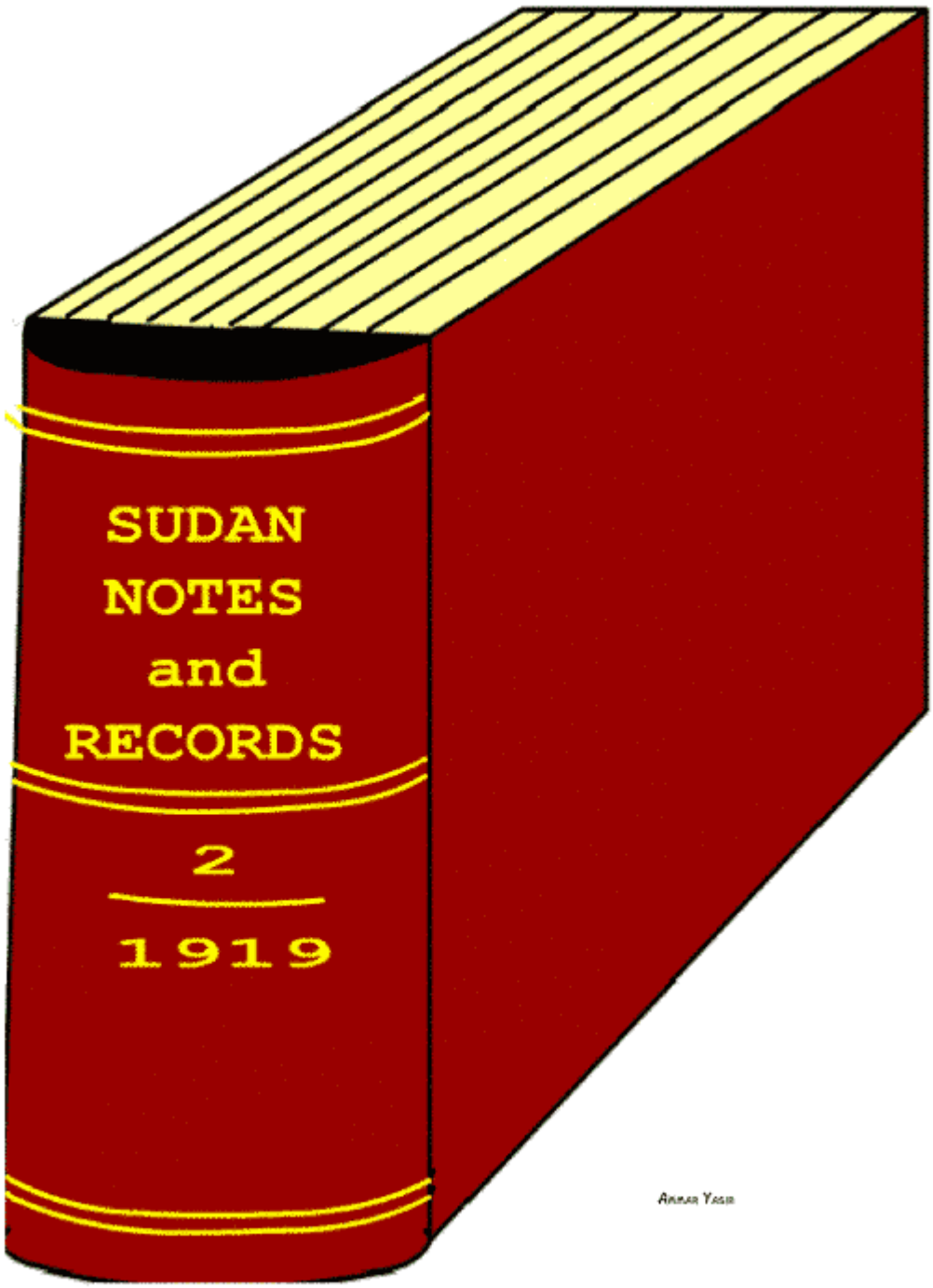

Ammar Yasir

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VOLUME II

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SUDAN NOTES AND RECORDS

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Transliteration of the Arabic alphabet

adopted by the Editors of «Sudan Notes and Records».

ا	at beginning of word omit, hamza elsewhere '	ذ	dh (coll. d)	غ	gh
		ر	r	ف	f
		ز	z	ق	q (coll. g)
ب	b	س	s	ك	k
ت	t	ش	sh	ل	l
ث	th (coll. t or s)	ص	ṣ	م	m
ج	j	ض	ḍ	ن	n
ح	ḥ	ط	ṭ	ه	h
خ	kh	ظ	ẓ	و	w
د	d	ع	'	ى	y

Vowels.

fatḥa	a,	lengthened	ā
kasra	i,	—	ī
damma	u,	—	ū

Diphthongs.

ـَـى ai (as in aisle) coll. ē

ـَـو au (as in mauser) coll. ō

The ل of the article always remains *l*.

Silent *t* (ة) to be omitted.

Notes.

1. The system will not be applied to well known names. Write Khartoum, Omdurman, instead of Khartūm, Umm Darmān.
2. In transliterating colloquial Arabic follow the pronunciation and not the spelling, giving the vowels their value as in Italian.

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SUDAN NOTES AND RECORDS

Volume II. No 1.

SEED-TIME AND HARVEST

BY H. C. JACKSON.

The British Farmer, with his perennial grumblings about the weather, has long since become a byword. It would be interesting to settle him in the Gezira, equip him with the primitive apologies for tools and machinery which are all that the natives of the Sudan own for planting, harvesting and threshing their crop, and watch his face. There must be few crops in the world which are sown in so sanguine a spirit, which are subjected to so many hazards and reaped with so much uncertainty, as those in the Blue Nile Province. From the day on which the land is first watered — and the cultivators bid among themselves for such scanty labour as is available — until the time, four months later, when the grain is carried to a threshing-floor as simple as that of Ornan the Jebusite, the cultivator's lot is one long struggle with adversity.

His first anxiety is as to whether the rains will fall in sufficient quantities and after suitable intervals : a failure of the storms for only two or three days makes a vast difference to the crop at certain periods of its growth — and this delay has far more effect than a corresponding postponement of the rains in a more temperate climate. And then, after one good downfall there is always the uncertainty as to whether another heavy storm may not fall before he has time to plant his dura, or, even if the seed has been sown, a second rainfall may drown his sprouting corn or cause it to wither : or the waterlogged condition of the soil may prevent his cleaning the crop with the result that grass, convolvulus and other weeds, grow up and choke it. If your cultivator has been fortunate enough to escape these mischances, his next enemy is a swarm of grasshoppers which devour

the young shoots time and again. In 1914 the crop had to be sown in some parts of the Blue Nile Province no less than five times, and, as the success or failure of the harvest depends not only on a well-distributed rainfall at suitable intervals, but also on the ability of the cultivator to make use of the few showers that fall, it can easily be realised that the total yield of the crop in these villages was disproportionate to the labour expended on it. At the present time no means have been discovered for dealing effectively with this plague which can only be overcome by rains sufficiently heavy to drown the grasshoppers as they appear.

A similar pest, familiar to everyone in the East, is the locust which may destroy the crop either in the earlier stages or when the grain is almost ready for the sickle.

Apart from these illchances there are other difficulties that the crop has to surmount : the stemboring caterpillar, the parasitic buda (a pretty magenta coloured flower), rust, the asal fly, field-mice, doves and in some places sparrows and other small birds that flock from the Rahad and the Dinder rivers in tens of thousands.

It is small wonder then that in a merely agricultural community with no manufacturing industries to fall back upon, among a population moreover that cannot forget the terrors of the year 1889 when probably half of the total number of inhabitants in the Sudan died of starvation, the natives should watch with meticulous care the various stages in the growth of a crop that may literally mean life or death to them. Each of these stages has a separate name shown in the following list :

1. *Tirab* «seed».
2. *Shoka* «thorn», when one leaf of the dura has appeared, i.e. after the crop has been three days in the ground.
3. *Adan far* «rat's ears» : when two leaves are showing and the plant is five days old.
4. *Abu Shaeifa* «father of weakness» : when the plant is six days old and has not yet taken proper hold : it is at this stage especially liable to die either from lack or excess of water.
5. *Sawasu :* an onomatopœic word in common use in the Sudan for a newly-hatched chicken : the dura is now twelve days old and is the height of a chicken.
6. *Farug* or *Farārīg* (plural) : medium sized chicken, when the dura is as high as a half grown fowl. Similarly the next two stages.
7. *Gidād :* a full grown fowl.

8. *Saqur* «a hawk». The next stage is that of
9. *Rukub* «knee» : when the dura is knee high.
10. *Lateiba* «maiden» : the stage when nodes begin to show in the stem of the plant : the term *lateiba* is applied to a young girl who has not quite arrived at the age of puberty.
11. *Zarag el fas* «appearance of the node». When the actual nodes in the stem show distinctly and are definitely formed.
12. *Himla* «pregnant» : when the head begins to swell inside the sheath.
13. *Fasakh* «splitting» : the head begins to split open.
14. *Shiraia* «husk» : the husk on the dura appears.
15. *Lebana* «milky» : when the grain has formed but is still in a soft condition.
16. *Ferik* «rubbing» : when the grain is quite hard and separates freely from the head with rubbing.
17. *Aish* : the ripened grain.

Not all of these terms are in common use, those most frequently met with being *Adan far, Sawasu, Gidād, Lateiba, Himla, Shiraia, Lebana* and *Ferik*.

With a crop that means so much to the cultivator, as he realises full well when he has a special name for no less than seventeen stages of its growth, it might have been thought that the farmer would have taken a certain amount of trouble to ensure its success either by ploughing or some other method. But, though it may be a somewhat sweeping statement, it is probably true to say that the Arab is the laziest agriculturist in the world. Times without number, for instance, he loses the benefit of a good storm by being too indolent to make the banks that surround his plot of cultivation strong enough to hold up the waters from a heavy rainfall. He is no believer in the dignity of labour or in the adage that Heaven helps those who help themselves : he prefers, with true Oriental complacence, to leave the fortunes of the crop to Allah whose goodwill he tries to win with sacrifices or whose wrath he attempts to avert by talismans.

When the time for the rains comes round and the storms are late, the villagers open subscription lists, each cultivator giving a piastre or two according to his means : with the proceeds a bull or a sheep is purchased for slaughtering. In some cases the services of a fiki or holy man are called in and he receives a part of the money collected in return for his good offices. At one time it was customary to pay the fiki before he exerted his

influence to procure rain but the growing tendency, at any rate in Wad Medani, now is for payment to be made according to results — a method that finds less favour with the priests than the former custom. The superstitious natives are at last beginning to put rather less faith in the efforts of the priest, though they have not yet arrived at the more advanced state of the country parson who refused to offer prayers for rain in his Church when the wind was in the north-west.

The sacrifice of a bull or a sheep is the common one. No special animal is selected nor are there any regulations as to its colour or as to its being without blemish. When the animal has been slaughtered, all the people are expected to eat of the flesh in the open air, near the crops. The poor may remove some of it to their own houses, but it is considered a disgrace for others to do so.

If this sacrifice does not bring rain, other methods are resorted to. In one of these two pigeons are killed, tied together and suspended along with two beetles, Ga'erein, in a new delu (or waterskin), on which have been written some mystic words by a Fellata from the West of Africa. This delu is hung up in the crops and a number of men, never less than eight or more than twelve, pray beneath it. The number of the supplicants depends upon the urgency of the need for rain : thus in 1917 eight men were employed, but this year when there seemed a possibility of a total failure of the crops, the number was increased to twelve. This method is supposed to be infallible, but as it is an expensive procedure, the canny native does not have recourse to it except in an extremity. In 1918 for instance no less than twenty ardebs of dura were promised to the twelve chosen supplicants should their prayers be answered. These prayers have to be said for seven consecutive days from sunrise to midday, and if they are still unavailing one last effort to procure rain is made. Seven beetles are put alive under a copper pot and are known as the seven prisoners. A Fellata fiki is charged with their supervision and the beetles are left to starve for seven days unless rain falls before the expiration of this period, in which case the survivors are released. The reason given for this method proving efficacious (as it is always supposed to be) is that the beetle is a wretched helpless creature and God in His mercy will not leave so forlorn a thing to die of starvation. I cannot say whether this is the real explanation or not. The

custom seems only to be practised by Fellati and it is interesting that a beetle should be associated with rain making on the West Coast of Africa as well as being held in esteem in the Nile Valley.

The Fellata who was appealed to in this particular case was offered two pounds, which were counted out in five piastre pieces in order to make the sum seem as large as possible — and then entrusted to a third party. As rain did not fall the Fellata was given fifteen piastres to console him instead of the two pounds, whereupon he went away and wept bitterly.

The offering of a sacrifice, in order to produce rain or a high Nile, has, as is well known, many parallels in history. At Jebel Dali, for instance, in the time of the Fungs, a young girl used to be given annually to the river god, and the same idea is commemorated to-day in Cairo at the cutting of the Khalig.

The Dinkas are another of the tribes that offer sacrifice for rains or to ensure a high Nile. After sticking an iron spear in the ground, the people turn towards the east and then sit down. A sheep or bull is produced, its legs are tied together and then, with songs and the beating of gongs, the whole assembly moves down to the river where the living animal is thrown in for the spirits of the river, Nyangkir, Lungnwar and others to feast on : grain, buttermilk, simsim and other products of the land are also cast upon the waters as a propitiatory offering, while the people cry out « *Dong Dit! Dong Dit!!* » (O Great God!). The villagers then return towards the spear, taking care not to look backwards to prevent the offerings being returned from the river; a bull or sheep is then slaughtered of which they all partake.

This sacrifice was made in 1917 and not in 1918 in Wad Medani and as the rains were plentiful in the former year and almost entirely failed during the latter it can be imagined that the local Dinkas put great trust in the efficacy of their prayers and sacrifice.

A curious belief prevails in the Blue Nile Province to the effect that if the river is high it claims a human life as a reward and children are warned against going near it when it is at all abnormal. It is possible that the explanation of the origin of this belief is merely the prosaic one that if one fell into the river when in flood it would be difficult to scramble out again. On the other hand, this idea that a river demands a life has parallels in other parts of the world and it is commonly held to-day by certain people

that the river Dart in Devonshire requires a life every year. During the past five years there have been two mysterious deaths of young girls whose bodies have been washed down from the Province of Sennar. These had apparently met a violent death and it is conceivable (although there are other possible explanations) that these girls had been sacrificed to the river God. But, in order to protect their crops, the natives have recourse to other simpler and cheaper remedies. Some who read this article may have had their eye caught by the sight of an old bone fixed in the ground near the corner of a field of corn. They may have wondered why so unsightly a relic of the past should have been put there and if so the object for which the bone was so placed has been achieved, for the eye of the passer-by has been deliberately attracted by the antique remnant to prevent it resting upon the crop of which it is the guardian. Throughout the Province it is a common occurrence to see some such relic in the ground. Usually it is an old white bone of any animal, though that of a hyena is preferable. I saw once in Monagil the whole carcase of a camel exposed in this way and its hulklike form caused much amusement to the beholders. Less commonly an antiquated broken black cantush, or jar, arrests the eye, but in every case it is placed in close proximity to a good crop or one that promises well and it always has the same purpose, that of diverting the eye of the jealous or envious passer-by from the cultivation itself. It is regarded as unlucky for the wayfarer to note the excellence of the growth : he has but to say « By God what a fine crop » and it is sure to fail. The explanation often given of the placing of a cantush or bone in the field is that the human eye is attracted by what is cheap and worthless and pays no regard to what is good and valuable — a somewhat cynical point of view to take of human nature. I am inclined to think, however, that a curse is probably implied in the custom, « if you cast an envious eye over my crop, may your bones become as this bone and may your property be destroyed until it consists of no more than a broken bowl ».

The question of the Evil Eye is only one aspect of the much larger one of Luck which enters very largely into the natives outlook on life. Some people are regarded as lucky and others the reverse for reasons that seem to bear no relation to reality. Thus, if a crop does well one year, the success is often put down to the good luck of the man who planted the ground and

the boy who threw the seeds; and the next year these two are hunted for and usually receive a higher wage in order to induce them to help again. If a new man comes to a village and the rains are bad that year, the failure is debited to the stranger and this is particularly the case if a cultivated plot next to that of the stranger happens to be a poor one.

Whenever the intruder comes out to look after his cultivation the neighbour says *Ya Allah wa rasul ma tashigg el bilad bitaati* «By God and his Prophet do not cross my plot». But if the stranger replies *Ma sha Allah* «What has God willed», then he can come near.

The Governor of a Province or the Inspector of a district is regarded as lucky or the reverse according to the rainfall or the height of the Nile in the first year that he arrives. If the river or the rainfall is good, his feet are said to be *layin* «wet».

Similarly a man who puts up a new house is held responsible for any bad luck that befalls his neighbour.

But quite apart from the question of the Evil Eye there are many other dangers that have to be guarded against and, theoretically, in order to be quite safe the cultivator should obtain a charm for each one of the hazards that may come in his way. Amulets can be obtained throughout the Sudan which are supposed to be sovereign against the sting of any particular coloured scorpion or the bite of any species of snake. These amulets usually take the form of a little bit of urug — the root of a West African tree — or a verse from the Koran which is tied up in a case and worn on the arm above the elbow, or, in the case of a woman, suspended from her neck like a chatelaine. So too in order to protect his cultivation from mischance the cultivator has recourse to a holy man who writes out some sentence or other, usually from the Koran, and this writing is then bound up in a dirty piece of cloth and placed in the middle of the crop. Each separate mischance that may imperil the cultivation has to be guarded against by the ultra-superstitious, and, just as to be reasonably safe from the slings and arrows of outrageous fortune, a man should carry a charm against every kind of scorpion or snake so the cultivator should really guard his crop against every kind of trouble that could overtake it. As a rule, however, the farmer, if he obtains a charm at all, takes it out as a kind of insurance policy against the pest that he most fears, or thinks is most likely

to visit his crop, and runs the risk of other misfortunes besetting it. This occasionally leads to trouble as in a case brought not long ago before the Inspector of Rufaa where some cultivators raised a civil suit against the local fiki for having failed to protect their crop as he had agreed. The case for the complainants was that they had given the worthy priest certain sums of money in order to safeguard their grain from winged things and that the charms which the fiki had given them proved ineffectual owing to a flight of locusts which had destroyed the crops. The fiki, on the other hand, contended that the charm was only efficacious against birds *tayyur,* and not against *tayyar* things that fly, and that the latter more comprehensive talisman would have cost a great deal more money than the cultivators had paid him. The cynic will regret that the casuistical prelate mistook his vocation when he qualified for the Church instead of the Bar, but will not be surprised to learn that he suffered the usual fate of those who try to be their own lawyers.

In some cases the superstitious, instead of applying to some fiki for a written charm, go to the grave of a holy man (which is always distinguished by white flags left as votive offerings) and remove one of the flags, after putting a new one in its place. The flag is then taken to the crop and set up in the middle, the idea being that the dead man will slay anyone who attempts to damage the cultivation in any way. Similarly a flag from a fiki's grave is often put over a pile of wood that the casual native leaves unprotected by the river's bank. In many parts of the Blue Nile Province it is no uncommon sight to see some pots and pans, sticks and other impedimenta left beside a fiki's last resting-place by some wandering tribe which has cultivated in the neighbourhood and then gone off south with its flocks and herds for six or seven months, in full assurance that these articles will be found undisturbed when next they return to cultivate.

Occasionally, instead of a flag, something or other, very often the rough image of a man made of straw, is put up as a kind of scarecrow, and it would be interesting if a connection could be traced between the two ideas that is between the influence of supernatural power in such a case and the more advanced conception of the power of the strong hand. As belief in the supernatural powers of the priesthood waned more and more reliance would be placed in the cultivator's own ability to protect his crop from

harm : and certainly to the ordinary prosaic individual the sight of a tattered scarecrow, in the form of a human being, would appear to be more likely to keep birds from a crop than a wisp of a flag that is scarcely visible.

At the harvest season the people hang up in their huts one kind of every kind of grain that they have planted. The usual explanation given is that this is done in order that they may have some of it to sow the next year. The natives however do not seem to know why they follow this custom and many of them say that it is for luck. Certainly it is only the best heads that are thus suspended from the roof and it is not unnatural to conjecture that, as in so many other parts of the world, the Arabs and blacks are attempting to preserve the Spirit of the Corn. The explanation that the seed is meant for sowing is obviously either incorrect or, at the best, only partially true. Often only one head, and that a very large one, is to be found and this can hardly be regarded as affording sufficient seed for the coming season. It is however mixed with other grain in order that the coming harvest may be a lucky one. In the same sort of way if a fowl is a good layer one of the eggs is taken, broken in two, and the shell put somewhere in the house «for luck» in order that the fowl may continue to produce eggs. Other steps have also to be taken if the harvest is to be a good one. Thus at the time of planting the man who dibbles the seed into the ground and the boy who throws the seed chant at the commencement of the sowing *Bismillahi ziraana lil ghāshi wal māshi* «we have sown for him who comes and him who goes. In the name of God» : if this sentence is not pronounced, it is believed that the crop will fail.

Behind this phrase I am inclined to think there is some idea of the offering of first-fruits. If a man is riding through a cultivated plot it is considered unlucky to prevent his animal from snapping off a head of grain here and there. When an official is assessing a crop, many villagers often accompany him to watch a particular area being measured and threshed and the owner views quite complacently the depredations of as many as a dozen of the visitors' donkeys which wander through the dura. When a crop has reached the *ferik* stage, the neighbours of any plot that is in this condition have the right to take a few heads of grain (usually five or seven) for luck and as a kind of thank offering that the crop is almost ready for

harvesting. It is the same sort of idea that is contained in *Exodus* (chap. 23, 22): «And when ye reap the harvest of your land, thou shalt not make clean riddance of the corners of thy field when thou reapest, neither shalt thou gather any gleaning of thy harvest — thou shalt leave them unto the poor and to the stranger».

This custom was once quoted in a case of a theft of dura at Kamlin, the accused rather ingeniously stating, in answer to the charge, that he was merely making use of the recognised privilege of taking a little ferik from his neighbour's crop, and was not stealing the dura found in his possession. Unfortunately for the accused the wiseacres, who were called in, were agreed that although he undoubtedly had the right to pick a few head of the corn he was not justified in carrying off two large baskets full of grain — particularly after nightfall.

Where so much is at stake it is not surprising to find that the natives pay considerable attention to the heavenly signs as indicative of what the weather is likely to be during the rainy season, several of the older men being credited with powers more or less real, to forecast the prospects of the coming season.

The astronomical year of the Arabs is divided into twenty eight parts, called mansions or phases of the moon, which are dependent on the heliacal rising of certain stars. These mansions each consist of 12 3/4 days except that of Gabhā which has 13 complete days. With some of these we are not here concerned and only those of immediate interest from the point of view of the rainfall in the Gezira (i. e. the part of the White Nile, Blue Nile and Sennar Provinces lying between the Blue and White Niles) need be considered. These mansions are named El Naṭaḥ, El Buṭein, El Thurayya, El Dabaran, El Ḥaka'a, El Ḥana'a, El Zirā'a, El Nathara, El Ṭarfā, El Gabhā, El Kharaṣān, El Ṣarfā, El 'Awa, El Simāk and El Ghafar. The first seven mansions constitute the Summer, the next seven the Rains or Kharif and the last one marks the beginning of the winter.

The natives explain the stars in various ways, thus Naṭaḥ which means «butting» or «prodding» is interpreted to mean that the summer is butting winter out of its place which it will take itself. El Nathara which denotes «dropping» is applied to the rashash or season when very light

showers may be expected to fall. The next mansions are compared with the appearance of a lion in a forest glade. El Ṭarfā, meaning side, is likened to the distant view of the lion when its flanks can be indistinctly seen : Gabhā, forehead, the head of the lion can be clearly distinguished and the rains are increasingly heavy. El Kharaṣān, the whole of the lion is in sight and the storms have commenced in earnest. El Ṣarfā « departure », the lion begins to go away and the rains recede. El ʿAwa « grumbling », the skies thunder but only a little rain falls, the lion is now out of sight but his roaring can still be heard in the distance : from this time on practically no rains need be looked for.

The critical mansions are Kharaṣān and Ṣarfā : if there is plenty of rain in Ṣarfā the storms are said to recede very gradually and the harvest is an excellent one as the ripening of the crop is delayed until the cold weather sets in when the dews swell the heads of grain. The general tendency, according to the theories of the natives, is for a wet mansion to be followed by a dry one so that, at first sight, it would appear as if the dual conditions of a wet Kharaṣān and a wet Ṣarfā could not be met with. But the Arabs also believe that after a really wet Kharaṣān only one, or at most two, heavy showers are needed in Ṣarfā in order to ensure a bountiful harvest.

If heavy rains fall in El Buṭein, the land then watered is expected to produce an excellent crop, but it is regarded as a bad omen for storms to break in Thurayya. It is interesting to note that heavy rains fell during Thurayya this last year in the Blue Nile Province and the harvest is a comparative failure.

So great is the faith put by some of the natives in the certainty of the rains falling according to these mansions that, when the cultivating season comes round, they commence sowing regardless of whether the rains have actually begun or not. The vast majority, however, of the people wait until the ground is thoroughly soaked, as they are afraid that the grain may be devoured while in the ground by insects or mice, or that it may disappear in the cracks in the ground or that the seed may become unfertile. The whole question is one that deserves close attention as the failure to utilise one heavy shower at the commencement of the rains — owing to its being followed by another before the natives have time to sow — is one

of the commonest sources of a poor yield in certain years. A few persons planted this last year «according to the stars» and on the whole they were far more successful than their neighbours. The problem is doubtless one that will be dealt with scientifically one day but it would be interesting if some fields could be sown over a widely distributed area during the last fortnight in July, regardless of whether rain had fallen or not, and a comparison made between these crops and those sown according to the native method.

Apart from these two mansions of Kharaṣān and Ṣarfā, which are said to have a direct bearing on one season's crops, the next mansion in importance is that of El Ghafar : if very cold weather sets in then and is followed by a bleak winter, accompanied by high winds, the Arabs expect a good rainfall during the next season and the phrase is used *Bashar el Badia bi sanat el nadia* «The nomad Arabs have brought good news of a wet year». A similar proverb is also quoted : *gadar el bard gadar el matar* «according to the cold so will the rains be». The former of these two phrases is also employed if there is a wealth of blossom on the arak bush towards the end of the hot weather : in this case there may be solid foundation for the Arabs' expectations and the flowering of the arak may be due to exceptional humidity in the atmosphere which is sufficiently great to affect the plant. Perhaps however the real explanation of the proverb lies in the fact that the rains will be early rather than heavy, and this would be quite sufficient to gladden the hearts of the nomads who know that it is very difficult to find grazing for their animals by the end of the summer.

In the Gezira the natives distinguish four kinds of rainfall, El Ḍaḥawi, el Leila, el Naḥāsi and el Ẓuhri. The first named is the best and commences early in the morning : it usually lasts some hours and is widely distributed; of it is said : *El Ḍaḥawi in tak ma biyinfak* «if the thunderclouds rumble in the morning, the storm does not dissipate». The next best rainfall is el Leila and, as its name implies, it comes during the night. El Naḥāsi breaks during the late afternoon and continues until after sundown. The worst storm of all is el Ẓuhri, which is also called *Um Baqar* «the cow storm» and is so named from the fact that it follows a semicircular course, like the branching horns of a cow, and leaves unwatered all the area between its actual narrow path.

Once the rains have set in certain local signs indicate whether a storm is approaching and how heavy it is likely to be. In Wad Medani, for instance, whenever a particular kind of cloud appears North by North-North-East it is a sure sign that rain will fall within two or three days : these clouds are known as *sihāb el gibli*. Another kind which is regarded as a harbinger of rain makes its appearance in a south easterly direction and is named *sihāb el Makadi* «the Abyssinian cloud».

As storms approach, the natives pay special attention to the nature of the lightning : if this is forked, Ḥargūṣ, the storm is likely to be merely local : the lightning, according to the native point of view, splitting the clouds and, by creating a strong wind, blows the rain away. On the other hand, the flickering summer lightning, Abu Fereiwa, foretells a general rainfall.

One other little belief of the cultivators may be noted. If by the mansion of Ṣarfā the cracks in the ground of a particular plot are not thoroughly watered so that they close up, the crop on that area will fail. This is only natural as little rain is expected after this time and the proverb is used *Iza inṣaraf el ṣaraf, inṣaraf el kharif ṣarfan* «If the mansion of Ṣarfā has passed away without a storm, the rains have also passed away».

The crop is now ready for garnering and is subjected to the last and, in the opinion of many of the cultivators, the worst of its misfortunes when there looms upon the horizon the Government tax assessor. There is no need here to delve very deeply into the methods by which Government decides what tax is due. Roughly it demands, in accordance with Mohammedan practice, one tenth of the crop. The assessment of this tithe, or *Ushur* as it is called, is entrusted to a Board of native sheikhs under the general supervision of a British Inspector and Egyptian Officers. At this critical period of the year differences that have divided families or individuals during the period of harvest die down and all unite in a praiseworthy attempt to cheat the Government.

A case was once brought me in Sennar, in which a lady complained, not that the Government was demanding more than the tenth which she should have paid, but that she had given to the Assessment Board — in order to have her crop underassessed — a larger bribe than one of her relations in a neighbouring village had paid! Most of the cultivators, how-

ever, are not so naive as this and, in some cases quite clever tricks are worked off on the hapless Inspector.

An average district will contain some three or four hundred villages and as the crops ripen very rapidly when the rains cease, and much damage may result unless it is harvested as soon as possible after ripening, the Inspector can obviously visit the work of a few Boards only : on this fact the Boards rely and very often indulge in wholesale bribery and corruption and extort money, either for underassessing a particular crop, or else by threatening to assess it accurately unless a bribe is forthcoming. In one district recently the Board even went so far as to keep a special private register showing what bribes were due from each cultivator. Unfortunately for them the Inspector discovered the book which was thus no longer private. Knowing that the Inspector can only visit a very small proportion of the villages and that if he stops in a village he can only inspect a comparatively few of the individual plots, the villagers put their heads together and when the Inspector appears he is greeted by the whole village, men, women and children, all shouting *maẓlumīn* «we are oppressed». Something appears to be very wrong : possibly the Board may have refused to be bribed and assessed the village correctly, or it may have actually overassessed the cultivation or it may have accepted bribes and then not granted the remission for which the people were looking.

As the Inspector cannot have time to thresh and measure every single plot he says that he will make a thorough investigation of three people's complaints on the understanding that if the complaints are unreasonable — and a deliberate attempt has been made to waste the Inspector's time — the three complainants will be fined. There is considerable whispering and finally three men come forward and say they will run the risk. The village turns out, the crop is measured, threshed, weighed and, as a result, it is found that the three men are being called upon to pay twice the proper tax due from them. Time presses and the Inspector has to visit other places and the natural inclination is to reduce the assessment of the whole village by one half. However a glance at some other plots may cause the Inspector to think that all the village has not been overassessed and, if he takes three additional areas, and threshes the crop he will probably find that the whole village — with the exception of the three complainants —

has been grossly underassessed. The village had in point of fact agreed with the three complainants to have their crop overassessed on the understanding that if the village assessment is not reduced as they anticipate their friends will compensate them for having to pay an excessive tax.

Natives as a rule have an extraordinarily accurate idea of what their plot of cultivation is likely to produce and this is quite understandable when one realises that their crop may be all that stands between some of them and starvation. But it is not such an easy matter for the Inspector to arrive at a really accurate estimate of a crop even if he measures and threshes as much as a quarter of one bildad or cultivated area. So much has to be allowed for damage by birds, high winds, shrinkage of grain, loss by falling to the ground and so on : and if he has time to measure the whole of a dozen plots in a village and thresh as much as one eighth of two or three areas he is lucky. The consequence is that once the natives realise that the total yield of the area cut is to be multiplied by eight or in some cases sixteen or even thirty two, they resort to all sorts of tricks to keep the yield after threshing as low as possible. Heads of grain are left uncut or thrown outside the area that has been cut, or buried in the cracks in the ground : or when a way is made through the crops in order to delimit the plot that is to be threshed all the stalks along the path are bent outwards instead of alternately outwards and inwards.

With the first fall of the rains violent disputes as to the ownership of land particularly on the east bank of the Nile, where there has as yet been no land settlement, at once ensue and lead in many cases to bloodshed. A shower may fall in a wadi that has not been thoroughly watered for five or six years and the nearest cultivators rush off to plant it. In many cases if Mohammed arrives late and thinks that Ahmed has cultivated his particular plot he sows his own crop on top of the other. And if there are some disputes over the ownership of a given plot, there are ten times as many as to where the boundaries of that plot are. These wadis are for the most part merely low lying depressions where the rain tends to collect and it is no easy matter to see where they begin and end : as they depend on the rainfall from a fairly large catchment area, an exceptionally widely distributed storm will broaden the wadi and thus extend the boundaries of the cultivable area. Where there is an appreciable slope in the ground,

turûs, i. e. banks, have to be made to hold up the water and these are a fruitful source of dispute. Mohammed starts a new *teras* higher up than Ahmed and thus robs him of the waters that should have flowed down on to the latter's plot. Or if very heavy rains have fallen and Mohammed's land is higher than that of Ahmed, Mohammed, after a few days, wants his field to dry up and cuts a hole in his bank, with the result that Ahmed's plot receives an excessive amount of water and is ruined.

In many disputes about ownership of land it is very difficult for the Inspector to arrive at a conclusion one way or another on the evidence brought before him. Both parties will inevitably lie and ruin even a good case in consequence : fortunately once they have ventilated their grievances in Court they frequently go outside and come to an arrangement among themselves : or one party will agree that if the other swears on the tomb of a holy man (who varies according to the locality of tribe of the disputants) as to the boundaries it will abide by the oath.

Another method of settling a dispute is occasionally employed and is usually regarded as binding but is much disliked. In this case one of the litigants has to put a Koran on his head and walk round what he says are the limits of the area claimed, and this boundary is accepted by both parties.

Finally, a still more unpopular plan is occasionally tried, but only as a last resource, as it is considered a disgrace for the contending parties not to be able to patch up a quarrel without taking such drastic measures. Here, in addition to the Koran, a *fas* (or little axe), a sword, an old bone and a broken cantush with a little frankincense in it, are carried round the land in dispute. This custom is only resorted to at the time of cultivation and, if a man foreswears over the boundary, he is popularly supposed to die. There is a well known case that occurred some fifty or sixty years ago in Wad Medani when a man called Abd el Muhsin (uncle of Sheikh Ahmed el Sunni) had a quarrel with his cousin which he proceeded to settle in this way. He had only gone a very short distance however when he dropped down dead.

H. C. Jackson.

ELEPHANT AND GIRAFFE
HUNTING IN THE HOMR TRIBE
(SOUTH-WEST KORDOFAN)

BY R. DAVIES.

Elephant are hunted, in the region of the Bahr El Arab, by parties of horsemen armed only with the broad-bladed Baggara spear. These parties would usually consist of from half-a-dozen to ten men, though on the occasion when the Homr massacred in one day ninety-three elephants of all ages and both sexes, a much larger force must have been engaged.

Competition among the hunters begins only when they have drawn near to the quarry and are withing galloping distance. The verb used for this approach is *ḥabaka* (حبك). One hears it in ordinary conversation about elephant hunting and it occurs in the following verse :

Zēlā um feldjan rigān :
In ḥabaku 'l juḥāl wa sār um jurān
Ana bidellu farḥān.

My lady hath teeth divided as by tracks :
If elephant be afoot and the youths have drawn near (the quarry)
I will go (with them) rejoicing.

The first line is intended as a compliment, though at first sight it might appear that the songster joyfully sought the perils of the hunting-field in preference to the horrors of home.

The first of the party to get his spear into the elephant (the median line being the part aimed at) has the right to take to his house, and retain until it is sold, the right-hand tusk, or the better tusk, if the right-hand one should be broken. This tusk is called the *'atag* (عتق) or the *'arūs* (عروس). The «second-spear» takes the remaining tusk, which is

called *um jebrūna* (ام جبرونة), on the same terms. The prowess of these two is of course celebrated in song by the women of the ferik.

When an opportunity occurs of selling the ivory to a merchant, the price is usually paid in cows. Of these, the first spear takes the best four-year-old cow and the second spear the next best four-year-old. The remaining cows are then divided equally among the whole hunting-party, including the first and second spears. If the ivory fetches only five cows, the first and second spears take only one four-year-old cow between them; if four cows, they take two cows as their complete share of the spoils. Should the sale be for money, the same principle of division applies, calculation being based on the current local value of a four-year-old cow.

Elephant meat is eaten at the place of the kill and is not divided up on any system. Belts made of the tail hairs are worn by the hunters.

Complications in the above method of division arise from partnerships in horses, which are very common in the Homr, and from the employment of jockeys.

Two men owning a horse in partnership hold it for alternate years. The profits of every elephant hunt are divided equally, but it is customary for the sleeping partner to return one quarter of his half-share to the partner actually riding. This quarter is called the *dasas*, and is withheld if the partners are on unfriendly terms.

A jockey, *'atāl* (عَتِيل), takes one third of the profits earned by the horse; and the owner, or owners, two thirds.

In giraffe-hunting the party would consist of two or three men only, while often a single individual hunts alone. The objective is the hamstring; and the first man to get his spear in takes the whole animal, meat and skin. The meat is made into biltong and, with the skin, is worth about P.T. 150, if sold among the Arabs.

If two men hold a horse in partnership, each takes the whole profits (from giraffe) of the year during which he holds the horse.

A jockey, called in this case the *ṭarrād* (طرّاد), takes the upper hind leg with its skin, five ribs and a portion of meat from the neck, near the withers, known as *ḍarābat esh-shōk* (ضرابة الشوك), a name whose derivation is obvious to anyone who has seen the *talḥ* forests through which the

giraffe plunges in its flight. The hind legs are thus distinguished because, in the fall of the giraffe, the meat of the under leg is bruised and pressed and will not make good biltong.

There is an interesting corollary to the sharing of the profits of elephant-hunting by the joint owners of a horse. A hunting-party after elephant to the south of the Bahr El Arab sometimes degenerates into a raiding-party on the neighbouring Dinkas, especially if elephants are not found. The spoils of such a raid are divided up; and a sleeping partner in any horse engaged naturally takes his share. In one instance which came to my notice, however, the raiding-party were brought to justice and, among other penalties, a fine of L. E. 8 was imposed on each member. One of the party thereupon petitioned for the recovery of L. E. 4 from his sleeping partner, who admitted and paid the claim, although he was away in Talodi district at the time of the raid.

In another raid, one or more Dinkas had been killed; and a heavy bloodwit was levied on the party, in addition to a fine for raiding. A similar claim for half his share in the fine and bloodwit was presented to me by one of the raiders against his partner in the horse ridden by him in the raid. The claim for half the fine was admitted and paid, but that for half the bloodwit was refused.

No tribal precedent met the case, which I referred to the elders, who finally decided against the claimant, on the ground that manslaughter was outside what might be reasonably expected in the employment of the horse for profit. From which judgment one may reasonably infer their view that the discovery and punishment by Government of a bloodless raid on the *'abīd* is an accident to which even the best-regulated are liable, for which therefore the partner should pay.

R. Davies.

ORYX

HUNTING IN NORTHERN DARFUR

BY CAPT. R. S. AUDAS, M.C.

The methods employed by certain tribes in Northern Darfur in hunting the White Oryx (*Oryx Leucoryx*) may probably be of interest to sportsmen and all who are interested in the preservation of game in the Sudan.

The habitat of the white oryx, in the Sudan, are the waterless desert districts of North-West Kordofan, Dongola, and Darfur. A southern migration occurs in the late winter and early summer as far as the 13th parallel, where they remain until the first heavy rain, when they drink once, after which they immediately start their northern migration. A few days after the first heavy rain a district which held many herds will be found completely deserted by them. Occasionally odd animals and small herds may remain longer. In North-West Kordofan one small herd of about fifteen remained in the same district for several years, but this was exceptional.

Until a few years ago, many hundreds of white oryx were destroyed annually by the camel-owning tribes of Northern Darfur, whose Ibils (herds of camels) grazed in that vicinity; but at the present time these tribes have very few camels, as they had been either raided by the Guraan, or taken by the late Sultan Ali Dinar. Their few remaining camels are not grazed very far away, the oryx country still being considered unsafe. For this reason they are unable to go so far afield as previously, when they subsisted chiefly on camel milk and were, to a certain extent, independent of water.

Large hunting parties went out, and when a herd was sighted it was rounded up and driven in the direction of their ferigs, where the oryx arrived in an exhausted condition; the men then killed them with spears and the women skinned them. In this way the whole herd was destroyed, and sometimes as many as fifty were killed in one drive.

During recent years a few hunting parties only take part in the sport. Furnished chiefly from the Gulul, Zaadia, and Zawaghi they start out about February when the oryx arrive in their district, and hunt until the first rains, and return to their homes when they have collected sufficient hides, dry meat, etc., to load their camels, having made four or five visits to the hunting ground during the season, with intervals for rest.

The methods of hunting are now so strenuous, both for horses and men, that out of the large numbers of oryx hunted, only a comparatively small percentage are killed, those being, in the majority of cases, the old bulls.

A typical present-day hunting party consists of perhaps four to six camels, two horses, and four or five men. The horses are accustomed to drink once every second day. Three men, the horses, and half the camels loaded with water, start out to the oryx ground and make a semi-permanent camp, perhaps thirty to fifty miles from water. A few days later the remaining camels, loaded with water, leave for the camp, when the first camels return to drink and bring out more water, and so on. These camels are watered about every eight to ten days, the journey out being done in two shids. The horses are not hunted more often than every second day.

A typical hunting day would be as follows :

In the early morning three men, a camel loaded with water, and the two horses, start out and go until either a herd is sighted or new tracks are come on when they halt. Towards midday, when the oryx are resting in the shade of the trees, the horsemen start again, each armed with a long spear and carrying a small waterskin on the right side of his saddle in front of his knee, the water camel following on their tracks. They get as close to the herd as possible without being seen or winded. The oryx is easy to get near compared with most desert animals but, when once he sees or gets wind of the hunter, he goes a great distance before settling down again. As soon as the herd see the hunters they break away, the men shout « Lu Lu », which causes the herd to pack and start off at a gallop. The men keep them at their best pace and in sight. After a few miles, a well-mounted man can easily come up with the herd if the going is good, but this is not as a rule done, because it would tire his horse and only mean the killing of perhaps one oryx; the idea is to get all the animals

exhausted so that the maximum number can be killed. The distance covered is perhaps six to eight miles, or more. The herd ultimately become blown and start to walk, the heavy bulls being as a rule in the rear. The horsemen then close in, each picks out a big bull, dismounts and approaches on foot, the spear being held well out in front. The oryx invariably shows fight and is extremely dangerous. He charges with his head down, thrusting his horns to either side with a scythe-like movement, at the same time emitting a curious noise through his nostrils. A few well-directed jabs with their spears (which are of the Baggāra type, only a foot or two longer), and the animals' eyes are soon pierced; once blinded, the ham strings are cut with the spear blades and the animals maimed are left, the hunters mounting their horses and proceeding after the rest of the herd which have walked on perhaps a few hundred yards.

Having come up with their quarry the same procedure is adopted. In this way as many as ten oryx are killed in one run, the hunters ceasing only when the horses are exhausted. At the end of the run the riders have their drink and start skinning and cutting up the last oryx killed. The water camel which has been following in the tracks comes up in a short time and the horses are given a drink; the hide and meat of the cut-up oryx are loaded on the camels, the party then retrace their steps, kill, skin and carry off the maimed oryx left on the way, and so return to camp, where the hides are pegged out in the shade and rubbed with wood-ash, and the meat cut into long strips and hung out to dry. The strips of meat thus preserved are known as *sharmūt* which is considered a great delicacy and fetches a good price when offered for sale, but it is usually consumed by the members of the hunting party and their families.

The bull hides are cut up into long strips, which, when tanned with *garad* (fruit of Sunt tree) and *gutran* (native tar), make excellent loading ropes, head ropes, etc. A good hide will make as many as five such ropes, the average length being about twelve feet and the market value from 20 P.T. to 50 P.T. each. Only the old bull hides are of any use for *Seers* which are strong hide ropes and very thick, as much as one half to three quarters of an inch when cut from the neck and withers. The skins of young bulls and cows that fall to the hunters are made into *gurabs*, grain bags, etc.

Oryx in the vicinity of villages are often hunted with dogs, but only very few are obtained in this way.

Although the country over which the hunt takes place is comparatively good when compared with the appalling ground over which the Baggāra hunt giraffe and elephant, the act of riding down and spearing an oryx requires much skill, courage and endurance, and is a feat of which any sportsman might be proud.

R. S. Audas.

NOTES ON THE AZANDE.

The notes which follow have more in common than the mere fact that they deal with branches of the same tribe. The Governor of the Bahr el Ghazal's anecdotes throw into relief essential qualities in the mentality of the Zande which have led to such developments as N'bili. The note upon the latter which comes to us from a Belgian source through the kindness of Captain Bardwell, concerns a secret society which is believed to be identical with that known as Bir or Bili in the Tembura and Yambio districts of the Bahr el Ghazal. Somewhat similar societies in the Lower Congo and on the West Coast have been described in great detail by Missionaries and others quoted in the Golden Bough (*Balder the Beautiful*, II, p. 251 ff): more or less disgusting orgies and initiatory rites of regeneration or re-birth are common to both. In the N'bili the candidate is forbidden to clean himself in any way, this is no doubt because he is conceived to be «born again as a little child» : in other societies the regeneration is carried out still further, he is buried and reborn and must then be taught laboriously again all he ever knew in the past, who his parents were, for example, and the way about his native village. The flogging and the beating of gongs is probably done with intent to expel evil spirits, and not, as is suggested for the mere pleasure of inflicting pain. The sacred fire with its woman attendant can be paralleled of course in a great many countries. The general organisation of the society, in particular the relations between the spiritual and temporal authorities, will suggest parallels in other countries at a very different level of civilisation. — Ed.

I

TWO PECULIAR CASES FROM THE SOUTH.

Both the following cases came under notice when I was Inspector of Tembura District, and all the parties concerned were of the Zande Tribe. The incidents of the first case occurred within a mile of my house, while those related in the second affair happened in a very remote spot in the District and one which I do not think had previously been visited by any official.

I have selected the first case because the rites after death appear to me to be very similar to those mentioned by Fraser as having been practised in the earliest European civilizations, while the second throws a little light

on the workings of the Pagan mind, in what to an ordinary civilized person, would appear to be a perfectly simple incident.

Case I. News was brought that a man had been speared to death that morning so I went up to investigate. His assailant was already in custody, he having made no attempt to escape, declaring that what he had done was absolutely justifiable, as the deceased man had killed his brother by magic on the previous evening, by blowing on a bewitched whistle that he had obtained for that very purpose.

In course of time the truth of the matter was laid bare and briefly was this.

The man who died from the effect of the magic whistle, had married his daughter to the man who had blown the fatal blast. This son-in-law had a child, but the child had died and it was of course impossible in his eyes that it could have died naturally, so he had sought the divination of *Bengi* (by seeing whether a poisoned chicken recovered or died while he mentioned the names of the people who might possibly be responsible for this child's death. If it died, the person named was guilty; but if the chicken lived, the suspected party was innocent and another name must be tried) and *Bengi* had declared that the mother was guilty, and therefore her father was the more guilty for marrying off such a woman.

The son-in-law having dealt with the woman came to settle accounts with her father, and, armed with the magic whistle made from the horn of an Oribi, strode up to the house. There he called the family together and informed his unfortunate father-in-law that he was responsible for his grand-child's death and that he had come to kill him, which he would do by fixing him with his eyes while he blew on his whistle. He then did blow on the horn and his father-in-law fell dead, while he went quietly to rest in an adjoining hut.

When the deceased's wives and relations saw what had happened, they laid out the body on the bare ground and called all the neighbours. A goodly number collected and from these as many virgins (or reputed virgins) as possible were selected. These were given bowls of water and bunches of twigs, and directed to march in procession round and round the corpse and sprinkle it with water as they passed, and, if the fates were kind, the dead man would revive. Whether the treatment was to be beneficial to him in his next incarnation I do not know, but it was no good to him in

his present one as he remained firmly dead. After a bit, the neighbours dispersed and the family went to bed, while the murderer reposed himself in a hut near by. In the morning he woke up with rather a «swelled head» and strolled over to his victim's house to brag about his prowess on the magic whistle. Having made himself thoroughly objectionable with regard to deceased's character and relations, he sat himself down under a little *Gugu* or grain store with his back to the bereaved family. This was too much for the dead man's son who crept up and poked a spear through his back killing him instantly.

The second case shows that even dumb animals can be influenced by an evilly disposed mind.

Two very old men, both of whom had lost their wives, were living together in a small hut near a Khor and away from the rest of the villagers. They were great friends.

One day one of the old gentlemen saw an elephant damaging their little bit of cultivation, and, with more bravery than prudence, promptly proceeded to drive it away with a bow and arrow with entirely fatal results to himself. The second old gentleman went to get help to bury his friend, and that mournful business being over, he settled down to a lonely existence.

In course of time, however, a young man arrived who claimed to be the son of the deceased. Having heard the particulars regarding the death of his father, he at once came to the conclusion that some one had «put up» the elephant to kill his father, and suspicion rested on the latter's late companion. When I arrived on the scene, I found a poor old fellow very nearly dead of starvation, tied to an immense log in a half ruined hut. His tormentor was at once arrested and seemed much hurt in his feelings, as he said that he had performed, at considerable expense to himself, a number of *Bengies* with chickens with a view to finding out the culprit for certain, and the last *Bengi* had *almost* declared that his poor old prisoner was guilty of his father's death.

HAWARDEN.

II

Yambio is having a visitation of man-eating lions and three were killed during July. One had taken a woman in broad daylight on a main road

not 600 yards from the station. The Commandant with two other officers and three soldiers took up the trail which led into a very thick and dark « Gallery » forest. The body was soon recovered and the lion was wounded at the first volley. After this the heavy foliage made it so dark that fire had to be directed at the grunts of the beast which was not killed until five hours later close up to the line of rifles. His final act was to bite clean through his forearms, snapping the bone like a match stick. He was a very old beast and the people are quite sure that the late Sultan Yambio is at last no more. It was well known that he turned into a lion when he died. Sultan Tembura also became a lion and it was a curious fact that immediately after his death a lion or some-one dressed in a lion skin went through the village and slew, it is said, some of Tembura's pet aversions.

(*Bahr El Ghazal Diary.*)

III

N'BILI SOCIETY.

N'bili has its origin in *Welle* and must have been introduced to the *Nekopo* at a period when Europeans had not yet reached that locality, probably at a time when Chief *Masaba* ruled on the banks of the *Nekopo* and when the Arabs were still engaged in the slave-trade. It had been introduced among the *Mabudus* during the course of wars between these two tribes.

The rites of this Order are carried out at the *Barzah of N'bili*, a sort of closed shed of large dimensions, which is built in an isolated position in the bush and is surrounded by private huts. The one which I saw at the home of Chief *Azdapana* was surrounded by a protecting fence, while the whole construction was strongly barricaded at the entrances. Scattered around the buildings were large plantations of hemp.

Each of these meeting places is permanently occupied by three people — two men and one woman — who share in ruling the order.

1. *Lubassa*, the supreme head who is looked upon as a person to be worshipped, and without whose approval no important decision can be taken. This person is sacred and none of his acts is subject to criticism.

Every decision, of whatever description is taken by him alone. He occupies himself with the preparation of medicines, especially poisons.

2. A woman called the *Edili* and a man called the *Gunambako*, who are in charge of the *Negbe*.

The duties of the woman are to guard the flames of the sacred fire which must never be allowed to cease burning. If this were to happen through the fault of the *Edili*, her punishment would be death by hanging. One of the duties of the man is the gathering of forest plants necessary to the *Lubassa*.

Attached to these three superiors are several subordinates with special duties, such as the *Mutu ya butu*, a man whose duties comprise the flogging of initiates and the carrying out of sentences given by the *Lubassa;* and the *Bandarossi*, who being the eldest member of the band, has in consequence the right to certain honours. The latter, attached to the person of the *Lubassa*, is chiefly employed by him in the gathering of the poisonous plants.

It is noteworthy that neither the *Lubassa* nor the *Gunambako* is ever the native chief of the district. In fact, the native chief, in spite of his influence which is often predominating, has no official title in the *Barzah*. In revenge, as it were, it is he who appoints the *Lubassa*, the *Edili* and the *Gunambako*, who are therefore inevitably under his thumb. The appointment of the *Mutu ya butu* is in the hands of the *Lubassa*.

The meetings of the *Barzah of N'bili* are nothing but huge popular orgies in which predominates the use of hemp, yando (a root which has exciting effects) and sometimes alcohol in which debauchery has a big place.

The activities of the *Lubassa* and his confederates are directed chiefly towards exploiting the natives. By the sale of remedies for sickness, of medicines for conjuring away ill-fortune, and, above all, by playing upon the superstitious fear with which the natives regard the « whistle of the *N'bili* », they extort from their victims all those of their possessions which they may desire. It would be difficult to say with certainty to what extent the terror produced in non-initiates by the « whistle of the *N'bili* » is based upon pure superstition. It is impossible to eradicate the belief that a « past-master » of the Order has the power of causing the death of anyone by simply employing the whistle and at the same time saying the name of his enemy. The

fact remains that strange deaths have sometimes followed this act. Is this coincidence pure and simple, or can one see in it the results of poisoning in order to substantiate a profitable superstition? Personally I believe the latter.

In order to evade investigation and punishment, the members of the *N'bili* are sworn to secrecy under pain of death. Death is the sentence for anyone, initiated or not, who may divulge the meetings to others. This was the case with a certain *Mandei*, who was condemned for having deigned to complain to the Europeans that his wife was being despotically detained at the *N'bili*.

The specially adopted mode of execution is particularly cruel : the condemned person is hung up by the feet with his head over a large fire, and then the *Mutu ya butu* and his assistants flog their victim to death.

Initiation into the *N'bili* is a long and complicated ceremony. The candidate is introduced by a sponsor and has to remain naked in the *Barzah* (without being able to indulge in any personal cleanliness) for a period the duration of which is determined by the *Lubassa* and also the candidate's rank among the natives. On the day of his admission, the initiate has to swallow a series of various concoctions, the chief of which are the raw heart and stomach of a fowl which he has to take from the ground with his mouth. The *Lubassa* gives him a new name and provides him with a wife for his future sojourn in the *Barzah*. This is never the candidate's own wife : generally she is some unfortunate woman who has been taken by force in the night, whom superstition and fear of punishment retain with her ravishers. Afterwards the initiate is brutally flogged to the accompaniment of the beating of the gong and women singing and dancing to drown the cries of the victims.

After the convert has been accepted, his sponsor and other notables, in consideration of large payments, clean him, cut his nails and hair, wash him and remove a special rope which he was wearing during the initiation.

The Order contains several branches with distinct names, but all of them are under the authority of the *Lubassa*. For example :

1. The *Biti*. The members of this category are fetich practisers or fortune-tellers, who are appointed by the *Lubassa* of the *N'bili* and who do

not themselves take part in the ceremonies in the *Barzah*. Their business is to predict the future, and their usual method consists of throwing darts at a piece of wood at a certain distance and answering questions put to them according to whether the dart obtains «a bull's eye» or otherwise.

2. The *Mando*. All the men of the *Mando* are members of the *N'bili*, but not vice versa. It is a sort of committee comprising, in addition to the officials, individuals who are consulted in serious cases and whose duty it is to see whether the Fates are propitious and to prescribe suitable philtres for conjuring away evil influences.

3. The *M'boro* consists of several persons, not necessarily members of the *N'bili*, but who owe the blindest obedience to the orders of the *Lubassa*, and whose chief duty is to arrange for all his necessities of life.

4. The *Mapulu*. This title is given to those whose duty it is, under the orders of the *Lubassa*, to prepare the poisons used for the carrying out of vengeance, or for the «tests» which are always made in the event of a calamity, such as the death of a chief. The men of the *Mapulu* also are not necessarily members of the *N'bili*.

A DINKA WITCH-DOCTOR

BY REV. W. L. MILLS.

During the rainy season of last year there was much stir and excitement amongst the Dinka people of the Melut district; consisting of the Agair, Ber, and Nial tribes, on account of the visit of a great witch-doctor of the Dong Jol tribe to the South, on the Sobat river, rumours of whose wonderful powers had reached these parts, and had lost nothing in the telling.

One afternoon there was unusual activity in the village, the big drum was taken out and set up on forked stakes, and all the young warriors paraded the village in full war costume, leopard skins round their loins, and spears and shields in hand, and then all marched out to meet the great « Bain » who was on his way from a near by village where he had been performing his magic.

He was seated on a bed made of ambach, carried on the shoulders of four sturdy young warriors and followed by a huge retinue of people of his own tribe and villages which had been purified by him. His approach was heralded by two men running ahead in a mad kind of way, carrying hippo hide whips, and incidentally they kept up this mad run round and round the village the rest of the afternoon and evening. At the entrance of the village he was met by the old men and women and children and welcomed amidst the acclamation of the people and songs sung in his honour, and conducted to the largest house in the village where the ambach bed was lowered and placed in the shade where he sat while all the men, young and old, knelt down before him, chanting a song in his honour and then crept up on their knees and kissed his hand. A sheep was then brought and sacrificed and the remainder of the day was given over to dancing.

The appearance of the man himself was well calculated to strike terror into the hearts of the people; short of stature for a Dinka being about 5 foot 6 or 7, he was also very stout, which is also an exception : on his

cheeks were small patches of ugly pinkish skin, also on his eyelids and neck, the back of his hands, and his legs from knee to ankle were also covered with the same disfiguring skin, and it was said his body as well. He was dressed in loose baggy half mash trousers with a loose cloth over his shoulders and on his head he wore a large kind of hat made of black ostrich feathers with three beautiful white plumes in front, which gave him quite an imposing appearance.

He gave out that he was the voice of God to the Dinka people, and that they were to be visited by much sickness and many people would die, but he would drive away the evil spirits for a small remuneration and the sickness would depart; as proof of his integrity he assured them he was not born the same as other people, but that his place of origin was the river, therefore water is his *Yab* or totem, and he must not cross over it.

The following day the village was astir before sunrise, and people began to troop in from the outlying *bi* villages, and all formed up and paraded the village in single file, marching round and round in order, — first the old men, then the warriors and younger boys, next the old women and married women carrying babies, then the younger women, girls and children — all singing a song in honour of the great «Bain», and all the while the two mad dancers were running round the outside of the circle with their hippo hide whips.

After this had been going on for an hour or so, they all came to a halt where two bulls were tied up, and formed themselves into a solid group, men in front, women and children behind — all strung to the highest pitch of excitement, awaiting the magical works of the witch-doctor, and all the while the mad dancers performed their antics round and round the expectant group; — occasionally they would make passes with their hands over the two bulls, this was to convey the evil spirit from the people into the animals; the significance of the two bulls being that one was a sacrifice for Deng, who kills by violent death, and one for the Jok, who kills by sickness. Whether these men were actually mad or under hypnotic influence or merely part of the show, is hard to say.

In the meantime, the witch-doctor was in another part of the village working up power with his followers, and after having kept the people waiting in the hot sun in close formation long enough he proceeded on his

way towards them, accompanied by his retinue singing songs in exaltation of his wonders, to the monotonous drone of the drum. Already the excitement was beginning to tell on some, and some of the girls were beginning to dance in an hysterical kind of way assimilating the mad dancers, and some had fallen down in a swoon.

Amidst dead silence he loosed one of the bulls and proceeded to lead it round the group by its rope, but as it was not held very securely it broke away, then the other bull was tried, but it likewise broke away, — that showed that the evil spirit was very bad in the village, it also caused further delay as two fresh bulls had to be brought, as the ones which broke away could not be used again. At last every thing was ready, and once again he unloosed and led round one of the bulls, four times he encircled them, trying each time to make the circle smaller and crowding the people together more, and now and then making passes with his hands over some of the people, the majority of whom were freely perspiring from the heat and in their intense excitement; the bull was then tied up again and the other one taken, the same performance repeated and it in turn tied up. He then armed himself with a sharp spear and with a clever thrust in the right side, behind the shoulder killed them one after the other amidst the shouts of the people : both animals fell on the right side, if they fell on the left side they would not have served the purpose, — and others would have to have been procured, — this happened in some of the other villages. By this time the people were keyed up to the highest pitch of excitement as he armed himself with a club of ambach, and going round to every individual he gave them a sound tap on the head with the club, those who passed the test passed on to form a fresh group, while those who laid or fell down remained where they were to be dragged away and *weaked* in another group for further treatment. Only one man was knocked out, but the women and children were bowled over like nine pins; when all had been laid out, he exchanged the club for a hippo hide whip and then went round to the prostrate forms laceing them over the head and shoulders with the whip until they came to. When all were restored, the two bulls were laid out side by side and he sat on one while all the people stepped over them in single file parading the village; on the second round he once again armed himself with the ambach club and as they stepped over the bulls, so he

gave them a sharp crack on the head with it, those who were knocked out being restored later on by the korbash.

Proceedings being over for the morning, the rest of the day was given over to dancing, the two bulls were cut up and eaten by the followers of the witch-doctor and people of villages who had «been purified», those who had undergone treatment were not allowed to touch it; — several of the girls spent the rest of the day in violent hysterics, running about like mad dancers or demented creatures.

In the evening once again, the people formed up, marching round and round the village and coming to a halt in the same place as in the morning; those who passed the test in the morning stood in a group by themselves while those who fell were divided into two groups. Four goats were taken for each of the latter groups and the same business was repeated as with the bulls, — the goats being led round one after another and then sacrificed, by this time, they were laid down while he gave them a sharp hit on the body with his flat hand, and with a sharp round spear, pierced the throat, and severed the spinal cord allowing no blood to escape, the ambach club and whip business was repeated, and the people had to step over the bodies of the goats, these were subsequently eaten by the witch-doctor's retinue and people of «purified» villages. Many other goats were brought for sacrifice, but these he distributed amongst his followers, keeping only the pick of them for himself, and in addition receiving five head of cattle for his services. So proceedings were concluded amidst general rejoicings.

The whole proceedings were weird and uncanny to a degree, whether the man possessed hypnotic powers, or it was merely hysteria is difficult to determine, but the whole thing savoured of the occult; — the effects took a very long time to work off, for months afterwards many of the young warriors were apparently quite mad, performing weird antics by day and night, although it is difficult to see what good was done, as there has been quite a fair amount of sickness and some deaths. Yet the people still retain their faith in him, and speak of him yet as the man of God and the man of the river.

W. L. Mills.

OUTLINE

OF THE

ANCIENT HISTORY OF THE SUDAN

BY PROF. G. A. REISNER.

PART IV. — THE FIRST KINGDOM OF ETHIOPIA,

ITS CONQUEST OF EGYPT,

AND ITS DEVELOPMENT INTO A KINGDOM OF THE SUDAN.

(1100-250 B. C.)

In the XIth century B. C., Ethiopia was the sole foreign possession which remained to Egypt of the vast empire which once extended from the head waters of the Atbara to those of the Euphrates. The inhabitants of the imperial territory in Western Asia had never been penetrated by Egyptian colonies and had been but little affected by Egyptian culture. The military weakness of Egypt during the internal troubles which marked the reign of Akhenaten and the end of the XVIIIth dynasty had permitted the rise of other powers in Asia, and in particular the great kingdom of the Hittites, who developed an awkward sort of hieroglyphic writing, as yet undeciphered, and a crude art of their own. Rameses II had managed with great difficulty to fight the Hittites to a draw and form an alliance with them. But in the background a more threatening power was growing to full strength, the Babylonian colony in Assyria. At the beginning of the period under discussion, Assyria was still engaged in its struggles with Babylonia, with the Hittites, and with other strong powers about them. These struggles on the north and east on the one hand and the military lassitude of Egypt on the other, freed Palestine and Syria for some time of the interference of the great powers. Thus there came into being the small kingdoms of that

region which have been given so great a place in the memory of the Christian world by the Biblical accounts of the history of Judah and Israel. David and Solomon of Jerusalem, Omri and Ahab of Samaria, Hiram of Tyre, and Benhaddad of Damascus, all of whom stand forth as great men in the writings of the Hebrew priests, owed their independence to the preoccupation of the great predatory nations of Mesopotamia and the Nile Valley. The kingdoms of most of them were to suffer extinction at the hands of Assyria as soon as the war for world domination had ended in the supremacy of that nation, and the rest were swept away by the Chaldean Babylonia which succeeded to the empire of Assyria. In the meantime, these little countries existed as political units of very similar cultural character. Indeed, the Damascenes, the Phœnicians and the Israelites were all members of the Semitic race and their records show no important traces of the influence of Egyptian culture. Ethiopia, however, was now a cultural and administrative part of Egypt and was separated by Egypt itself from the area of Asiatic influence. Thus Ethiopia remained to Egypt because it was a part of the great Nile kingdom, not a foreign possession.

Herihor, the first king of the XXIst dynasty, had been high-priest of Amon-Ra, commander-in-chief of the army, and viceroy of Ethiopia under the last of the Ramessides. A member of the royal family and head of the official autocracy, he succeeded peacefully to the throne and immediately, out of the fulness of his political experience, put in force a simple but effective measure for consolidating the power of the king. This consisted in keeping the high offices which controlled the chief sources of revenue in the hands of his son, and became the traditional policy of the princes of Thebes. A practically perpetual co-regency was thus maintained which made greatly for peaceful succession. But the measure came too late to save the whole of the kingdom for Thebes. Another royal family arose at Tanis and from time to time the highest office left to the prince of Thebes was that of high-priest of Amon-Ra.

The details of the succession, the intermarriages between the royal families of Thebes and Tanis, have little interest for the broader view of Egyptian history and none at all for the history of the Sudan. But the development of the social and religious life of the period was shared by the Egyptianized Sudan. The national life of Egypt and Ethiopia was charac-

terized by an extraordinary complexity. Outwardly, the brilliant ceremonial of the imperial court was still enacted about the person of a divine king. The magnificent temples and palaces built by the great men of an age that was past, swarmed with priests and officials greedy for place and profit. All were parts of an intricate organization, the self-perpetuating character of which is hardly to be overestimated. History has recorded case after case in both church and state of age-long organisms which owed their continuance not so much to their public services as to the union of personal interests which bound a large mass of educated, intelligent men to their preservation. Self-interest in such cases maintains a certain degree of efficiency in keeping order, in collecting the revenues, and in preserving the sanctity of the king and the gods. So it was in Egypt in those years, but justice was a mere matter of policy and the administration was a parody on good government in the modern sense.

The evil government provided by the organized body of Egyptian officials appears on every hand. We find the minor officials poaching in the poultry yards and the fishponds of the temples, and the cemetery workmen systematically looting the rich tombs of the kings and queens at Thebes itself. It may well be doubted whether there was any form of trickery, and corruption, or oppression which was left unpractised by the higher officials and the priests. We know from the attempt made by Horemheb to purify the older administration that even then no high standard of conduct was in force, but at the time now in hand the only principle which is apparent, was that public office is a private perquisite. Of course all bad practices were condemned in the traditional religious writings, as for example in the so-called «negative confession» of the dead. Yet the general disregard for the very principles there enunciated and a cynical contempt for the power of the gods is manifested on every hand. The apparent contradiction is perhaps to be explained by the prevalent belief in the power of ceremonial acts and spoken words to mislead the gods and to secure pardon for every possible offence. The «negative confession» itself was only a properly worded piece of magic intended to compel a favourable judgment on the dead man, a piece of magic available to the unjust as well as the just. The man who had a copy of the «negative confession» knew thereby *the names of the gods of the judgment.* From the

times of the pyramid texts the power of *the name* was one of the main tenets of Egyptian magic. The powerful one was he whose name was hidden, even from his own mother, and who knew the names of all the gods.

This was then the period in which the magical texts for securing prosperity in the future life reached their greatest development and widest use. These are the texts incorporated in the so-called *Book of the Dead,* the nucleus of which was of course much earlier. Portions of them were inscribed on the walls of the tombs, on the coffins, the heart scarabs, the funerary figures (*shawwâbti*), various utensils and a great variety of amulets or sometimes in a more or less complete form on a roll of papyrus placed beside the mummy. The heart scarab was to be weighed against truth instead of the real heart. The funerary figures were to work for the daily bread of the owner in the fields of the other world. And thus by one magic after another, a man could secure an enviable future existence as «a precious, glorified soul» forever. It is to be noted, however, that all this machinery had to be obtained by laborious study as a priestly scribe or purchased from such a scribe. Naturally the magic available for a poor man was often of a very defective character, and it is difficult to escape the conclusion that his purchased immortality was also of an inferior quality. Some of the mummies of poor people are pathetic enough with the bones of several individuals mixed together, with deficiencies eked out with sticks and rags, and with inscriptions ending in mere scribbles. But whether a man was rich or poor, it was the power of words and of ceremonial acts on which each one relied for his future safety.

As for ordinary daily life, the ideas which governed personal conduct were equally crude. The material is not so full as for the Egyptian conception of immortality, but a certain number of votive inscriptions made by men of the lower middle class are sufficiently enlightening. One of these, now in Berlin and published by Prof. Erman, contains a hymn in praise of Amon-Ra, and was dedicated by a certain tomb-painter, named Nebra, when his son, Nekhtamon «lay ill and dying, and had fallen into the power of Amon on account of a sin» (i. e., an offence against the god). Nebra informs us that he had at that time promised Amon, saying: «I will make this stela in your name and I will place this hymn upon it

in writing, *if you will save Nekhtamon for me*». «So I spoke to you and you heard me. So behold I do what I promised. You are the lord of them that cry to you, who rejoices in truth.» Again, an *ex voto* in Turin, also published by Erman, was made by a cemetery workman, named Neferabu, who had been afflicted with a difficulty in breathing (asthma, pneumonia, or a bad cold): «I was an ignorant man and a foolish one. I knew not good from evil. I did an act of transgression against the Mountain Peak (a name of the goddess, Merseger) and she punished me. I was in her hand night and day. I sat on a brick like a woman in pains and cried for air, but none came to me.» Then, probably after trying various magical expedients in the way in which modern Egyptians try various quack-doctors, Neferabu promised to make this stela with the accompanying hymn to the Mountain Peak, and «when I called to my Lady, I found that she came to me with sweet air. She pardoned me after she had had let me feel her power.» At the end, he says: «Behold, let every ear hear which lives on earth, beware of the Mountain Peak». The primitive ideas which lie behind such dealings with supernatural beings, are common enough even in the present day but they are none the less based on a superstitious materialism of a low order. It was obvious to the meanest intelligence that evil deeds were not punished in this world. To offend a supernatural being was more serious, but such offences being more of a ceremonial character such as touching a shrine with impure hands, were more difficult to guard against. When they occurred, the offender, or the victim of the god's anger, had to be bought off by a bargain like one of the above examples.

Turning to the theological expositions of the higher class of scribes, one finds explanations of the creation, of the relations of the gods, and of the underworld, similar in many ways to those of the Babylonian priests some of which have come down to us in the *Book of Genesis*. Nor is there any lack of hair-splitting commentaries of these expositions, such as the Hebrew, Christian, and Mohammedan theologians of certain periods loved to compile. Thus the knowledge of the ancient Egyptian scholars was richer in details, but the fundamentals of their beliefs in regard to life and death were much the same as those of the common herd. Nor were the gods as the Egyptians conceived them much different from men. There is a tale inscribed on the walls of the tombs of Sety I and Rameses III, published

by Naville under the title *La destruction des hommes*. The great god Ra had become old and mankind losing their respect for him had begun to blaspheme his name. He summons a council of the gods bidding them to «come quietly lest the people should hear them». The gods advise Ra to send Hathor to destroy all mankind. The people take alarm and flee to the desert. Hathor pursues them and slays them for a day making indescribable slaughter so that Ra's pity is aroused. But he cannot recall the word of power. He therefore plays a trick on Hathor. Having obtained a great quantity of beer and colored it with the juice of a plant to look like blood, he makes a pool of it in the place where Hathor is to go forth for the second day of slaughter. Hathor, attracted by the blood-like appearance of the pool, stops to admire her face in the mirror of the surface, drinks of the pool and becomes so intoxicated that she forgets her purpose. Thus, by a trick, the total extinction of man is prevented by the great god who had spoken the word of power and then repented of his order.

With such ideas current, it is hardly a matter of wonder that great weight was attached to the orders of the gods given by visible signs in the great temples and still less that the priests ventured to engineer the necessary movements of the statues of the gods. The high-priest Menkheperra, afterwards king of Egypt, who was a great-grand-son of Herihor, once had occasion to settle a civil disturbance at Thebes caused apparently by too great severity in punishing prominent men for unnamed misdeeds. The account is as follows: «Then the high-priest of Amon, Menkheperra, said (to Amon): O my good Lord, there is an affair, shall it be told (to you)? Then the Great God nodded violently. Then he spoke again to the Great God, saying: O my good Lord, the affair is that of these servants, against whom thou art angry, who are in the Oasis, whither they are banished. Then the Great God nodded violently.» After a hymn of praise to Amon-Ra, mentioning his readiness to forgive, the high-priest continues: «Thou shalt hearken to my voice on this day and thou shalt forgive the servants whom thou hast banished to the oasis, and they shall be brought back to Egypt. And the Great God nodded violently.» It is impossible to penetrate to the intrigue which lies behind all this, but it is clear that an oracle was obtained banishing certain men to the oasis, that the political consequences made it necessary to reverse the decree, and Amon-Ra consider-

ately revoked his oracle (see *Bar*, IV, 650-658). An inscription at Karnak, of the time of Painezem II, the son of the Menkheperra mentioned above, says that on a certain day, the high-priest, Painezem, «took counsel of the affairs of this land, before the Great God (i. e., Amon-Ra)», and «this Great God determined that which the scribes, the inspectors and the administrators had done, who had committed fraudulent acts in Thebes, his city. Then the Great God condemned the scribes, the inspectors, and the administrators, because of the acts of fraud which they had committed.» The inscription then gives the procedure in the case of a certain Thothmes who was acquitted. Two writings were placed before the statue of the god, one saying he was guilty and the other that he was innocent. «Then the Great God took the writing which said : there are no matters to be investigated in the case of Thothmes» and rejected the other. This extraordinary method of controlling the acts of officials needs no comment. It is indeed surprising to find that the priests, in spite of their intimate knowledge of the machinery for controlling the physical manifestations of the god's will, were fond of promulgating their testaments and their land conveyances as divine decrees. Perhaps, it was the best they could do under the circumstances and possibly they relied somewhat on the proverbial honour among thieves.

Thus in faint outline was the state of life in Egypt at the beginning of the period under consideration. All these beliefs and customs spread through the whole nation even to the southern limits of Ethiopia. Amon-Ra of Karnak was Amon-Ra of Gebel Barkal, and what the priests did in Thebes, their brothers also carried out in Napata.

Politically the great event was the seizure of the throne of Egypt by the Libyans, about 945 B. C. Foreign mercenaries had been employed in the Egyptian army as far back as the time of Rameses II, and Mazay and other Nubian tribes even in the Old Empire. During the XXth and the XXIst dynasties, the Egyptian government came to rely mainly on the Libyan troops. The Libyans, badly beaten by Merneptah and Rameses III in their attempt to invade Egypt by force, had nevertheless succeeded in filtering into Lower Egypt and the Delta in considerable numbers. Here they rapidly became Egyptianized, and about the beginning of the XXIst dynasty, a certain Mawasen, son of Buyuwawa, became priest of the god Harsaphes

at Heracleopolis (Ehnassiyah). This is the man whom I believe to have been the ancestor of the kings of the first Ethiopian monarchy. For four generations, his descendants held the post of priest of Harsaphes at Heracleopolis. Then, Namlat (or Namrat), representing the sixth generation, became «great chief» and his son, Sheshonk, seized the throne of Egypt as Sheshonk I. The course of events is obscure, but one surmises that the family had gained complete control of the Heracleopolitan nome, that Namlat extended his territory to cover the Delta, and Sheshonk took the throne without much difficulty. He commanded, no doubt, a strong force of his own hardy tribesmen and possibly the Libyan mercenaries of his rivals deserted to him.

The Egyptianized Libyans brought a fresh virility into the general management of Egyptian affairs. Sheshonk I, mentioned in *I Kings* 9, 16 as Pharaoh and in 14, 25 as Shishak, is said to have made an alliance with Solomon, but to have plundered Jerusalem in the 5th year of Rehoboam, son of Solomon. His own inscription at Karnak proves that he made at least one successful campaign in Palestine. The Harvard Palestinian Expedition found, in the court of the palace of Ahab at Samaria, a broken alabaster vase with the names of Osorkon II, a great-grand-son of Sheshonk I, which could only have been a royal present. Thus the relations between the Libyan king and Ahab seem to have been those of a friendly alliance. Ethiopia remained united with Egypt, but there is no sign of a revival of the Egyptian empire.

Internal conditions in Egypt appear little affected by the Libyan domination and for our purpose little need be said of the succession of the Sheshonks, the Osorkons, and the Takelats, who with their families enjoyed the profits of kingship. Sheshonk I married his son, the crown-prince Osorkon, to one of the princesses of the Tanite royal family and he made his younger son, Yuwpuwt, high-priest of Amon-Ra and commander-in-chief of the army. Thus, it was Yuwpuwt who probably acted as viceroy of Ethiopia, and his successors in office may also be assumed to have acted as viceroys. But little is said of Ethiopian affairs. The tribute is mentioned a few times, and one or two of the kings include in their laudatory predicates that of conqueror of the southern lands. It may however be safely concluded that Ethiopia retained its place in the Egyptian organism and

shared the conditions of Egypt, although the written records offer no explicit information.

About 750 B. C., two hundred years after Sheshonk became king, and over three hundred years after the last important reference to the Sudan in the Egyptian inscriptions, Ethiopia appears again in the records no longer as a province of Egypt, but as the seat of an independent monarchy of which the Thebaid was the northern province. Historical research has not yet succeeded in penetrating the obscurity which covers the origin of this monarchy; but something can be inferred from the contemporary conditions in Egypt. The virility of the earlier Libyan kings had weakened, and the monarchy had become little more than a coalition of local dynasts, paying tribute and nominal submission to the king. These dynasts, who called themselves kings and enclosed their names in cartouches, were mostly Egyptianized Libyans whose family history must have been similar to that of the king. There thus appear to be several different kings ruling in Egypt at the same time, and certain of these dynasts did from time to time make themselves independent. Under these circumstances, it may be reasonably assumed that the Libyan prince who had the command of Ethiopia would also have made himself a more or less independent place as governor of Ethiopia. This man I believe to have been the commander-in-chief of the army, the son of King Sheshonk III and the time about 775 B. C. I found an inscription of his at the Nuri pyramids. He appears never to have taken the title of king, but a man named Kashta, whom I believe to have been his son and successor, appears as the first of the line to call himself «king». Kashta, having inherited Kush and being descended from Sheshonk II or III, managed to displace Osorkon III (Sa-Isit) from Thebes and force the adoption of his daugther Amenirdis by Shepenwepet, the daughter of Osorkon, high-priestess of Amon-Ra. This is irrefutable proof that Kashta had obtained the mastery of Upper Egypt from Thebes to Assuan in addition to Kush itself. Osorkon retired to Bubastis in the Delta with such vestiges of power as were left to him over the Lower Egyptian dynasts.

The king of Ethiopia and of Thebes was now in possession of a considerable military power and a very comfortable income. He had control of all the traffic between Egypt and the south, as well as the gold mines,

and he held the right of taxation over a considerable agricultural area in Egypt itself. The man power at his disposal was probably equal in numbers to that of the rest of Egypt and perhaps of better quality owing to the levies of negroes and Nubians. His capital was the old city of Napata, situated on the Nile at the place now called Gebel Barkal, or the railway station of Kareima. It was a place of some magnificence, adorned with at least three Egyptian temples built by Thothmes IV, Amenophis III and Rameses II, and we may assume palaces and fortifications to correspond. From that place northwards to Assuan, the bank was strewn with great and small temples and Egyptian colonies. Probably the commandants and most of the leading men in these colonies were now of Egypto-Libyan descent like Kashta himself. Egypt as will appear below from the inscription of Kashta's son Piankhy, was held by the military officers of the Ethiopian king just as Ethiopia in the preceding century had been held by the military officers of the king of Egypt. Such is the history of the origin of the first royal family of Ethiopia as I would reconstruct it from the scanty materials at hand.

For convenience of reference, the first dynasty of Ethiopia may be set forth as follows :

Sheshonk III..	King of Upper and Lower Egypt..	About	790-750	B. C.
Pashedenbast .	Governor of Ethiopia.....	—	770	B. C.
Kashta.....	Governor of Ethiopia.....	To ca	750	B. C.
	King of Kush and Thebes.....	About	750-740	B. C.
+ Piankhy I....	King of Kush and Thebes.....	—	740-721	B. C.
	King of Kush and Egypt.....	—	721-715	B. C.
+ Shabaka.....	King of Kush and Egypt.....	—	715-700	B. C.
+ Shabataka....	King of Kush and Egypt.....	—	700-688	B. C.
+ Tirhaqa.....	King of Kush and Egypt.....	—	688-663	B. C.
+ Tanutamon ..	King of Kush and Egypt.....	—	663-661	B. C.
	King of Kush.....	—	661-653	B. C.

The great document for the extension of the territory of Kush northwards to the Mediterranean is the granite stela of Piankhy which was found in the temple of Amon-Ra at Gebel Barkal in 1862 and is now in the Cairo Museum. It has considerable interest for the ideas prevailing in Ethiopia as well as for the history : It begins : « Year 21, first month of the first

« season, under the majesty of the King of Upper and Lower Egypt, « Piankhy-Meryamon, living forever. The command which My Majesty « speaks : Hear what I have done more than the forefathers. I am the « king, a part of the god, a living image of Atum, who came forth as a « great leader, as a ruler whom those greater than himself feared, whose « father knew and whose mother realized that he was to be a ruler while « he was in the egg, the Good God, beloved of the Gods, the Son of Ra, « achieving with his own hands, Piankhy-Meryamon. One came to His « Majesty to say : The chief of the Westland, the great nomarch in Neter, « (called) Tefnekht, is now in the..... nome, in Xois, in Hapi, in..., « in Ayan, in Pernub, and in Memphis. He has seized all the Westland « from the marshes to Yethtauwi, coming upstream with many soldiers. « The two lands are united behind him. The nomarchs and the comman- « dants are as dogs at his heels. No fortress has closed (its doors as far) as « the nomes of Upper Egypt. Meratum, Perskhemkheperra, Hathetersebeq, « Permezer, Thekanesh, every city of the westland, — they have broken « their doors because of fear of him (i. e., unconditional surrender). He « turns to the eastern nomes and they likewise open to him, — Hatbennu, « Taiwazyt, Hatnesûti, and Pernebtepyeh. Behold, (he) besieges Khenen- « nesuti (Heracleopolis). He has completely invested it. He allows no « one to come out or to go in, fighting every day. He has distributed « himself around its whole circumference (so that) each (of his) nomarchs « knows his (part of the) wall. He causes each man of his nomarchs and « commandants to besiege his portion. Then (His Majesty) heard (these « things?) as one great of heart, laughing and his heart was glad. These « chiefs, nomarchs, and captains who were in their cities sent to His « Majesty every day, saying : Wilt thou be silent, ignoring the land of Upper « Egypt, *the nomes of the Court?* Tefnekht seizes upon it, finding none to « withstand his arm. » Thus it appears that the Upper Egyptian nomes were in a special relation to the king of Kush, probably part of the inherited kingdom left by Kashta. A little further on it is said that the dynast of Eshmun, near Minieh, had forsaken his allegiance, so that the part of Piankhy's Kingdom under allied vassals extended at least as far north as Minieh. Piankhy sent orders to his nomarchs and captains in Egypt to take up their position along the frontier of the Hare-nome and hold

Tefnekht. He then gathered an army in Ethiopia and sent it to destroy the army of Tefnekht. His instructions as to their tactics was full but more interesting for the present purpose is the following paragraph : « When « you arrive at Thebes, opposite Karnak, you shall enter the water, you « shall wash in the river, you shall put on fine linen, laying aside the bow « and unslinging the quiver. The chief shall not boast himself a man of « might... There is no might in the strong man who is ignorant of him « (Amon). He (Amon) makes the weak man to a hero, so that a multitude « turns the back to a few and one man takes a thousand. Sprinkle your- « selves with the water of his altars : kiss the earth before him. You shall « say to him (Amon) : 'Lead us that we may fight in the shadow of thy « mighty sword; the troop who comes to thee, its victory is sure (lit. be- « comes), for it overcomes a multitude.' Then they (the officers to whom « Piankhy was speaking) threw themselves on their bellies before His « Majesty, (saying) : It is thy name which gives us strength. Thy counsel is « the anchor of thy army. Thy bread is in our bellies on every march; and « thy beer quenches our desire. It is thy might which gives us strength, « and there is power in the remembrance of thy name. No army is perfect « whose commander is a coward. Who is thy equal (as a commander)? « Thou art the victorious king, achieving (victory) with his own arms, « the overseer of the works of warfare. (Then) they sailed away down- « stream. They came to Thebes and they did all that His Majesty had told « them. » This army accomplished many great victories, but Tefnekht, the leader of the opposing forces always escaped and managed still to hold the country as far south as Eshmun. Piankhy, sitting in his palace in Napata (Kareima), grew ever more angry with his army, at the failure to obtain the utter breaking of Tefnekht's power. Finally he went north himself, stopping at Thebes to celebrate the Festival of Ipet, and arriving at Eshmun besieged by his army, he took personal command of the operations. The account of the successful sieges and battles which followed may be read in Prof. Breasted's careful translation in his *Ancient Records of Egypt* (vol. IV, pp. 419-444). Memphis was taken by assault by the use of ships, and the soldiers seem to have been allowed twenty-four hours plundering. After that the Delta dynasts, including Tefnekht, surrendered unconditionally and swore allegiance to Piankhy. The inscription

ends : « Then the ships were loaded with gold, silver, copper, clothing, every « thing of the Northland, every offering of Syria, and all the perfumes of « the God's Land. So His Majesty sailed upstream with joyful heart. The « two banks were cheering; and the west and the east received a holiday (?), « cheering in the presence of His Majesty, singing and cheering. They « said : 'O mighty ruler, O mighty ruler, O Piankhy, O mighty ruler. « Thou goest having conquered the Northland. Thou makest the bulls « (i. e., strong men) like women. Sweet is the heart of the mother who « bore thee, of the husband who begat thee. Those in the valley give « praise to her, the cow that hath borne a bull. Thou art for ever, thy « strength endureth, O ruler, beloved of Thebes' ».

It is to be noted that Piankhy's commanders in Egypt, Puwarma and Lumersekny, as well as most of his opponents, such as Osorkon, Yuwpût, Akanesh, Pama and Huwrabas, have Libyan names, while others of his opponents who have Egyptian names are said to be chiefs of the Libyan mercenaries and are probably Egyptianized Libyans. It is also clear that Piankhy's conquest did not result in bringing Lower Egypt under the central Ethiopian administration at Thebes but only in making the northern dynasts tribute-paying subjects of the king of Ethiopia and Thebes. Piankhy returned to Napata, where he had been born, and it is little we know of the rest of his reign. He reconstructed the great temple of Amon-Ra built by Rameses II at Gebel Barkal, was liberal in his gifts to the temples, and was no doubt a favourite of the priesthood both at Thebes and at Napata. After the campaign of Piankhy, Tefnekht seems to have acted as Piankhy's agent in the north and head man of all Lower Egypt. His son who succeeded to this position, assumed the royal titles about 718 and was counted by Manetho as the only king of the Egyptian XXIVth dynasty. When Shabaka, the brother, or half brother, of Piankhy came to the throne of Kush about 715 B. C., Bekenrenef continued to be called king but acted more or less as a vassal of Shabaka. About 710, Shabaka, wearied not doubt by the continual unrest in Lower Egypt, finally established the Ethiopian administration firmly over the whole of Egypt. Manetho says that he burned Bekenrenef alive. From that date then, the historians reckoned the kings of Kush as the XXVth Egyptian Dynasty, ignoring Kashta and Piankhy. The position of Napata at the upstream end of Dongola

Province was very unsuitable for the capital of all Egypt, and Shabaka transferred his residence and the seat of the government to Thebes. He had his daughter, Shepenwepet II, adopted by his sister, Amenirdis I, as god's wife of Amon-Ra and his son, Horemikhûti, made high-priest of Amon-Ra of Karnak.

In this wise Ethiopia conquered Egypt and the ruler of the Ethiopian Empire was known through the ancient world as the king of Kush and Misr, or Ethiopia and Egypt. For at this time, 750 to 700 B. C., events were preparing in Western Asia which were to force Ethiopia into the great struggle for world domination. Battles were being fought in Mesopotamia, in the swamps of Bosra, in the plateaux of Persia, in the mountains of Armenia, and in the land of the Hittites which were to make Assyria the dominant power of Western Asia. The advance of the Assyrians southward through Syria and Palestine was gradual. Each campaign was made to pay richly in plunder and tribute. In 732, Damascus was taken by Tiglath-pilezer, king of Assyria and Babylonia, and the Syrian kingdom became an Assyrian province. In 721, about the time that Piankhy invaded Lower Egypt, Sargon of Assyria took Samaria and transported the people of Israel to Mesopotamia. Only the kingdom of Judah lay between the borders of the Assyrian Empire and Egypt. The *Book of Kings* gives a vivid description of the vacillations of Hezekiah, between submission to Assyria and cooperation with Egypt. In 705, Sargon was succeeded by his son Sennacherib. Outwardly, the two great powers, Assyria and Ethiopia, about to meet in mortal conflict, maintained friendly relations, for a fragment of a clay tablet found in the royal archives of Assyria at Nineveh bears the seals of Sennacherib and of Shabaka, his contemporary. But each of these two kings must have realized that sooner or later the Assyrian armies would attempt to make Egypt part of the profitable estate of Assyria. The smaller countries of Palestine and Arabia shared the terrors of Judah, those already conquered were seething with discontent because of the outrages and extortions of the Assyrians. Shabaka could not well refrain from fostering a coalition of these small powers against Assyria and promising his help. About 701 B. C., Sennacherib came down and besieged Jerusalem. Our principal evidence is contained in the double account given in *II Kings* 19. Hezekiah was hard pressed. He stripped even the temple to make up

the tribute demanded as a ransom for the city, and in the end the Assyrians went away. This departure is explained by one account as due to the approach of an army lead by Tirhaqa, king of Ethiopia, and in the other to a visit of the Angel of the Lord. The favoured interpretation is that these accounts are merely two different aspects of the same event. The mistake of calling Tirhaqa king is explained as arising out of the fact that he commanded the Ethiopian army on behalf of his uncle Shabaka and became king later. In any case it is clear that the Ethiopian king was taking an interest in the advance of Assyria and that with the submission of Jerusalem, the next advance westward of the Assyrian would be at the expense of the Egyptian province of Ethiopia.

For twenty years, Sennacherib and his son Esarhaddon were preoccupied with affairs in the east. Syria and Palestine quietly paid their tribute and no occasion arose for sending an Assyrian army to the west. Shabataka succeeded Shabaka, his father (?), and was followed about 688 by his cousin Tirhaqa, a son of Piankhy. The Ethiopian kings had by now firmly organized their government of Egypt, but without departing from the old Libyan feudalism by which the local administration was left in the hands of hereditary dynasts whose territorial limits followed roughly those of the ancient nomes. But it does not appear that they made any reorganization of the army or any special preparations for a conflict with Assyria. Nevertheless, Tirhaqa carried on a series of intrigues with the vassals of Assyria, especially with Sidon and Tyre. Abdimilkut, king of Sidon, was encouraged by Tirhaqa to refuse his payments, and, as a result, lost his life in 676. Tirhaqa appears to have done nothing to help him. In 674, the kings of Arabia tried the same game and had their kingdoms destroyed by Esarhaddon. In 673, Baal, king of Tyre, also listened to the messages of Tirhaqa and was besieged in this city. At the same time, an Assyrian army was sent against Tirhaqa but was defeated, or at any rate forced to withdraw. The siege of Tyre lasted five years, and Esarhaddon became thoroughly enraged against Tirhaqa. In 670, he advanced to the Egyptian frontier, where he met and routed the Ethiopian army. Tirhaqa fell back on Memphis. Fifteen days later, the capital of Northern Egypt was taken by assault, but Tirhaqa escaped southwards, leaving his harīm in the hands of the enemy. Esarhaddon satisfied with the plunder of Memphis

and the Delta did not follow up his victory, but contented himself with receiving the submission of the Delta dynasts and reappointing them to their posts as Assyrian vassals. The Assyrian had a stela made on which he represented Tirhaqa as a negro led captive by himself with a ring in his nose, but that was only an oriental boast. Moreover, Tirhaqa was not a negro, for the statues of both himself and his descendents show features which might be Egyptian or Libyan but certainly not negro. A similar boast was Esarhaddon's claim that he was king of Misr, Tatarisi, and Kusi, that is Egypt, Southern Egypt and Kush. It is improbable that he or any of his army ever saw Tirhaqa or Upper Egypt, much less Kush; but probably the fickle Delta men currying favour with the Assyrian spoke of Tirhaqa contemptuously as «that nahsi» (that negro) of Ethiopia.

Esarhaddon was hardly out of Egypt before Tirhaqa was back with another army levied in Upper Egypt and the Sudan. He made quick work of the vassalage of the dynasts to Assyria, occupied and restored Memphis, and renewed his messages to the Tyrian king. It must be remembered that while Tirhaqa had now become the Ethiopian king, Ethiopia was culturally a part of Egypt and the king of Ethiopia was by descent an Egyptianized Libyan like the dynasts themselves. They felt no loyalty to the foreign king of Assyria and very little to the Libyan king of Ethiopia and Egypt. So we find them switching from one side to the other during the next ten years each seeking to save what he could for himself from the confusion. A letter sent by these dynasts to Tirhaqa, a few years later in the reign of Esarhaddon's son, Ashurbanipal, was intercepted by the Assyrian general in Egypt and is given by Ashurbanipal in his *Annals* as follows : «Peace be between us and let us be friendly. We will divide the «land among ourselves and no one else shall be lord over us.»

Esarhaddon died in 668 while on his second expedition against Tirhaqa, and his son, Ashurbanipal, continued the campaign, calling it his first expedition. His account in the cuneiform inscription has considerable interest for the ideas which prevailed for centuries in the ancient world, and runs as follows : «Tirhaqa, king of Egypt and Ethiopia, whom Esarhaddon, «my father overcame and took his land, — he, Tirhaqa, forgot the power «of Ashur, Ishtar, and the Great Gods, my Lords. He trusted to his own «strength and attacked the kings, the governors, whom my father had

« appointed in Egypt, and came to kill, to plunder, and to seize Egypt. « He set himself in Memphis, a city which my father had captured and « added to the territory of Assyria. An express messenger came to Nineveh « and informed me. » It is seen that the worthy Assyrian scribe gives the official Assyrian view. Moreover, the messenger actually came to Esarhaddon, but Ashurbanipal continues as if he alone had been concerned. We know the truth from the dry, matter-of-fact record of the events of each year kept for practical purposes by the scribes of a Babylonian temple. Ashurbanipal tells of the mustering of his army, the march to Egypt and the great battle in « the open field », by Karbana in the eastern Delta. The mixed army of Ethiopians, Egyptians and Libyans was completely broken, and « Tirhaqa in Memphis heard of the rout of his army. The terrifying « glory of Ashur and Ishtar cast him down and he went mad with fear. « He left Memphis and fled for his life to Thebes ». Ashurbanipal followed him, reaching Thebes in 40 days. Tirhaqa drew his army off to the west bank, and the Assyrians took Thebes apparently unopposed. Ashurbanipal strengthened the Assyrian garrison in Lower Egypt, reinstated the Egyptian dynasts as governors of their respective provinces, and returned to Nineveh laden with the plunder of the temples and palaces of Egypt. The Assyrian text gives the names of twenty of these lesser « kings » whose Libyan or Egyptian names look queer enough in their cuneiform dress but are still recognizable. The two most important are Nikhu (= Egypt. *Nekauw*, and Greek, *Necho*) of Sais, and Mantimekhi (= Egypt. *Mentuemha*) of Thebes. Necho was the father of Psammetik I who founded the Egyptian XXVIth or Saite Dynasty and fostered the Egyptian renaissance. Mentuemha of Thebes was a loyal agent of Tirhaqa from whom we have statues and inscriptions found at Thebes which prove that it was he who restored the temples and the statues damaged by the Assyrians and did so in the name of King Tirhaqa. Even the Delta nomarchs were only temporarily submissive. They soon engaged in a conspiracy against the Assyrians when the letter to Tirhaqa mentioned above was written. This attempted rising was put down by the Assyrian garrison, greedy no doubt for plunder and outrage, and the guilty nomarchs were sent in chains to Nineveh. Necho, however, was pardoned and sent back to Sais. As for Tirhaqa, the Assyrian writes : « The frightfulness of Ashur, my Lord, cast him down in the place whither he had

fled, and his dark fate (i. e., death) came to him. Afterwards, Tanutamon, the son of Shabaka, sat on his throne». Ashurbanipal also relates his expedition of the year 661 against Tanutamon. Thebes was taken a second time and plundered of its «countless booty». Tanutamon fled southwards, and no king of Ethiopia again ruled over Egypt. Nor did the Assyrians ever again invade Egypt, for some fifty years later, Nineveh itself was taken and looted by the Medes.

Tirhaqa and Tanutamon have each left us one inscription which may be called historical, but that of Tirhaqa is in a fragmentary condition. It was set up at Tanis to commemorate a visit of his mother to Egypt. He had come away from Napata as a young man of twenty in attendance on the king, that is, his uncle Shabaka. Now that he occupied «the throne of Horus of the living» and had appeared in the great double crown of Egypt, he sent for his old mother that she might feast her eyes on his magnificence, just as Isis looked on her son, Horus, when he received his inheritance as king of the Earth. He restored the temples of Thebes after the first Assyrian conquest, but devoted most of his attention to the temples at Napata. There he restored one of the halls of columns of the temple of Rameses II, and placed in it the great grey granite altar inscribed with his name, which now lies broken in the ruins of the temple. He also made two rock-cut temples in the cliff «north» of the great temple, and he built the temple at Merowe which was excavated by Prof. Griffith in 1912-1913. Tirhaqa also founded the great royal cemetery of Ethiopia at Nuri (near Merowe), where twenty kings of Ethiopia and fifty-three of their royal ladies were buried. His pyramid was excavated by the Harvard-Boston expedition in 1916-1917, but was found completely plundered in ancient times. The coffin which had been of wood and the mummy with its cases had been broken up so that a few fragments of a leg bone were all which was found of this great king. Nevertheless, there were many objects found in the debris despised by the plunderers or dropped by them accidentally. A large series of funerary statuettes, so-called *shawwâbtis*, of stone, beautifully worked, a few stone vessels, and a number of gold ornaments. Many of these are now on exhibition in the Museum at Khartoum. Near the temple of Amon-Ra at Gebel Barkal, the Harvard-Boston expedition also found a gigantic black granite statue of Tirhaqa, broken but practically com-

plete with a portrait head of the king. This too is destined for Khartoum.

As for the inscription of Tanutamon, it is on a stela found with the Piankhy stela in the same temple from which came the statue of Tirhaqa. It is ordinarily known as the «dream stela». The text begins : «The good «Good God (i.e., Tanutamon), on the day he was born, he was (the god) «Atum for mankind, lord of the two horns, ruler of the living, a king «seizing every land, mighty of strength on the day of battle, hastening on «the day of attack, lord of might like Montu (god of war), great in strength «like a lion, true of heart like (the god) Thoth, crossing the great sea «after his opponent, and attaining him who opposes him. He has seized «this land without fighting, without opposition, the King of Upper and «Lower Egypt, Bakara, the Son of the Sun, Tanutamon, beloved of Amon-«Ra of Napata.

«In the year of his coronation as king (of Kush), His Majesty saw a «dream in the night : (There were) two serpents, one on his right hand and «one on his left hand. When His Majesty awoke, he found them not; and «His Majesty said : Wherefore has this come to me? Then it was explained «to him, saying : 'Thou shalt have the Southland, and thou shalt seize the «'Northland. The two crowns shall appear on thy head. The land shall be «'given to you in its length and its breadth. No other shall share it with «'thee.' His Majesty appeared on the throne of Horus in this year.

«His Majesty went forth from the place where he was as Horus went «forth from Khemmis (to assume the crown). When he went forth from «. . . . . , a million, one hundred thousand came to him to follow him, «and His Majesty said : 'The dream was true. Glorious it is for him who «sets it in his heart : evil, for him who is ignorant of it'. Then His Majesty «went to Napata.» His accession was recognized by Amon-Ra in the midst of the Holy Mount (Barkal), and after various offerings, Tanutamon went northwards to Thebes, where he was recognized by Amon-Ra of Karnak. «Then His Majesty sailed downstream to the Northland while east and west «cheered, singing and cheering, and they said : 'It is come in peace, and «thy *ka* is at peace to give life to the Two Lands, to restore the temples «which begin to fall in ruins, to set their statues in their places, to endow «the offerings of the gods and the goddesses, and to put the priest in «his office, and to make all things belonging to the gods'. They whose

« hearts were set on fighting, became jubilators (i.e., joined in the wel-« come to the king).

« His Majesty arrived at Memphis and the children of rebellion came forth « to fight with His Majesty. His Majesty made a great slaughter among « them, of uncounted numbers. His Majesty seized Memphis and entered « the Temple of Ptah-South-of-his-Wall. He made his offerings to Ptah-« Sokar.

« And His Majesty was glad of heart so that he made a monument for « his Father, Amon of Napata. He gave an order for it to the land of « Ethiopia, to build for him a new hall of columns, one not found built in « the time of the forefathers. His Majesty caused it to be built of stone, « overlaid with gold (foil); its columns were of cedar, smoked with the « myrrh of Punt; the doors thereof were of electrum and the bolts of *tekty* « (an unidentified metal, or alloy). He built another hall at the back for « milking his many herds in (their) tens of thousands, thousands, hundreds, « and tens. There was no counting the young calves with their cows. » This building has not yet been found at Barkal, but many ruins remain unexcavated.

« After this, His Majesty went down stream to fight the princes of the « Northland, but they entered their strongholds as (mice creep) into their « holes. His Majesty spent many days before them, but not one of them « came forth to fight with His Majesty. » Tanutamon then returned to his palace in Memphis and while devising means of overcoming the Delta chiefs, they made their submission voluntarily and accepted the annual tribute laid on them. The dream is not again referred to, but the closing words mark its complete fulfilment : « The Southerns came downstream « and the Northerns came upstream to the place where His Majesty was « (probably Memphis), bearing every good thing of the Southland and all « supplies of the Northland to satisfy the heart of His Majesty, who was « now the King of Upper and Lower Egypt, Bakara, the Son of the Sun, « Tanutamon, may he live, be prosperous and well, appearing on the throne « of Horus for ever ». All this took place in the year 663, soon after the Assyrian general had quelled the revolt of the local dynasts. Two years later, Ashurbanipal made the last Assyrian invasion, mentioned above, and Egypt was left with Tanutamon in Napata and Psammetik I, son of

Necho, at Sais. Tanutamon held Thebes down to his 8th year, 655, B.C. for a stela recording a sale of land at Thebes is dated in that year. In 654, Psammetik forced the adoption of his daughter Nitocris as hereditary high-priestess of Amon-Ra at Thebes on Shepenwepet III, the aunt of Tanutamon, and the records of the height of the high Niles of 653, 652, 646 and 644 are dated in the 10th, 11th, 17th, and 19th years of Psammetik. It is clear that Tanutamon had lost Upper Egypt in 654 and probably died either that year or in 653.

The stunning defeats of the kings of Ethiopia by the Assyrians had broken their prestige both at home and in Egypt. It may be assumed that the Ethiopians had borne the brunt of the fighting, and the heavy losses of their picked companies had reduced the Ethiopian army to a position of equality with the united forces of the Delta, or even one of inferiority. The Upper Egyptians to whom the matter was merely one of a change of masters, each considerate of the temple dues, had learned to take what came without risking their skins for either side, — a lesson they seem never to have forgotten. Tanutamon still held Thebes while Psammetik at Sais was organizing his young kingdom; but the accumulated wealth of Thebes had gone to Assyria, the cattle had been driven off, and the province could hardly have yielded any considerable revenue. At the same time, the wealth of Ethiopia had been dissipated in the great military effort, the old trade with the south was disorganized by the destruction of Egyptian production, and Tanutamon must have been a very poverty-stricken monarch. At Nuri, where he and his queens were buried, we found their pyramids to be of pitiful size and while the tomb furniture included a few heirlooms of fine workmanship, most of it was common and cheap. The funerary figures (*shawwâbtis*) of the king were of blue fayence made in an ordinary mould. By a lucky chance, this same mould was used for a few of the funerary figures of one of his ladies, a wife or a daughter, which led to the identification of the group of queens' tombs of his reign. Of the two queens mentioned on the «dream stela», one of them, Irtiuwruw, was buried in the very small tomb with only a symbolic pyramid which I numbered Nuri LIII. The poverty of these burials is striking, and shows clearly that Tanutamon was in reduced circumstances, being probably followed by a king of another branch of the family. This conclusion is borne out by the

fact that the next two kings were not buried in the cemetery of Tirhaqa at Nuri but founded a new field of pyramids at Kurru, about 15 miles down stream on the other side of the river.

The kings of Ethiopia were now thrust back within the borders of that land. The Assyrian Empire was torn by a struggle between Ashurbanipal and his brother, Shamashshumukin, whose names and fates have been so curiously mixed in the story of «Sardanapalus». Psammetik, left undisturbed, organized the resources of Egypt and secured the funds necessary to build up an effective army of mercenaries, mainly Greek, with which he broke the power of the Egypto-Libyan dynasts. He fostered the trade with the Mediterranean ports and along the Arabian caravan routes, but he seems to have been content to let the Ethiopians alone. Both parties were interested in the southern trade lines and probably found no profit in a conflict. It is possible that Assuan, the «market-place», remained in the hands of the Ethiopians and even Thebes, at some moment of Saite preoccupation, may have been occupied for a short time. But the future of Egypt now lay in the Mediterranean while that of Ethiopia rested in the negro districts to the south.

Thus the Ethiopian Empire came to its end. Its material power had rested on the intensive exploitation of its natural resources and its favourable commercial situation by a highly intelligent class of Egyptian immigrants; and the extension of its territory had been won by the spirit of a strong family of Egyptianized Libyans. For the moment the accumulated wealth of Ethiopia was dispersed, its man power weakened, and the spirit of its rulers broken; but the trade routes and the gold mines were still there awaiting only favourable conditions to become again sources of revenue. The virile family of Kashta was still in the land, as well as an upper class of Egyptians, consisting of priests, scribes, officials, and craftsmen of every art. In the temples built by the Thothmes', the Amenophises, and the Rameses', by Piankhy and Tirhaqa, the rites of Egypt were still fulfilled from day to day, carried out according to the Egyptian papyrus rolls stored in the temple archives. Culturally Ethiopia was still a part of Egypt.

Until the Harvard-Boston expedition excavated the pyramids of Nuri, in 1916-1918, the history of the kingdom of Ethiopia after the fall of the

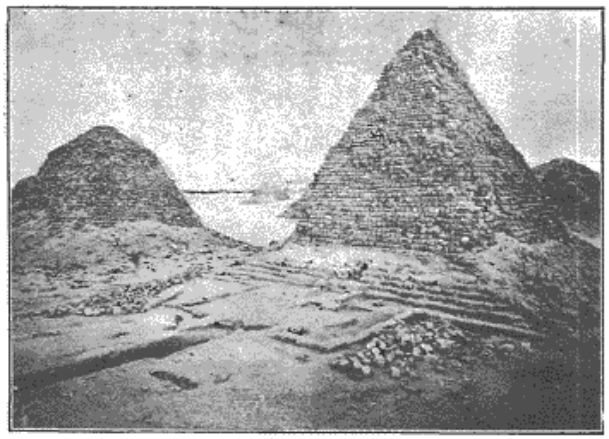

Fig. 1. — Pyramid of Aspalta,
showing remains of chapel, enclosing wall and stairway.

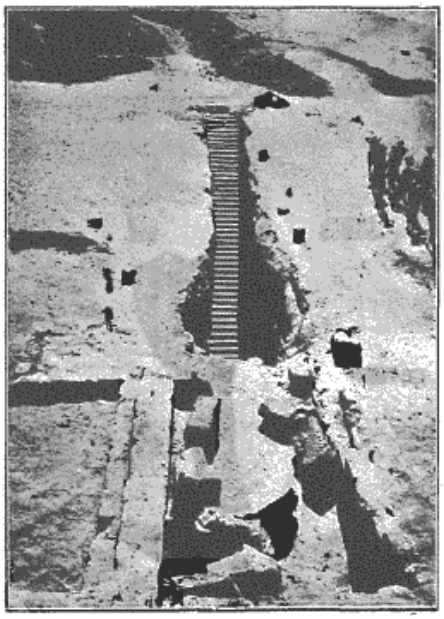

Fig. 2. — Pyramid of Anlaman, looking down
on chapel and stairway.

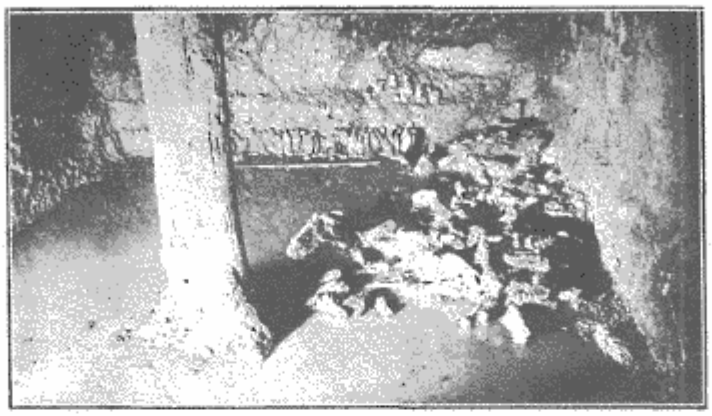

Fig. 1. — Pyramid of Senkamanseken, burial chamber B, shawwabtis as found.

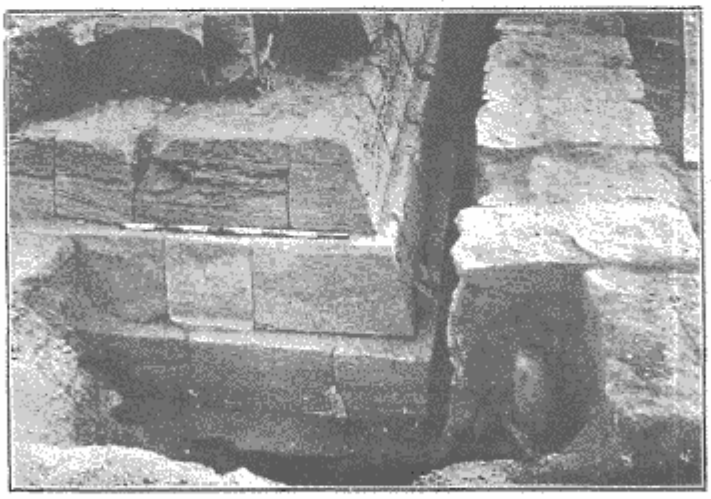

Fig. 2. — Pyramid H, «N W» corner. On right, foundation deposit under corner of first pyramid. On left, corner of second (rebuilt) pyramid.

empire was so little known that even its chronological basis had never been attempted. Although the names of nine other kings were known, no two scholars could agree as to their relative order, their approximate dates, or the duration of the kingdom before it was replaced by the kingdom of Meroe (Kabushia). At Nuri we found the tombs of 20 kings beginning with Tirhaqa and at Kurru those of four more. The examination of these pyramids and their contents enabled me to establish by comparison the chronological order, which admits of no question except as to the relative order of one or two pairs of minor kings. The theory of the comparison is very simple. These kings were all kings of Napata and buried from that capital. They must therefore have ruled in succession and died at intervals that would average about a generation apart or slightly less. We begin with a fixed point, the tomb of Tirhaqa. The tomb and its contents represent the work of one generation of craftsmen, scribes, sculptors, goldsmiths, faience makers, potters, masons and so forth. The tomb of the next king would have been prepared in part by the same craftsmen, but some of the old craftsmen would have died and been replaced by others. Thus some objects in the Tanutamon tomb were exactly like those in that of Tirhaqa, but others were different. In the same way each successive tomb presented objects like those of its predecessor but others which were different. Thus the work was like fitting together a huge picture puzzle. The results were confirmed by a similar examination of the evidence furnished by the tombs of the queens. Then we were so fortunate as to discover the foundation deposits under the four corners of the pyramids and these strengthened still further the conclusions. The order thus obtained, going back to Tirhaqa, is as follows :—

ORDER.	PYRAMID.	NAME OF KING.	ESTIMATED DATE B.C.
—	—	—	—
Group a :			
1.....	Nuri I.	Tirhaqa.	*688-663*
2.....	— XX.	Tanutamon.	*663*-653
3.....	Kurru XV.	Piankhy II.	653-633
4.....	— —	Atlanersa.	633-623
5.....	Nuri III.	Senkamanisken.	623-603

ORDER.	PYRAMID.		NAME OF KING.	ESTIMATED DATE B.C.
Group b :				
6.....	Nuri	VI.	* Anlaman.	603-573
7.....	—	VIII.	Aspalta	573-553
8.....	—	IX.	Amtalqa	553-538
9.....	—	V.	* Malenaqan.	538-528
10.....	—	XVIII.	* Nalma'aya.	528-523
Group c :				
11.....	Nuri	X.	Netaklabataman.	523-503
12.....	—	VII.	* Karkaman.	503-488
13.....	—	II.	* Astabarqaman.	466-463
14.....	—	IV.	* Sa'asheriqa.	463-443
15.....	—	XIX.	* Nasakhma.	443-438
Group d :				
16.....	Nuri	XI.	* Malewiyaman.	438-408
17.....	—	XVI.	* Talakhaman.	408-403
18.....	—	XII.	* Amanherinutarik.	403-373
19.....	—	XVII.	* Baskakeren.	373-372
20.....	Kurru	II.	* (?)	372-368
21.....	—	I.	* (?)	368-348
22.....	Nuri	XIII.	Harsiotef.	348-313
23.....	—	XIV.	Piankhalara (?)	313-298
24.....	—	XV.	Nastasen.	298-278

The names marked * are those of newly discovered kings. The positions of the Kurru kings, Nos. 20 and 21, is securely established by the foundation deposits, but their names have not yet been found. The name of No. 21, I am afraid, will never be recovered, but I still have hopes of finding that of No. 20. This chronological skeleton is, on the whole well established. Further material may send one or two names up or down the list by a number, and will probably make more precise the estimated dates, but will make no radical change in the list and probably not more than 25 years difference in the total period of 410 years. There are no more pyramids in the Sudan of this period except that possibly one or two of the earliest of those at Kabushia may fall within group *d*.

Now for the first time, a history of the kingdom of Ethiopia for the four centuries between Tirhaqa and Ergamenes, the friend of Ptolemy II, may be taken in hand. For the moment, material for the cultural development has been recovered in abundance from the royal tombs, but the inscriptions which alone can give us the political history are still only four in number, two by Aspalta, and one each by Harsiotef and Nastasen. In addition to this, there is the temple at Barkal begun by Atlanersa and finished by Senkamanseken, and certain altars and statues made for Tanutamon, Atlanersa, Senkamanseken, Anlaman, Aspalta, and Amtalqa. Prof. Sayce has also found the names of Aspalta, Amtalqa, and Malenaqan in a temple excavated by Prof. Garstang at Kabushia. The sum total of the evidence seems little enough, and yet is sufficient to cast a rough outline about the chronological skeleton obtained at Nuri.

The kingship did not always descend from father to son, but rather to the remaining head of the family or its strongest member. Nominally the decision rested with Amon-Ra of Gebel Barkal. Aspalta relates that when after the death of the old king, Anlaman, the princes were presented to Amon-Ra in the great temple at Barkal, the god indicated him, Aspalta, as his «beloved son». There can be no question that this placed the choice of the king in the hands of the High-Priest of Amon and his colleagues, but only within the limits of the royal family. It must not be assumed however that this choice could be exercised freely. In the case of Tanutamon, and probably, of many another man, the priests simply performed a service practically forced on them by a strong man. Nastasen seems to have disposed of his competitors before seeking the priestly sanction. Once firmly seated on the throne, the power of the king seems to have received little check from the control of the oracles. We see Aspalta lining up the priests of Amon to *record* the appointment of his daughter as High-Priestess of Amon. He does not request them: he orders them. The old Greek tale that the priests ordered the king whom they disliked to commit suicide never applied to the kings of Napata. Nevertheless, it is obvious that the kings of Ethiopia were devoted worshippers of Amon and of all the other gods of their land. They prided themselves on their gifts to Amon and looked to his favour for life and prosperity. Conflicts between temple and palace doubtless arose. We have one inscription of a king punishing certain

priests, but the name of that king was afterwards carefully expunged by the priests of the temple. Intrigue, assassination, and usurpation, all these may be assumed as concomitants of an oriental monarchy.

The Egyptian customs of brother and sister marriages and of unlimited polygamy were in full practice. Apparently the children of the minor wives as well as those of the sister-wife were counted as members of the royal family; but as far as our records go, only sons were eligible to the throne.

The capital city was for a long time Napata. Northwards, the larger towns known to us are : Per-Gematen, at Kawa, opposite Dongola el-Ordi; Per-Nebes, probably near Halfa; and Duwa'ab, somewhere near Ibrim or Abu Simbel. The stela of Harsiotef mentions also Akena and Assuan, lying further north, but in that time these belonged to Egypt. Southwards of Napata, the names are recorded of Taka, in the valley not far from Napata; Tara, somewhere near Abu Hamed, two days journey from Napata; Asdarsa, a day's journey northwards from Kabushīa; and Baruwa (= Meroe) at Kabushīa. Six other towns of the kingdom are mentioned, Karaza, Katarudi, Mesha, Taluwdima, Taramenuw, and Sakasakadi, but their location is uncertain. The coronation ceremonies took place at Napata, in the great temple of Amon-Ra, but duplicate ceremonies were also performed in the temples of Amon at Per-Gematen and at Per-Nebes, and the round was completed by a visit upstream to Bastet of Tara, who *suckled the king* and gave him long life.

Of all these cities, the greatest interest attaches to Baruwa, or Meroe, near the modern Kabushīa, which was destined to become the capital of the Kingdom of Meroe. After the separation from Egypt, the exploitation of the region of this city was naturally the first step in the extension of Ethiopia southwards, the most promising direction then open to its rulers. This district contained a comparatively large agricultural area, held a commanding position on the trade routes including the roads to the gold-bearing countries of the eastern desert and Abyssinia, and was not far from the Gezira and the productive lands of Kordofan. The date of the founding and the manner of growth of the city of Meroe are not known.

The district had probably been in the possession of Ethiopia from the time of Kashta. In the reign of Aspalta, the temple of Amon had already been built, but not in its later form. When Harsiotef came to the throne,

about 350 B. C., the Island of Meroe had become culturally and politically so integral a part of Ethiopia that his family seat was in Meroe. Indeed, this advanced part of the kingdom was then politically more important than Ethiopia proper. Nastasen, about 50 years later, says that his political selection took place at Meroe, where the other candidates renounced their claims in his favour. He then proceeded to Napata to receive the confirmation of Amon of Barkal, and the coronation ceremonies were completed by similar visits to Amon of Per-Gematen, Amon of Per-Nebes, and Bastet of Tar. After the coronation at Barkal, the people said : «He will do all «things well. Amon of Napata has given him the sovereignty over Ethiopia. «The Son of Ra, Nastasen, goes up on this day and sits on the gilded «throne in the shadow (of the god). *He will be king and sit and reside in «Meroe.*» It is clear that the political capital was now at Meroe, while the religious capital remained at Napata. The kings were crowned at Gebel Barkal, as of old, and their bodies were brought back to be buried in the royal cemeteries within sight of the Sacred Mount. The temples of Napata with their endowed bodies of priests and craftsmen educated in the learning of Egypt remained the cultural centre of the kingdom, while Meroe became the centre of material wealth and political power. The effect must have been an evil one on both these centres of national life, and indeed, the monuments of the royal tombs show a steady loss of command over the ancient learning and the traditional handicrafts inherited from Egypt. It was not until a generation or so after the death of Nastasen that the rulers of Meroe introduced a revival of learning and art under the influence of Ptolemaic Egypt and made their capital for the first time the cultural centre of Ethiopia. This is the point when Meroe became the real capital of Ethiopia and the kingdom of Meroe may be said to begin.

Going back to the Ethiopian kingdom, it is difficult to determine just when the southern city, Meroe, became politically dominant. The material from the pyramids of Nuri present two breaks in the maintenance of the Egyptian traditions either of which might have been caused by such a political development. The first is between groups *b* and *c*, and the second between groups *c* and *d*. In each case a weak king was succeeded by one of wealth and power. In the first case, the deterioration of the handicrafts is so slight that I would prefer to think that Netaklabataman, the first of

group *c*, and his successors lived at Napata, although their home may have been in the southern province. In the second case, the degeneration, especially in the knowledge of hieroglyphics, is so great that this seems the time, the beginning of group *d*, when the seat of government was transferred to Meroe. The king in question is Malewiyaman and the date, about 440 B. C. He must have been a very great king judging from the size of his pyramid and the richness of his funerary furniture, and his chapel was the only one which showed marks of long continued reverence. The roof had been formed of two rows of great stone slabs leaning against each other to make an arch, and must have lasted a great while. Up to the time it fell, the walls were being scored by the rubbings of visitors to obtain sand for medico-magical purposes, just as happened to so many Egyptian temples.

During the period of group *d* of my list of kings, when as I suppose, the political capital was at Meroe, the only guild of craftsmen who exhibit a high standard are the masons. The potters produced a set of poorly formed vessels of badly levigated material, insufficiently baked. The gold and silver-smiths were still capable of good work but their designs were for the most part clumsy in drawing. Faience-making was nearly a lost art and on its later revival employed a different material. The manufacture of small stone objects was on a low level. Heart scarabs were no longer made, and the only stone vessels seem to have been imported ointment jars. Sculpture appears to be represented solely by the reliefs on the stela and the chapels, and at its best was poor in design and workmanship in comparison with the work of group *b*, while some examples are almost barbarous in execution. Egyptian, especially in the hieroglyphic form, is clearly a dead language. A curious illustration of this is given by the titulary of the king himself. Since the time when the kings of Ethiopia ruled Egypt, they had retained the five titles and the five names of the Egyptian king; but now we find the first three names stereotyped and transmitted from king to king apparently as part of the first three titles. The royal annals were still composed in Egyptian and cut in hieroglyphics on stone, but the language is so peculiar and the signs often so strange that a special study has had to be made in order to permit of a translation. Thus all that which Ethiopia inherited from Egypt was at a low ebb. Yet it is remarkable

that now after four centuries of isolation the Ethiopians retained even these remnants of Egyptian culture.

The territory included in the kingdom of Ethiopia certainly included old Ethiopia and the province of Meroe, but beyond that it is difficult to say what other districts were actually under the administration of the king and what were merely within the sphere of his military activities. Prof. Schäfer, in his great translation of the Nastasen stela, has pointed out that the accounts of the military expeditions of Harsiotef and Nastasen contain some indication at any rate of the direction of the campaigns of these two kings. Harsiotef, whose inscription is dated in his 35th year, made 9 campaigns, in his 2, 3, 5, 6, 11, 16, 18, 23, and 34th years. Nastasen up to his eighth year had made six. The army of Harsiotef seems to have had its greatest labour in repelling and punishing the raids of two desert tribes, — the Mazay lying between Abu Hamed and Halfa and the Rahrahsa, further south. The Rahrahsa gave no trouble in the time of Nastasen, but the Mazay raided the temples at Per-Gematen (el-Ordi) and Tar (Abu Hamed), and escaped unpunished. Each of the two kings made one campaign into Lower Nubia towards the Egyptian border and Harsiotef claims to have reached Assuan, but it may be doubted whether either of them made any pretence of holding the valley below Kalabsha. The other campaigns, those which might shed light on the geography of the time, were made by Nastasen against districts which yielded large amounts of gold, cattle and slaves. The places named are as follows :

LAND.	CITY.	NAME OF CHIEF.
1.	Mekhendene.	Iayneka.
2. Lebalu	Takalukaran.	Lubheden.
3. Iarrasa.	Masha.	Iabesh.
4. Mekhtarkheret	»	»
5. Mayhaka	Sarasara.	Tamakhiyt.

The booty obtained was as follows :

LAND.	GOLD.	CATTLE.	SMALL CATTLE.	WOMEN.
1.	»Much».	209,659	505,349	2,236
2.	»Much».	203,216	603,107	»All».
3.	1,212 deben.	22,120	55,200	»All».
4.	No mention.	203,146	33,050	»All».
5.	2,000 deben.	35,330	55,526	»All».

The 2,000 deben of gold makes about 182 kilogrammes, or about L. E. 24,000. It is to be noted that this booty represents the property captured in the invaded lands, not their annual production, nor necessarily the whole of their possessions. Both Maspero and Schäfer were inclined to seek these enemies of Ethiopia in the eastern desert and towards the head waters of the Atbara and the Blue Nile, that is in a region which was at once a gold-bearing and a great grazing country. But in view of the fact that gold may have been found in the Nuba Mountains and may even have been acquired in trade in these small amounts, the most trustworthy indication is the item of cattle. We may be sure that at least lands nos. 1, 2 and 3 were great cattle producing countries. The following table is therefore of interest as showing the cattle raising districts of the Sudan in 1914. It is compiled from the annual report of the Finance Department for that year (see p. 41); and groups horses, cattle, camels and donkeys as equivalent to large cattle :

	LARGE CATTLE.	SMALL CATTLE.
1. Kassala	404,096	297,233
2. Kordofan	265,668	524,130
3. Sennar	167,410	170,864
4. White Nile	117,315	183,596
5. Nuba Mountains	106,773	161,068
6. Bahr-el-Ghazal	101,566	3,250
7. Upper Nile	91,478	179,021
8. Blue Nile	60,104	217,680
9. Red Sea	57,505	178,498
10. Dongola	42,000(?)	187,422
11. Berber	28,856	166,255
12. Mongalla	20,489	1,427
13. Khartoum	13,549	100,553
14. Halfa	333(?)	20,270(?)

These figures include the tribute-paying as well as the registered cattle and like all tax lists are certainly an under-statement of the actual numbers of cattle in the provinces. From the above figures it would appear probable that the expeditions of Nastasen were made in the direction of Kassala, the Gezira, or Kordofan, or perhaps in all these regions. Kordofan in fact is

the only modern province which presents figures similar to lands nos. 1 and 2 of the Nastasen campaigns.

The possibility that the wars of Nastasen may have led him into Kordofan seems not to have been considered up to the present. Operations at this distance from Meroe would imply that the Gezira or a large part of it was permanently occupied by the Ethiopians. Now, in recent years, the excavations carried out by Mr. H. S. Wellcome at Gebel Moya have thrown an unexpected light on the history of the Gezira during the early part of the Ethiopian monarchy (700 to 500 B.C.) and for some centuries before that period. For the first time, a scientific archæological record has been made of a site in the interior of Africa. That record concerns, it is true, the history of only one village, but judging from my experience, the village of Gebel Moya was probably typical of all the villages in the inner Gezira. Mr. Wellcome has very properly reserved the publication of the results until they can be fully worked out by his archæological assistants all of whom enlisted at the beginning of the war. There are two points, however, of great importance for this outline which I think I may mention without detracting from the final publication. The first point is that the last century or so of the occupation of the ancient village of Gebel Moya was that in which lived Tirhaqa, Tanutamon, and the kings buried at Nuri down to about the time of Aspalta. The objects found in the upper debris prove this and show that the village had direct trade connections with Napata. The second point of supreme interest is that the population of the village has been shown by Mr. Wellcome's anatomists to have been a mixed race with negroid characteristics not greatly unlike the present inhabitants of that district. With this population and with the proved connection with Napata, it is only reasonable to assume that the Gezira was at that early period within the sphere of the political influence of the kings of Ethiopia and was later brought under the rule of those kings who lived at Meroe. The importance of these results is so great for the history of the Sudan that it is sincerely to be hoped that Mr. Wellcome may continue his work and extend it to other sites. Only by such researches will we ever be able to compile a history of that part of the Sudan which lies beyond the borders of Egyptian Kush.

In view of the imperfect character of the materials, a positive conclusion as to the territory ruled by the later kings of Napata is beyond our reach.

My personal conclusion is that these kings held the provinces of Halfa, Dongola, Berber, Khartoum, the Blue Nile, and the district of the Gezira with the adjoining part of the White Nile. The provinces of Kassala, the Red Sea and the Kordofan were within the radius of military activity, while the region of the *sudd* and southwards was practically beyond reach. The weight of the territory thus outlined lies too remote from Dongola Province to have been effectively administered from Napata. The exploitation of the material resources of the southern provinces had drawn men of strength and initiative southwards to Meroe and gave them the means of establishing the political domination of that city.

It is now plain that the most important part of the Sudan in antiquity was that which includes the present provinces of Berber, Dongola and Halfa, — or the Nile Valley from Assuan to Khartoum, with its hinterland on the east. Down to about 800 B. C. the main gold supply came from the eastern desert north of Um Nabardi; but after that time, the kings of Ethiopia show the greatest indifference to this region and manifestly drew on more southerly sources of supply. The trade routes for the supply of ivory, ebony, gums, myrrh, incense, and slaves, lay as ever through Halfa and Dongola provinces. In the New Empire, the valley as far as the Fourth Cataract was occupied, colonized and made an integral part of Egypt. As such it shared in the moral degeneration of Egypt to an autocracy of office holders dependent on mercenaries for protection, and with Egypt fell a prey to the Egyptianized Libyan chiefs who seized the throne. Under a branch of the Libyan royal family, Ethiopia became one of the feudal principalities subject to the crown, and when the dissolution of the loose feudal bonds brought disruption, Ethiopia was the principality which assumed the leadership and forced the other principalities into union as vassals of her royal family. But the Assyrian had now swept over western Asia and was approaching the eastern borders of Egypt. The attempts of Shabaka and Tirhaqa to set up a barrier of the small states of Palestine and Phœnicia failed and the hard Assyrians broke the military power of Ethiopia and drove the Ethiopians out of Lower and Middle Egypt. Exhausted by the war with Assyria and unable to withstand the new Egyptian power which arose at Sais, the kings of Ethiopia withdrew to Napata which was now regarded as their home, aliens as they were by descent.

Thus about 650, Ethiopia was cut off politically from Egypt. The cultural relations were fostered only by the voluntary intercourse brought about by the journeys of merchants, the importation perhaps of craftsmen, and the visits of the priests from temple to temple for purposes of study. The effect of this voluntary intercourse was small and by 550, we find the Ethiopian priests and craftsmen travelling their own road, diverging more and more from that of their brethren of Egypt. Cut off from Egypt and barred by internal weakness from attacking the kingdom of the Saites, Ethiopia was forced to turn southwards. The province of Meroe was consolidated and made an integral part of Ethiopia as Ethiopia had been of Egypt. Meroe was Ethiopianized, that is, brought under the influence of the Egyptian culture which had been inherited from the days of the viceroys. But this Egypto-Ethiopian culture, probably never so virile as that of Egypt itself, was certainly greatly diluted by its extension to Meroe. Meroe was Ethiopianized, not Egyptianized. About 440 B. C., I believe, but at any rate before 350, Meroe had in its turn absorbed Ethiopia itself, just as Ethiopia three centuries before had absorbed its mother country, Egypt. The degeneration of the culture became more rapid. The priests and scribes gradually departed from the traditions of Egypt and the craftsmen lost the old skill of handling materials which is so characteristically Egyptian. Even the race was changing. The Egyptian element was being overborne by others, Libyan, Nubian, negro, or whatever it may have been. The fine traits of the educated and skilled Egyptian were visibly fading into the coarse features of a negroid race which may have been slow at forgetting but was incapable of giving a creative impulse to art, learning, or religion.

G. A. Reisner.

REVIEW.

The travels of Werne.

In Mohammed Ali's time the «lost ones» of Southern Europe gravitated to Egypt and the Sudan by a kind of natural law and in a sort of descending scale. The greater adventurers, sealed of the tribe of Bolo, did not go beyond Cairo, only a meaner class of miscreant, the Italian pharmacist-poisoner may stand as typical of the breed, went as far as Khartoum or further. This, at any rate, is the impression you get from the pages of Ferdinand Werne though he was himself a man of genuine humanity of the legendary emotionful German type : his chief interests were natural history and antiquities, but he made no great discoveries : he loved merisa and hated Fikis : though full of fears he travelled where no white man had been before him and, being in the Government service, he saw things more intimately than the ordinary traveller of that line. His books, though ill-arranged and inconsequent, may be described like the games of our youth as innocent, instructive and (moderately) amusing, they have apparent truthfulness and the saving grace of brevity. Those on the White Nile and the Expedition to Kassala have been translated into English, but no English version has appeared of his journey through Sennar and the Butana and a few notes on this book [1] may therefore be welcome.

Werne started south from Khartoum in May 1841 after his doctor brother Joseph's death which was naturally attributed by all Khartoum to the poisons of a rival practitioner. After passing Burri, where he noted old red-bricks pointing to a former Christian village, Geref, the four mud-brick villages of Gedid and Gubba, he came to Alti El Fugara (?Mesid) «where only Fikis live with whom I wished to have nothing to do» and another Alti where cotton was grown and woven. So he came to Kamlin or Kamnin which Ahmed Pasha, then Governor General, was developing, for his own benefit of course, through the agency of Nur El Din Eff. In Kamlin there were over fifty well sagias and a flourishing sugar plantation, besides two Italian pharmacists and factories for making soap, sugar and brandy, in charge of a German, named

[1] *Reise durch Sennar, nach Mandera, Nasub, Gheli*, von Ferdinand Werne, Berlin 1852.

Bauer, whose name occurs also in the letters of Lepsius. From Kamlin, Werne went through Abu Ushar, Abu Fru, then the seat of a Kashef, Mesellemia, a big village settled by the inhabitants of Arbagi, to Medani. The European community in Medani was represented by a French chemist, an Italian doctor, a Provençal bird catcher and a second Italian of revolting morals, who died shortly afterwards «mordendo come un cane». Among the objects of interest in Medani, Werne mentions five iron cannon previously looted from Abyssinia by King Badi and set up in Sennar; they seemed to Werne to be naval guns of Portuguese origin : also a small Venus in bronze, in the attitude of the Vénus de Médicis, a span long, found near the Gubba.

It is worth noting that the villages between Khartoum and Medani which Werne mentions have all survived to this day, whereas south of Medani and again in the Butana he gives several names which have disappeared from the map. Everywhere south he heard complaints of the exactions of the Turks : the villages he mentions on the way to Sennar are Soriba, which survives, Wad Raweihi (?), the market of Osman (?), Hillat el Hadji (?), Abdin El Chila (? Deneigila), Degihn (? Dekhein), Wad El Naudi (?) and several unnamed Nuba villages near Sennar. At Sennar itself he had long conversations with Yusuf, a son of the last king, on the history and the origin of the Fung kingdom, and thence set out for Jebel Moya in quest of antiquities. He passed Kadaru (?), Umjahn (?), where the Pasha had lately dug a great Hafir which held water the whole year round and where there were also well-sagias, then several other hafirs and mounds of old village sites covered with potsherds, and came to a place called Kewawi (?) which was in sight of the Jebels. At Jebel Moya he found only Arabs settled, but at Segadi there were Baggāra who had fled with their cattle from the plundering Turks on the White Nile : the Baggāra camp was in excellent order with the tents in a line and a fire in front of each. The numerous potsherds and hafirs about pointed to a much larger population at a former time, and the people showed him a rock at Segadi shaped like a man which they said was the figure of an infidel king called Hadri who had been turned into stone because he rejected Islam. Werne returned to Medani by a different route : the first night he spent at Shadli in a new hut which was decorated with bones as a charm to bring meat, and went on through Melechela (?), Yakub (?), Sheikh Ahmed (?), Osman (?), El Shakaba and Ansumnat (Umm Sunot), the last two places being close to Barakat. At Medani he found the number of Europeans increased by the arrival of a Khartoum merchant who was dealing on a large scale in «black ivory» which actually did scandalise the other Franks.

From Medani, Werne crossed the river at Abu Haraz in the hopes of beginning his exploration of the Butana, but found the country too wet and had to postpone starting until August. The pages which follow are perhaps the most valuable in his book, as they contain an interesting account of the then state of the Shukria. According to their own story, the Shukria had only recently conquered the Butana by defeating the Rikābis at Jebel Mandera : the latter had appealed for help to Sennar and the king had sent them soldiers, but as soon as the latter had after a first success withdrawn, the Shukria returned and for fifty years « had drunk the waters of the Rikābis ». The Shukria themselves were now in some difficulty with the Turks, and their leaders were handling the diplomatic situation much as their descendants handled the dervish crisis : in other words, the real head of the tribe, Mohammed Abu Sinn, refused to have any dealings with the Turks and lived near Jebel Rera, while his younger brother Ahmed acted the *Sheikh bitāᶜ El Dīwān* and wore a tarbush as did his son Hāmid and Mohammed's son ᶜAwad. Hāmid discussed politics frankly with Werne : he openly declared his hatred of the Turks and, complaining that it was only their hopeless disunion which prevented the Arabs from ousting them, quoted a prophecy that the Turks would be finally expelled by a Frank and regretted that Werne's face was not black enough for him to fill the part! Meanwhile their customs were changing and the children of Abu Sinn were being taught to write Arabic and to pray; their followers, however were hardly contaminated, they were only just taking to cultivation at the bidding of Sheikh Ahmed and the land had clearly to Werne's eye been better cultivated in the past. The men in fact were still fonder of fighting than anything else : they all wore the Shusha and spoke their own dialect [1] though they understood Arabic as well, and they strongly disapproved of Werne's presence.

Werne's route led him from Abu Haraz via Sadunab (?) and Kagli (?) to Alleba El Tor (Lebaitor) where he found a big camp with some two thousand fires alight. The camp was shortly struck with a great beating of the sheikhly drums and speedily packed on camels and they marched to Jebel Nasib where news was brought of a raid by the Hadendowa against the Atbara Shukria. They went next to Jebel Mandera where Werne was struck by the number

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[1] Werne (pp. 71-75) declares this to have been the same as that of the Bishari and Hadendowa with which he had been acquainted on the Kassala expedition. Mr. Hillelson questions this on the ground that Shukria poems of earlier date are written in Arabic, but this hardly seems to me conclusive.

of Hafirs : in his search for antiquities he was disappointed for the only building was a stone hut which once belonged to Sheikh Ṣādigāb, a Rikābi fiki, revered equally by Shukria and Rufai who all stored their grain there in matmuras which were marked by sticks or stones laid cross-wise. Werne noticed also numbers of basins and scoops on the rock to which parallels may be found on most of the Butana Hills. The ancient name of Mandera is written by Werne as Cheria, which may be the same word as Khiāri, the name given to an ancient site east of Jebel Rera. From Mandera they went to Jebel Abu Shaafa (Nasub Abu Shaf) and thence by Emla El Ohd (?) and Zibehk (? W. Shibeika) to Jebel Geili where Werne noted the potsherds but failed to discover the ancient Meroitic carving : from Geili he returned to Kamlin by way of Adara.

After this, Werne interpolates an account of Gedaref extracted from the note books of this brother Joseph. Gedaref then consisted of a number of villages inhabited by tribes differing in origin, Shukria, Dabaina, Takruris, and Fung. One of these, Tiave was the original centre and still the seat of a Fung chief, Ibrahim Wad Fottil, who complained that the intrigues of the Shukria had robbed him of his lands but still clung to his old prerogatives, the Nogāra and the Horned Cap. Joseph Werne like his brother was zealous in collecting reports of antiquities : Jebel Kassaman «should contain important antiquities, great stones with hieroglyphs and human forms» : at Sofi there were remains of pyramids, worked stones and old walls, as also at Hasabullah on the left bank of the Atbara!

Ferdinand after mentioning further reports of antiquities at El Derri half a day north of Abu Deleig on the authority of Nasr El Din then Sheikh and Fiki of the Batahi, and at Cheri one day east of Halfaia, which may be an old site at Bir Haj Yusuf, gives a fairly good description of Meroe and ends abruptly with the tale of how he thrashed a Fiki in Burri.

The picture which Werne gives of the Sudan has a value of its own. As contrasted with that drawn by Cailliaud, for example, some twenty years earlier, it shows that in the intervening period considerable activity had taken place in the economic sphere. Progress was mainly the work of the disreputable Europeans who figure so largely in his pages, men who wished to get «rich quick» *quocunque modo*, and the ultimate failure of the old Government was due primarily to the moral shortcomings of the agents it employed and this disregard for justice and humanity in dealing with the natives. Their work and character, however, deserve some record if only by way of an example to be avoided.

J. W. C.

NOTES.

Kordofan Province.

Id el Faiq (Mrs. Seligman's article, *S. N. and R.*, vol. I, no. 4).

The phrase is properly *Id el Fā'iga*, or *Fā'igi*, *i* being a common Kababish mispronunciation of the terminal ة.

The word is not فيقة, but فائقة, the feminine of the present participle of فاق; and it means the lady riding in the 'uṭfa.

فاق is a fairly common colloquial word for «to be at ease» or «to be idle».

A description of some leisured man as *fāig sākit* would be understood anywhere in Kordofan.

The following song introduces the verbal noun of this word in the sense indicated above.

البنوت يا رفاقة
واحدات يُعزّن[1] بى واحدات يجنّن شفاقة
اخوانهن كثير يوم العرس والفاقة
انا اخوهن هناك يوم الدرق يتلاقَ

The girls, O my comrades!
Some stir my pride, others move me to tenderness.
Many claim brotherhood with them at weddings or times of ease:
I am their brother there, where the shields clash!

Fāiq is also a common Syrian adjective for «eminent» which is an additional reason for applying the term to the lady in the «utfa».

R. D.

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[1] For يُعَزِّزْنَ.

Red Sea Province.

Beni 'Amer Marriage custom.

The following note is intended to give some idea of the marriage custom as practised by the Beni 'Amer tribe. It may be mentioned that each section of the tribe regards itself as free to modify or amplify the details here set down.

On the day appointed for the marriage ceremony to commence, the male and female relatives of the bridegroom leave him at home and with singing and rejoicing proceed to erect the bridal hut. The materials for this hut are as follows :

Seven pieces of white bursh.

The usual number of bent poles over which to stretch the bursh.

Pieces of *zāf*, i. e. leaves of dom palm, wherewith to tie the bursh to the poles.

An *angareb* or even simpler form of bed.

Some pieces of *Hugarit*, the local name for a hematite which is found in Eritrea.

The above mentioned materials are put on a camel and conveyed to the spot arranged where they are all taken off and laid upon the ground.

The male relatives now take the camel and go themselves to the house of the bride's father. They are met with derisive shouts by the female friends of the bride who seal the testimony of their regard by bespattering the visitors with dung.

(This form of play is indulged in by the bride's female friends for the ensuing seven days.)

Nevertheless they return with the men, who load the camel with an *angarcb* or some form of couch and proceed singing to the site of the new hut.

The bridal hut is now erected by the female relatives only of the bride and bridegroom. The hut is partitioned into two portions by fixing up light hangings.

Water is next poured over the pieces of *hugarit* and the resulting solution is taken and splashed over the poles supporting the hut and huge rough crosses are made on the bursh above the entrance to the hut with this same solution.

This ceremony is said to be carried out in commemoration of the tragic murder of the father of the first of the Nabtabs who was beheaded by the

Christian King Bulō on the morning following the first night after his marriage with the king's own daughter.

(This man is reputed to have been a «holy man» called 'Ali Belās, to whom the King Bulō took such a fancy that he gave him his daughter in marriage. On the morning after his first bridal night, he was, for a slight breach of etiquette in the presence of the king, summarily beheaded. His one night bride bore him a son, Mohammed Diglāl ibn Mousa, the first of the «Nabtabs».)

This ceremony completed, the bridegroom on horseback appears upon the scene accompanied by horsemen and camelmen, who encircle the hut seven times. After the procession has completed the seventh circle, the whole mounted body with a shout, gallop for about half mile in a line due south of the hut. (The reason for going in a southerly direction is because in ancient times the tribe prayed with faces turned to the south.) After this has been done, the bridegroom is carried bodily into the half of the hut reserved for him and his friends, and is deposited on the *angareb*.

He is now anointed with water into which have been poured a few whole grains of dura. He also changes his garments and decks himself out with women's jewellery especially bracelets, and a piece of dry camel dung is inserted in his amma. The jewellery includes a necklace of alternate gold and other beads and a broad silver bracelet and is worn by the bridegroom until the seventh day when it is given to the bride.

He is now ready for the bride who, in due course, approaches with all the women in attendance. She is carried on the back of a strong slave seven times round the hut and is then brought in and deposited on the *angareb* in her half of the hut. She is anointed in like manner as the bridegroom.

As soon as the bride is anointed the women in their half of the hut and the men in their half commence singing and rejoicing. The men, however, soon go out and indulge in sports and races.

The marriage feast commences and is kept up for seven days — the men entering and leaving their portion of the hut while the women do the same in theirs. For seven days and seven nights, the bride and bridegroom are surrounded, day and night, by their friends. Only once during that period does the bridegroom enter the bride's chamber. In the silent watches of the first night, he, accompanied by a friend, by stealth approaches the couch of the supposed-to-be-sleeping bride. He strokes her face and neck and immediately retires again. This ceremony is performed with the purpose of preventing the *jinn* from bearing her away or changing her into another being.

At the end of the seven days, the male friends of the bridegroom begin to leave him until by evening only one is left in attendance.

At night the bridegroom and his friend again enter the bride's chamber. This is the signal for all the bride's attendants, except two old women, to rush out of the hut. The bride tries to follow and must be forcibly detained by the bridegroom. (She has allowed her finger nails to grow long so that the scratches she makes on his wrist may afterwards be shown to his friends.)

If he fails to retain her, so that she escapes to her companions waiting outside, he is made the laughing stock of the village.

If he succeeds, he throws her upon the ground and in the presence of the two old women and his friend, he puts his foot upon her neck and proclaims himself her lord and master.

The witnesses now leave : the partition is thrown down : the hut is one.

Before the wife can speak to the husband, he must pay her father the sum of £ 10 or give him the present of a camel.

At the end of ten days, the husband is required to leave his wife. He goes away for the purpose of earning the £ 10 or of securing a camel, and quite often does not return for several months.

The period of silence seems to vary very much and even though the bridegroom has already provided the necessary gift, the bride ought not to speak to her husband for at least six months. If he does not leave her village she yet may not speak to him nor may he live continuously in her house and if he wishes to see her face before the end of the six months, he must remove her veil by force. The period of silence may be extended to two years if the present is not forthcoming. The reason given by the people for this «avoidance» is that if the bride speaks it shows that she has known the bridegroom previously and this is considered disgraceful.

G. J. Fleming.

Sennar Province.

A Stray buffalo.

Last August a villager from the village of Borgu apparently working near the edge of the forest was suddenly attacked by a bull buffalo and thrown. He managed to crawl under a gum tree before the buffalo charged him again. The buffalo was eventually killed by the villagers and the horns and skin were brought to the Merkaz.

The village of Borgu is about 20 miles north of Sennar, on the west bank of the Blue Nile.

I made enquiries and found that no one could remember having heard of a buffalo so far north before.

Men from another village a little to the south-west of Borgu had seen this buffalo the same morning.

I particularly asked if there were any marks on it to shew that it had been fighting and had thus been dispossessed from leadership of a herd, but I was told there were no wounds on it. Neither had any other buffaloes been reported.

The people suggest that it had been driven so far north to get away from the fly; but in this district there has been very little fly on account of the poor rains this year.

I am told that there are buffalo around El Ein on the White Nile and that this one probably came from there.

E. G. C.

Sennar, November 7th, 1918.

CORRESPONDENCE.

Stories.

I send you two stories for publication in *Sudan Notes* : One was told me, about seven years ago, by the late Sheikh Mohammed El Tom Talha of the Semania Tarika. This is his story : The night before the battle of Omdurman a certain powerful fiki of the Semania Tarika, who was compelled by Khalifa Abdullahi to live in Omdurman, slept, and while asleep, he dreamt that he saw the Prophet and the Mahdi talking together. The Prophet said to the Mahdi : «Show me your Kingdom». The Mahdi undid a part of his tob and pulled out a black stone which he handed to the Prophet. The Prophet took the stone and wiped it with his clothes and it became a brilliant white. Then he said to the Mahdi : «Your Kingdom is dirty. I have taken your Kingdom from you and handed it to people wearing helmets.»

The fiki then woke up and saddled his donkey and fled.

After the death of Sheikh Mohammed El Tom at Medina, when returning from his pilgrimage to Mecca, I told this story to some of his followers and they said : «The fiki, in the story that you have told us, is Sheikh Mohammed El Tom himself. We all know that story.»

The second story was told me by Munhil Kheiralla, Nazir of the Shanabla Tribe; it is as follows : Before the fall of Omdurman there lived a certain Sheikh Hamad El Nil, a man whose heart and mind lived continually before the Eternal Presence. One day while sitting among his disciples he was seen to cover his mouth with his tob and laugh! The disciples did not know what had happened to him. When they asked him he said : «I have just seen El Kos wearing a coat, trousers and a helmet. The Government is going to change.» Note : «El Kos» is the Governor of Governors and acts according to the orders of the Prophet whose minister he is. That is : he is the angel who carries out the orders which come from God through the Prophet to him.

This story is well known and common knowledge.

E. Drummond Hay.

El Dueim.

SUDAN NOTES AND RECORDS

Volume II. N° 2.

DISTRIBUTION OF SUDAN ACACIAS

BY W. R. G. BOND.

In the northern half of the Sudan few scenes, except those in the extreme desert, are devoid of specimens of Acacia.

Not even excluding the introduced palms, it is the dominating genus of trees, and the change of scenery noticeable in a journey by rail and steamer, from Abu Hamed to Renk, is largely due to the abundance or the reverse of Acacias, and to the relative preponderance of the different species.

Their economic importance is also great : as a fodder for herds of camels and goats, as a source of gum, as timber for boats and water-wheels, as fuel [1], and as providing tanning materials, they play an indispensable part in native life.

On the other hand, their dense thorny growth forms an obstacle to communications, and their thorns are a vehicle for the disease known as «madura foot».

Though varying in size and habit, a general resemblance runs through them all, and a single leaf picked from any of half a dozen species would be difficult to identify.

All are adapted to intense sunshine and very dry air, nevertheless they have acquired certain interesting adaptations, which enable them to occupy very different surroundings, from the extremely arid deserts of the North to the submerged mud-flats of the swamps further South.

Curiously enough the two species, which have adapted themselves to these extremes, resemble each other fairly closely, and it is not easy, at

[1] The wood of the Sayal burns so well that the Arabs have a special word for the flame of a fire of this wood.

first, to detect the morphological differences which explain their different habits.

The reason for this is, I believe, that their main differences are buried under ground, lie, in fact, in their root systems, where they are most likely to escape notice.

To the traveller intent on other objects opportunities of studying the roots of the trees he passes are not frequent, but the caving in of river banks, and the sinking of wells, afford occasional glimpses of what is going on underground.

The deductions here put forward are based on such fortuitous observations, and do not claim to be the results of methodical study.

The Sudan Acacias may roughly be divided by their habitat into Desert, Prairie, and Riverain forms.

The purely desert forms are the Sayal (1) and the Sallam (2) which may be seen isolated or sparsely scattered over deserts so scorched and forbidding, that not another trace of vegetation can be seen in a day's riding, and where, but for the evidence of their presence, it would seem impossible to believe that any plant could live. Unlike some desert plants, such as the cactuses, they have no fleshy stems or leaves for the storage of water, and paradoxical as it may seem, it is just these two desert forms of Acacia that are the most exacting in their demands for a constant and unvarying water supply. The fact is that deserts are not necessarily so devoid of water as they seem, and many a man has endured the agony of death from thirst, with water, had he known it, but a foot on two beneath where he lay. All that is required to form a desert is a surface layer of a foot or two so porous and lacking in capillarity that water does not diffuse up through it from below, while allowing occasional rains to pass rapidly downwards. There is thus a layer so dry that young seedlings cannot work through it to the moisture below. The two Acacias mentioned above seem to have solved this difficulty, perhaps either by the very rapid growth of the seedling root, or by their seeds withstanding dessication for a long time until an exceptional rain helps them. Whatever the reason these conditions of a desert surface, with a water supply beneath are just those which suit the Sayal and the Sallam.

Nor does the Sayal send its roots far down in search of water, and it is

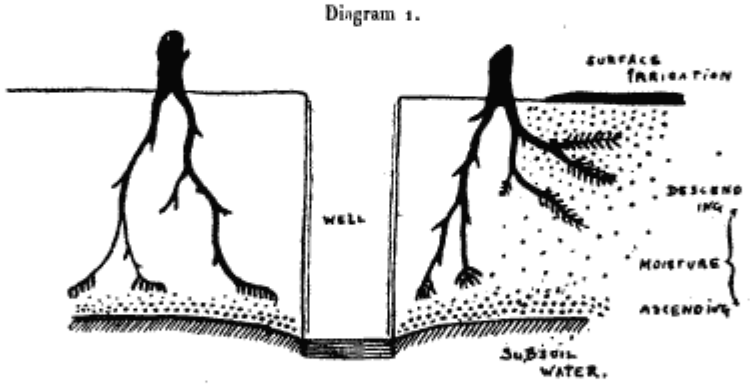
probably safe to say that by digging a well under the shade of a Sayal, water would be found at a depth not much exceeding five or six feet.

The Sayal therefore is usually confined to the lowest-lying spots in the desert; the Sallam is deeper rooted and spreads further through the valleys, but since Arabs naturally dig their wells where the water is nearer the surface, it is difficult to obtain direct observations.

Neither of these species seems tolerant of a great rise and fall in the water-table, conditions near the river are quite unsuited to them, but in one — in my experience — unique instance where surface irrigation is practised under conditions where Sallam grows, the whole habit of the plant changes.

Instead of being a stunted and twisted bush, it sends up long straight stems nearly twenty feet high, and resembles a Sant (3) under similar conditions. This is due to the greater vertical distribution of moisture in the soil, for where as in ordinary circumstances the tree is dependant on

Diagram 1.



Root system of tree wholly dependant on subsoil water.

Root system of tree assisted by surface irrigation.

subsoil water, it does not send out root-hairs in the saturated layer, but in the moist layer just above, which, owing to the bad capillarity of the soil in which these trees grow, does not extend far above the limit of saturation. Perhaps this can best be explained by a diagram of two trees growing near a well, one of which is supposed to be surface irrigated, the other not.

The «prairie» forms are the Hashab (4), the Kittir (5) and the Laout (6). They are characterised by roots which do not penetrate deeply, but which run along just beneath the surface of the soil [1].

They do not need therefore a constant supply of subsoil water, but derive their moisture from water falling on the surface as rain. Since in this country rains are strictly seasonal, these species have become deciduous, and are in fact green for only a few months in the year.

The Arabs have a saying that the Government fixed the Dongola-Kordofan boundary «between the Sallam and the Laout». A traveller riding across the boundary would note no sudden change in the scenery, but beneath the surface of the ground there is a difference, for as has been seen the Sallam must have subsoil water, the Laout need not.

The Government fixed the boundary to suit the old tribal limits of the Arabs. We have here therefore a good instance of the obscure influences which control the distribution of races and tribes, and set a limit to their spreading. Two kindred Arab tribes and two species of Acacia have found the same subtle limit to their dispersion. Students of ethnology are familiar with these parallelisms.

Though similar as to their water requirements, the prairie species have their soil predilections.

The Kittir almost monopolises the clayey plain, while the Hashab prefers the sandy ridges; hence the importance of the latter as the source of gum. The Laout is intermediate in its tastes and prefers soil neither so sandy as the Hashab nor so stiff as the Kittir, hence these three tend to segregate themselves somewhat even when growing in the same neighbourhood.

I have attempted to shew that the desert and prairie have their respective boundaries of distribution, which may perhaps be determined by their root form; it might be thought that the riverain forms would have no such strict limitations. We are met however by what seems at first even a greater puzzle in distribution.

The White Nile from Khartoum to Jebelein may be divided into three

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[1] Observers differ as to whether they are mainly reproduced by suckers from these roots or by seedlings.

approximately equal stretches. The distance is under 250 miles and the climatic conditions are not dissimilar throughout. Yet in the northern third a common, if not the predominant Acacia is the Haraz (7), in the southern division the Kuk (8) attracts the chief attention; neither grows in the other's territory, or in the central area which is wholly given up to the Sant (3). Nevertheless, the Sant grows alongside both the Haraz in the north and the Kuk in the south.

The Haraz extends further south up the Blue Nile, and the Kuk does not appear on that river at the same latitude, and only seventy miles distant from its main habitat on the White Nile. In gardens all three can be grown together. This segregation is puzzling, for since they all grow on the river bank, it might be thought that the water conditions would be similar. I am inclined to think that just as the length of their roots determined the different places where the two desert forms grew, and separated them from the prairie forms, so it is differences of root length that control the distribution of the riverain forms.

Since neither the Haraz nor the Kuk tolerate long submersion, they must grow above or near the limits of «high Nile», and since on the other hand neither can stand drought their roots must be able to follow the water in the soil as the Nile recedes. The roots of the Haraz are, I believe, longer than those of the Kuk; therefore the Haraz can live in the Northern reaches of the White Nile where the mean rise and fall is considerable. The mean variation in level at Geteina is nearly 5 metres.

The Kuk, on the other hand, is a shallow-rooted form and is therefore better suited to places further up the Nile where, as at Renk, the mean rise and fall is only about 2 metres.

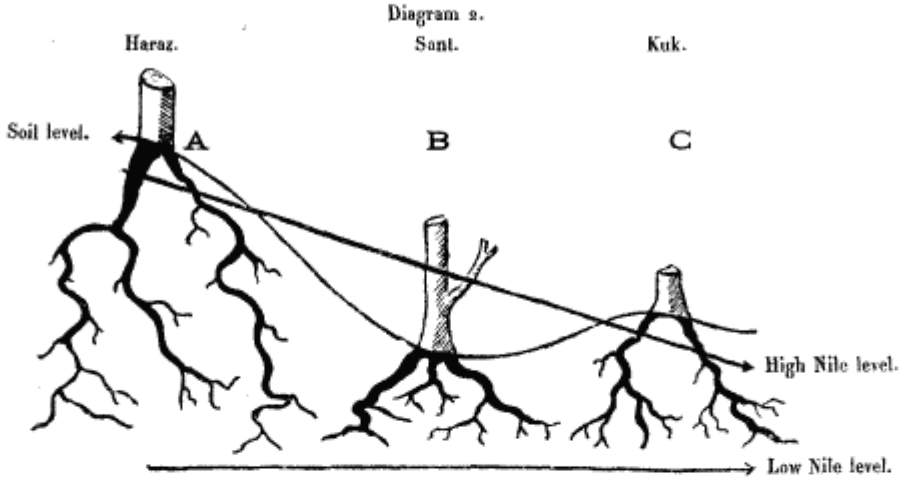
The Sant is also a shallow rooted form and requires a heavy retentive clay to grow in; nevertheless, as has been pointed out, it can grow alongside either the deep rooted Haraz or the Kuk.

This is due to its curious ability, unexpected in an Acacia, to endure a considerable amount of submersion. It has gone down, as it were, into the river-bed to a point where it can reach the moisture at low Nile, and unlike the Haraz does not mind if it is partly under water for a considerable period when the river is in flood. Why the Sant suddenly ceases just south of Jebelein is at present unknown.

Diagram 2 may help to illustrate the different habits of the three species.

A and C shew two forms growing above the high Nile level, but being long or short rooted to suit the mean variation in water level.

Diagram 2.



Long rooted form growing above high water mark. Short rooted form submerged at high Nile. Short rooted form growing above high Nile level.

B is a short rooted form and is adapted to low Nile conditions, but it allows the high Nile to cover a part of its stem and lower branches and takes no harm.

The Blue Nile, for a considerable distance south of Khartoum, has a large rise and fall, this suits the Haraz which extends further south than on the White Nile.

Its steep banks, unlike the mud-flats of the sister river, afford little foot-hold for the Sant, which here thrives best on the *maias* or spills of the river forming pools which maintain their level long after the flood in the main channel has receded.

If this view is correct, the distribution of these three species is explained, and it is not difficult to understand, on the principle of Diagram 1, why all three trees will grow in a garden, for all alike have the power to throw out root-hairs at any level in the soil where constant moisture is assured.

It has been pointed out that the Haraz sends its roots deep down towards the level of the low Nile, these roots are therefore deeply submerged at the time of the flood.

To obviate the ill effects of this submersion and to avoid excessive transpiration, the Haraz has adopted the curious expedient of becoming deciduous during high Nile, just at the time when the prairie forms are green.

Hence the rather weird effect, noticeable on the Blue Nile just south of Khartoum, of a Haraz forest appearing leafless and dead just when every other plant is bursting into vivid green.

I have made an arbitrary division of the Acacias into desert, prairie, and riverain forms, and have explained that the prairie forms are deciduous in the dry season, while the Haraz casts its leaves at the time of maximum moisture.

The Talh (9) falls into neither of these categories.

Avoiding the vexed question of species and subspecies, the Talh is found on the fringes of the desert, in the prairies, and by the river. In Dongola it is a large tree and not deciduous, further south it never grows to a large size, and casts its leaves as regularly as the Kittir or the Laout. The colour of the stem also varies considerably. In Dongola it is greyish green, though in certain places, as near Merowe, it is a rich orange red.

In the prairie area the stems are the colour of a well burnt brick while if the «soffar» variety still further south, really belongs to this species, the stems and branches are paper-white, a colour, which in combination with the eerie whistling of the wind in the hollow bases of the thorns, gives a weird and ghostly effect.

Given a fairly clayey soil, the Talh seems to grow anywhere and to alter its characteristics to suit its surroundings with a remarkable freedom.

One is tempted to look on it as a very generalised form, and as standing near the ancestral form of many of the Sudan Acacias.

APPENDIX.

LIST OF VERNACULAR AND SCIENTIFIC NAMES (BROUN 1906).

1. Sayal	*Acacia spirocarpa.*	6. Laout	*A. nubica.*
2. Sallam	*A. Ehrenbergiana.*	7. Haraz	*A. albida.*
3. Sant	*A. arabica.*	8. Kuk	*A. verugera.*
4. Hashab	*A. Verek.*	9. Talh	*A. Seyal.*
5. Kittir	*A. mellifera.*		

Note. — Not the least of the puzzles presented by the Acacias is the lack of correspondence in these names (vide nos. 1 and 9).

W. R. G. Bond.

NOTE TO Mr. BOND'S PAPER.

There are many interesting points raised by Mr. Bond's article on the *Distribution of Sudan Acacias*, but to deal with them efficiently would need a special monograph on the subject. «Situation wanted» might be taken as the text for these few remarks, for it is the cry in all communities whether they be human or vegetable.

Nowhere is the survival of the fittest better illustrated than in the silent struggle which takes place every season in the arid plains of the Sudan.

That Acacias do predominate is due to characteristics which are direct adaptations to environment, and which may be briefly summarised as follows :

1. Reduction in leaf area, thus preventing excessive loss of water.

2. Capacity for movement of the leaves, enabling them to present a vertical surface to the intense solar rays, and so avoid over-heating and consequent loss of water.

3. Extraordinary growth of tap-root, especially in a young seedling. The rate of growth of the root is out of all proportion to the growth of the portion above the ground. This enables the plant to reach water before the surface soil dries up.

4. Resistance of the seed to fire.

Other characteristics which are possibly due to the environment are :

5. The presence of thorns; it is well known that thorns are evoked by dryness and that in a moister climate they become less pronounced.
They are, of course, an invaluable protection to the plant.

6. Hardness of the wood and the lack of sappy, water-containing elements.

7. Prolific seeding.

8. Presence of tannin; this is a common feature of desert plants.

At the conclusion of a tour in 1913 through the Eastern Sudan, the writer showed in a short sketch of the plant geography that the master factor determining the distribution of plants in this region is the water content of the soil.

The character of the country between latitude 13.5° N. and latitude 18° N. changes from desert to thorn forest, passing through steppe into savannah with a few pioneer Acacias, and finally into thorn scrub and forest, the components of which are entirely Acacias.

The *Kittûr* is the real outlier, and as Mr. Bond points out, it is adapted to a scanty rainfall and a long period of drought. The true tree forms such as the *Seyal* are not met with until the rainfall increases, and even then it is difficult to understand the presence of isolated groves of thriving trees without assuming the presence of a subterranean water system.

The black cotton-soil is practically impermeable and would not hold the rain water for a sufficiently long period of the year to maintain a perennial vegetation.

The writer suggested that the origin of this water is generally an intrusion of rock which has decomposed, and, being permeable allows water to percolate through, and accumulate in the underground layers.

In this connection a study of the map on which the curves of the average rainfall are shown is illuminating.

The following represents in a concise form the writer's observations on the various Acacias commonly found in this country. He has no wish to be dogmatic, for prolonged investigation has not been possible.

Acacia spirocarpa, Hochst..... «Şamr», sometimes «Seyal». Flowers in April; fruits in June, possibly two varieties. Nubian desert, Sennar, Kordofan.

Acacia tortilis, Hayne..... «Seyal». — Kordofan, Nubia, Berber, Dongola, Red Sea Hills.

Acacia nubica, Benth..... «Laaû, Laout, Laud». — Two varieties apparently exist : one flowering in June, the other earlier, in April or May. Nubia.

Acacia verugera, Schwf..... «Kûk». — Upper White Nile (Bari-land), Fazoghli, Kassala.

Acacia Seyal, Del..... «Seyal or Talh». — Nile valley, Gash, Gedaref, Sennar.

Acacia Seyal, Del. var. fistula... «Şofār». — Sennar, Gedaref.
NOTE. — The curious swellings and punctures are caused by insects which utilise the cavity thus formed.
This form seems to be intermediate in habitat between *A. arabica* and *A. verek*. It is commonly found on strong clay soils, in colonies.

Acacia Ehrenbergiana, Hayne... «Sallam». — Nubia, Shores of Red Sea, Upper Egypt.

Acacia mellifera, Benth..... «Kittir». — Red Sea mountains, East Nubia, Gedaref, Sennar, Kordofan, Upper White Nile.

Acacia arabica, Willd..... «Sant or Sunt» — Flowers during rains, develops its fruits with the flood, and ripens them with the retreat of the waters [1].

Acacia albida, Del Haraz..... On all soils, sandy for preference, generally isolated, rarely in groves, widely distributed.

Acacia verek, Guill et Perr..... «Hashāb». — Flowers and fruits about May — Kordofan, extends to Senegal.

Acacia stenocarpa, Hochst..... «Kakūl (Bega) — Talh (Arab)». — Gedaref, Southern Nubia, White Nile.

In conclusion, should this most interesting article stimulate the zeal of amateur botanists, it may be mentioned that, for identification, flowers, leaves and fruit are necessary.

R. E. MASSEY.

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[1] My own note reads as follows: «Prefers ground strongly irrigated, basin land, etc., but cannot stand too prolonged immersion, when on the banks of rivers is generally well elevated above high water level.
«Naturally occurs in colonies, and fruits more freely thus than when isolated.»

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SEASONAL FESTIVAL AT GEBEL MĪDŌB

BY H. A. MACMICHAEL.

In the first number of *Sudan Notes and Records* (Jan. 1918) I gave a short account of «two annual festivals» held by the inhabitants of the Southern Hills of Gebel Mīdōb in North-Eastern Darfur, a people who have strong claims to be ethnically connected with the Nubian (Barabra) race of the Nile Valley. The first Festival, I said, took place when the first heads of corn were being cut, before the general reaping, the latter at the harvest proper. But from the evidence subsequently obtained I find that these «two festivals» are in reality only phases of a single one and that certain rites are performed which are highly interesting on account of their curious similarity to those practised from the earliest times in widely separated parts of the world — in all five continents in fact — on the occasion of seasonal festivals.

In March 1918 I was travelling in Western Darfur with camels hired from Gebel Mīdōb and noticed that one of the drivers, a youth of about 19, wore his hair long and plaited, somewhat in the manner of the Bedayrīa and Ḥawāzma youths in Kordofan (Baqqāra). When I enquired from him as to the reason I found him shy and rather ashamed of himself, but his companions readily gave all the information required. From them I learnt that the *bazza*, as the festival is called, is common to the whole Mīdōb range but is only held in a year when the rains have been reasonably heavy and a good harvest (*bukkali*) is ensured. It begins, it is said, on the 8th day of a lunar month when the corn is ripe and the first few heads are being cut, but before the general reaping. On this occasion the young men and the girls go to a khor (Odingār in the case of the Southern Mīdōbis) and camp there for fifteen days, enjoying themselves with

dancing and horseplay. The elder folk merely act the part of spectators and bring out the food and drink for the others.

A month later, on the 8th of the following month, that is, the young men go to another Khor (Tāt in the case of the Southern Mīdōbis) and take part in manly sports, running and riding, etc. The women and girls look on. In the evening each young man has to jump over the Khor and then all go home.

The plaited hair (*dirwa* or *tirwi*) however, plays an important part in the proceedings. In anticipation of the festival the lads of Mīdōb allow their hair to grow long, and about spring time they begin to pay special attention to anointing and plaiting it. Thus, when the time comes for the celebration of the second half of the festival, if the fathers, judging the harvest sufficiently good to warrant it, give sanction and anoint their own heads (which are, of course, close shorn) the lads dress themselves up with women's ornaments, bracelets, beads, etc., and take a drum (*nugāra*) and form a procession and go round visiting all the neighbouring villages, beating their drum and inviting contributions.

In a good year there will be some 50 to 100 youths there celebrating the *bazza*, in a poor year perhaps only a dozen or so; and evidently it is a matter for distinct pride in after life to have been one of the lads of a good year; of my informants one boasted that he had been one of 63 and another one of 55.

If the numbers are sufficiently large, two independent processions are formed instead of one.

Before setting out on their series of visits (which may extend over a week or a fortnight or so, according to the number of villages to be visited and the length of the gaps between visits) the lads select from among the elders of their tribe, for the maturity of their judgment, two old men (*baraga sirigi*, i. e. «rulers of the young men»: the word *sirigi* is also that used for a village sheikh at Mīdōb) as advisers: it was explained that two were chosen, and not one only, because in human affairs «two heads are better than one».

It is a matter of formality that these two elders at first refuse, and only allow themselves to be over-persuaded when the lads engage solemnly to them to behave themselves and lead a decent orderly life, avoiding quarrels

and irregularities and insubordination. This done the two elders consent to act, and instruct the lads in the proper ritual. The same elders may never serve more than twice.

In addition, the lads chose from among their own number two leaders, also apparently called *baraga sirigi*, as are the two elders, for each procession, or for the single procession as the case may be; but for this privilege only those are eligible whose fathers and mothers are still alive and hale.

During the course of the processional visits all the lads submit to the orders of the leaders thus chosen.

Then the procession sets out and visits the villages, beating the drum and collecting whatever is offered of corn, money, sheep, strips of cotton material, etc. Small girls, not yet come to puberty, may follow in the train of the procession, but it is not customary for anyone else to do so.

At the end of the festival the offerings are all handed over to the two elders, who divide up 1/3 of the total amount among the lads and keep 2/3 for themselves. The leaders of the procession get no more in this distribution than their companions.

Then the lads disperse to their homes and the father of each (or, in default, the father's brother) cuts off his son's locks and gives them to the mother, and she hangs them up in the home and there they remain suspended indefinitely.

This sacrificial cutting of the hair is the final consummation of the whole affair and every male Midóbi goes through the process on the threshold of his manhood, and once for all.

There is no particular age specified and the rite has apparently no connection with puberty, marriage, etc. One simply waits for a reasonably good harvest year. It is only forbidden for sons of the same mother to go through the ceremony in a single year, though sons of the same father by different mothers may do so.

Until his hair has been shorn it is improper for a boy to leave the mountain, and, in the case of the one with unshorn locks whom I encountered, nothing but the force of particular circumstances would induce him to do it.

Now here we have obvious resemblances to the rites at those seasonal

festivals which were practised at one time or another by primitive people in Europe, Asia, Africa, North America and Australia and which survive in many cases in a modified form to the present day.

It is not necessary to suppose that these seasonal rites were in every case deliberately transmitted or borrowed by one people from another. Sometimes they certainly were, but the simplest facts of nature are apt to strike the simple primitive man in the same way all the world over and his natural instincts vary but little with his environment. Thus, as Miss Jane Harrison has said [1]: « The savage is a man of action. Instead of asking a god to do what he wants done, he does it or tries to do it himself; instead of prayers he utters spells..... When he would hunt and catch a bear, he does not pray to his god for strength to outwit and outmatch the bear, he rehearses his hunt in a bear dance..... Magical dancing still goes on in Europe to-day. In Swabia and among the Transylvanian Saxons it is a common custom..... for a man who has some hemp to leap high in the field in the belief that this will make the hemp grow tall. In many parts of Germany and Austria the peasant thinks he can make the flax grow tall by dancing or leaping high or by jumping backwards from a table..... »

When the Macedonian farmers have been digging their fields, they throw their spades up into the air and, catching them again, exclaim : « May the crops grow as high as the spade has gone ». In some parts of Eastern Russia the girls dance one by one in a large hoop at midnight on Shrove-Tuesday. The hoop is decked with leaves, flowers or ribbons, and attached to it are a small bell and some flax. While dancing within the hoop each girl has to wave her arms vigorously and cry : « flax, grow », or words to that effect. When she has done, she leaps out of the hoop or is lifted out of it by her partner. »

In each of these cases the performers do what they want their god to do. Their intense desire finds utterance in an act. « Let anyone watch an exciting game of tennis, or better still perhaps a game of billiards, he will find himself *doing* in sheer sympathy the thing he wants done, reaching out a tense arm where the billiard cue should go, raising an unoccupied

[1] *Ancient Art and Ritual* (Home Univ. Library), pp. 30-33.

leg to help the suspended ball over the net. Sympathetic magic is..... in the main and at the outset, not the outcome of intellectual illusion, not even the exercise of a *mimetic instinct,* but simply, in its ultimate analysis, an utterance, a discharge of emotion and longing.»

Now the performance of these rites very naturally tends to become a ceremony performed by the people collectively — in order to obtain intensified results — and it is only as religious faith declines that the serious ritual act degenerates into frivolity, and the Presiding Deity of the Spring Festival becomes a mere children's Queen of the May. Food and Children being the main interests of primitive man and the supply of each being closely connected with the recurrent seasons, he naturally holds his festivals and performs the rites at the periods obviously designated, the spring time and harvest, and his object is the simple one of promoting fertility in the corn, in the women, and in the flocks. Thus the object of «carrying the may» is to «bring the very spirit of life and greenery into the village [1]», and by burning Guy Fawkes in effigy one aims at exorcising the very spirit of treason.

These ceremonies then are designed through sympathetic magic to induce fertility, and unavoidably they involve at some stage in their evolution the actual personification of a spirit of fertility or vegetation.

Primitive man, if Miss Harrison is right [2], does not first form a conception of a spirit of vegetation (e. g.) and then later embody it. He begins with a vague excited dance. The dance has a leader. The leader comes to personify the thing desired. «So from many actual living personal May Queens and Deaths, from many actual men and women decked with leaves, or trees dressed up as men or women arises *the* Tree Spirit, *the* vegetation Spirit, *the* Death» and as the festival is recurrent and there is always a leader, the latter tends to become a permanent conception and the periodic festival begets a perennial spirit, who in the imagination dies and lives again in an everlasting cycle.

Bearing the above in mind compare the details of the harvest festival of Mīdōb with (e. g.) those of the ancient pre-Christian festival associated with the Holy Bull of Magnesia, a comparatively early example of the

[1] *Ibid.*, p. 59. — [2] *Ibid.*, p. 71.

deification of a spirit of virility and fertility, and one must, I think, be struck by several striking coincidences [1].

Plutarch quotes a ritual hymn sung as a spring song by the women of Elis :

> In Spring-time, O Dionysos,
> To thy holy temple come;
> To Elis with thy Graces,
> Rushing with thy bull-foot, come,
> Noble Bull, Noble Bull.

But it was not only at Elis that a holy bull appears at the Spring Festival. Among the Delphians the «Sanctifier» was a bull, «a bull who not only is holy himself, but is so holy that he has power to make others holy, he is the Sanctifier; and..... he sanctifies by his death in the month Bysios, the month that fell, Plutarch tells us, 'at the beginning of spring, the time of the blossoming of many plants».

We do not hear that the 'Sanctifier' at Delphi was 'driven', but in all probability he was led from house to house, that every one might partake in the sanctity that simply exuded from him. At Magnesia, a city of Asia Minor, we have more particulars. There, at the annual fair year by year the stewards of the city bought a Bull, 'the finest that could be got', and at the new moon of the month at the beginning of seedtime they dedicated it, for the city's welfare. The Bull's sanctified life began with the opening of the agricultural year, whether with the spring or the autumn ploughing we do not know.

The dedication of the Bull was a high solemnity. He was led in procession, at the head of which went the chief priest and priestess of the city. With them went a herald and the sacrificer, and two bands of youths and maidens. So holy was the Bull that nothing unlucky might come near him; the youths and maidens must have both their parents alive, they must not have been under the *taboo*, the infection, of death.

The herald pronounced aloud a prayer for 'the safety of the city and the land, and the citizens, and the women and children, for peace and wealth, and for the bringing forth of grain and of all the other fruits, and of cattle.'

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[1] *Ancient Art and Ritual* (Home Univ. Library), pp. 85 et seq.

« All this longing for fertility, for food and children, focuses round the holy bull; whose holiness is his strength and fruitfulness.

« The Bull thus solemnly set apart, charged as it were with the luck of the whole people, is fed at the public cost. The official charged with his keep has to drive him into the market place, and 'it is good for those corn-merchants who give the Bull grain as a gift', good for them because they are feeding, nurturing, the luck of the State, which is their own luck.

« So through the autumn and winter the Bull lives on, but early in April the end comes. Again a great procession is led forth, the Senate and the priests walk in it, and with them come representatives of each class of the state — children and young boys, and youths just come to manhood, *Epheboi*, as the Greeks called them. The Bull is sacrificed, and why? Why must a thing so holy die? Why not live out the term of his life? He dies because he *is* so holy, that he may give his holiness, his strength, his life, just at the moment it is holiest, to his people.

« 'When they shall have sacrificed the Bull, let them divide it up among those who took part in the procession.' The mandate is clear. The procession included representatives of the whole state. The holy flesh is not offered to a god, it is eaten — to every man his portion — by each and every citizen, that he may get his share of the strength of the Bull, of the luck of the State. . . . . »

« Next year a fresh Bull will be chosen, and the cycle begin again. »

The ideas underlying the *bazza* at Mīdōb have clearly much in common with those that prompted the celebrations at Magnesia two millennia ago, and the precise coincidence of certain details is remarkable. Nowhere else in Dārfur, I believe, is the *bazza* held except at Mīdōb [1], and it would seem at least probable that it is related to the Egyptian seasonal festivals connected with the cult of Osiris, which are themselves of common origin with the similar seasonal festivals of Eastern Asia and Greece.

H. A. MacMichael.

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[1] House to house processions of boys dressed up for the occasion are held by some tribes (e. g. Qimr) after a batch of them have been circumcised, but this is quite a different affair.

DATE-TREES IN HALFA PROVINCE

BY T. A. LEACH.

For a Land Settlement Officer or Inspector in charge of a Date Census in Halfa Province it is impossible to see the wood for the trees; it is even difficult for him to see the trees owing to his preoccupation with the parts thereof. The present article therefore being written entirely from the point of view of the Land Settlement Officer will deal with no general questions of interest concerning date-trees, such as methods of culture, the different species of dates, the value of a tree's yield or facilities for market or export. The prospective date grower will find here no useful information or advice as to the conditions and prospects of successful date farming, nor will the administrator be given any statistics or hints which will help him to encourage native enterprise in this direction or to assist the development of the date trade.

The existing native system of ownership and some of the customs of the most uncompromising and perverse community in the country alone come within the scope of this article, though it will be necessary also to give some account of the ways in which official record is kept of such ownership, and of the method of settling disputes.

The natives of Halfa Province, with the exception of a few merchants and others in Halfa town and two small outside villages of Gararish Arabs, are exclusively Berberines.

The main characteristics are generally well known. The great majority of the male population are employed away from their homes as servants, saises, *raises*, boatmen, etc., while their women and old men, aided by monetary contributions from those away, eke out a meagre existence on narrow strips of cultivated land squeezed in between the desert and the river, such as may be seen along all the river bank from Halfa to Shellal.

But the one constant source of pride and object of desire of the absent Berberine is the possession of a share in such a small holding of land, or more particularly in a date-tree.

For these Lilliputian estates are seldom owned by a single individual, and there is nothing in the province too small to be divided.

The question naturally arises. « How can a date-tree be divided up into parts? or what is the use to a man of owning (say) 3/16 of an indivisible entity like a date-tree? »

The explanation is simple. The principle comes into practical application only when the crop is gathered, and it is the fruit that is divided up each year among the several owners. Even when as will be seen later there are several trees subject to the most complicated cross-division of different partners, the registration of which entails elaborate mathematical calculations to arrive at the proper fractions or indeed often becomes impossible, there is no real difficulty in the division of the dates — which is easily carried out without any knowledge of mathematical formulæ. The dates of 5 trees in a single clump, for instance, are collected into heap. The first division is probably into three heaps representing the three equal shares of the original owners. One of these thirds is possibly owned now by several heirs of the original owner, and it may be necessary to divide this heap into elevenths. Mohd. Ahmed, one of them, takes his share which is two of these small heaps and goes off with it. Meanwhile the fruit of another tree of which he owns 1/2 has been collected and put in a separate heap for him — and he takes this off and pours it into his own separate individual heap, and so on for all the trees in which he has a share. At the end he has all the dates he is entitled to from different trees collected in one heap, and he has never had to trouble his mind in the least as to the working out of the sum 2/11 of 1/3 of 5 + 1/8 + 1/5 of 1/2 of 7 or whatever it may be. The registration of his ownership is a different thing, but of that later.

The question next arises how did this complicated system of division arise? Why does a man not plant a tree for himself and keep it as his own, at any rate until he dies? Since the land was settled, a tendency to do this is to be noticed. But the number of such trees compared to the vast number of older trees is as a drop in the ocean, and the force of habit is too strong to allow even this practice on a small scale to continue long. One way which would naturally be expected to be a frequent cause of division, is that a man being in need of money, but disliking the thought of

parting from the whole of his property, might sell half a tree. This however was a very rare occurrence, and was only resorted to occasionally in cases of real distress and only in Mahas, the poorest part of the Province. It may however have become more common in or since the bad year of 1913-1914. In ordinary circumstances it was a disgrace to sell either land or date-trees. Sale may therefore be ruled out as an important cause of the division of trees, though gifts, as to a son or to a wife for dowry, are not uncommon.

The main causes are as follows :

I. The general custom as to planting, especially in former times and before the Land Settlement.

II. The Mohammedan law of inheritance.

III. The pride of ancestry, and the innate reluctance of the people to part with anything.

I. The classical method of planting a date-tree is as follows : A obtains shoot and plants it; B in whose land it is planted receives 1/3 of it; C who waters it (in its early years when it would otherwise never survive till maturity) 1/3, leaving A himself with 1/3 only.

There are, of course, many variations of this basic principle; e. g. A may plant the shoot in his own land and water it himself, in which case he owns the whole of it. More often B, the owner of the land, having a Sagia waters the shoot and so receives 2/3. In some cases the land chosen is particularly good for date-trees, and by special agreement B receives 1/2 instead of 1/3 only.

In former days it seems seldom to have been the rule for the land owner to be specially consulted. It would often have been an understood thing that he would receive 1/3 of the tree, but frequently this was not the case, and probably the right to claim the 1/3 was in many cases waived in favour of a friend or in return for the right of planting a tree in the other's land. During the Land Settlement when claims were put forward in the case of trees of some age, that is at least over 5 years, to 1/3 of any tree on the land purely on the strength of the old custom, the rule followed was that the land-owner must definitely prove that the 1/3 had

been actually received in the past or the existence of a specific agreement to that effect. In more recent times it would have been impossible to plant a shoot in another man's land without his consent.

B (the land-owner) is of course, where every «sagia» or plot of land is owned by several partners, frequently not a single individual but may represent all the owners of a «sagia». In that case B's 1/3 has to be subdivided among all the partners in proportion to the shares of each in the land.

This leads us to some description of the different methods of ownership of the land which is occupied specially by date-trees. Such land goes by the general name of *mashghûl* (worked, or occupied), or *mashghûl el ṅakhîl* (date-trees) and consists nearly always of the foremost strip of the sagia land on the river bank where the roots of the trees when full grown reach to water level.

In passing, it may be remarked that if the native cultivators showed any enterprise they would aim at filling the whole area of their land with date-trees, and not merely as now a narrow strip on the river front or just along the *gadwal* (irrigation channel). There would be no difficulty in growing the usual crops till the trees reached maturity, and they would then have a valuable property which, if watered as they now water a poor annual crop of wheat, would bring in a return far more than sufficient to buy all their requirements for bread and provide a handsome surplus.

The *mashghûl* is generally an integral part of the sagia. Where it is full of old full-grown trees, the sagia owners have little control and as they have nothing to gain out of it they generally, to the detriment of the yield of the trees, take care that they lose nothing either by watering it for the benefit of others. Where there is still space for planting new trees or the trees are mostly the property of the land-owners, the *mashghûl* is generally divided up among the partners separately from the rest of the sagia, but as far as possible in proportion to their shares in it. This is a frequent cause of dispute — when one partner is dissatisfied with his portion as being largely occupied by the trees of one or more of his partners, and he claims from them the «land-owner's right» to 1/3 of the trees in his own special portion. However he is generally satisfied without resort to this further complication.

The *mashghûl* is also frequently a separate plot and not part of any sagia. In many such cases in Halfa District the land is the actual property of the owners of the trees on it, and the owner of every tree or part of a tree is the owner of a share in the land proportionate to the number of trees or parts of a tree or trees he owns. The difficulties which can be raised by a cantankerous partner against any proposal to deal with any portion of such land can be easily imagined. Fortunately in other parts of the Province even where the *mashghûl* is a separate plot, it is owned by definite persons whose shares are fixed without reference to the number of trees they may or may not own in it.

To return now to our original shoot which was planted by A on land owned by B and watered by C, we should have little difficulty in recognising it at any time and tracing its history however much subdivided if it only remained single. But the trouble is that when it grows up it becomes the mother of a clump (Arabic būra or hufra). The small shoots which start from its root are seldom cut off by the native grower who is more interested in the possession of a large number of trees than in proper palm-culture. In this way one original shoot may grow into a clump consisting of anything up to ten trees, and the clump is always identical as to ownership with the original mother tree. The number of trees in a clump perpetually varies as additional young trees come on, or older trees die off, so that from census to census (an interval of five years) the identification of the trees becomes exceedingly difficult for an outsider.

In the course of the years 1907 to 1911 the first complete register of individual owners of trees was carried out. Previous censuses had been merely an approximate record for purposes of tax collection only, and trees had been shown in the name of the most important of many partners who were made responsible for the tax. To record all the owners the use of the complicated fractions referred to above was indispensable. But it was impossible to show every tree or clump separately, and for the purposes of the census all the trees in a sagia or similar registered plot of land are shown together. You get thus Mohamed Khalil recorded as the owner of 3 3/4 trees in Sagia no. 49, though in fact he has not probably a single whole tree in the world, the 3 3/4 representing the sum of the fractions of single trees or clumps in which he has a share in that Sagia.

Even if you find Ahmed Ali with one tree to his name in the register, it is probably 1/3 of a clump of 3, or 1/2 + 1/3 + 1/6 of 3 different trees. In spite of these complications however it is generally fairly easy to identify for the purposes of a lawsuit what trees or part of a tree are in dispute, but when it comes to the next quinquennial counting, by which time the number of mature trees is considerably altered, it is unfortunately difficult to obtain much assistance from the older register.

II. The second chief cause of petty divisions, the Mohammedan law of inheritance is too familiar to require more than the mere statement : the Qadi's documents recording the divisions of an estate are generally very conscientious and thorough, and in order to give no one a share more or less than his due, they employ fractions which are the despair of the Registrar. For strictly correct registration, fractions containing 6 or 7 figures in the numerator and denominator would be nothing.

III. We have now seen how the partition of trees into exiguous fractions arose historically from the customs of the people and the nature of the palm, and how on another side it has been developed to exaggeration by the sanction of ecclesiastical law. But even so the position would not be desperate if you had to deal with people more willing to compromise. The obvious way of getting over these inconveniences would be for the partners and especially co-heirs to come to terms whereby each partner would take a whole tree or trees in one place instead of all retaining fractions of trees scattered all over a village or district, inequalities of value between different trees being rectified by cash payment, or by exchange of chattels or of land in the same way. But this is totally opposed to the Berberine attitude of mind — which is incapable of even conceiving the idea of foregoing a right or parting with a possession, however great and obvious the advantages of so doing may be. In one aspect this is a most praiseworthy attitude. The Berberine has an intense love of home such as is found in other peoples who inhabit a barren region, and spend most of their lives away from it, and an overweening pride in his ancestry and inherited possessions. But when this leads to the people whose homes and properties were submerged by the Assuan Dam spending their compensation money

in building on bare rock a few yards higher up on an oven of a hill instead of acquiring fair broad acres at Shendi, or to a retired servant of Halfa Province spending his whole substance and life in raising lawsuits to obtain a share of 1/3 of a great-grand-father's palm-tree which is now almost past bearing fruit instead of starting a profitable grove of his own, it must be regarded not as a virtue but as a vice. He is more suspicious than an Arab and as uncompromising as a sea lawyer. Far rather than run the risk of seeing his cousin gather possibly a handful of dates more than himself by giving up a share in a tree which was once his father's (supposing he could even imagine himself doing such a thing), he will either go to the annual trouble and expense of a day's journey to gather his modicum for himself, or suffer fresh tortures every year in thinking that his cousin is cheating him over the collection.

However, when all is said and done, it must be remembered that the system practically insures against entire loss of crop by spreading the risks and that the natives do not feel the inconvenience of the divisions to any great extent, since they are mainly concerned only with the distribution of the dates, and the real sufferers are only the judicial and administrative staff. A register is of no value unless it gives a complete and accurate record of actual ownership, and as the ownership is of the nature explained the register is bound to follow it. The lack of a Register is (*experto crede*) desolation; and an incomplete Register is the worst state of all, causing injustice among the people, for the rights of the deserving may be lost eternally because they are not recorded in the book.

T. A. Leach.

SUDAN PROVERBS

BY H. C. JACKSON.

The natives of the Sudan have a fund of proverbs particularly in rhyming form. Many of these are common to other parts of the Arabic speaking world, but, as far as possible, only those peculiar to the Sudan have been recorded here, together with the local interpretation put upon them in the Blue Nile Province : possibly a somewhat different meaning attaches to them elsewhere in the Sudan, and it would be interesting to compare any varieties of interpretation there may be. For other Arabic proverbs the reader is referred to the collection made by Mrs. Singer : a few of these are quoted below but only where the explanation given in that collection appears to be wrong or where no interpretation of them is given at all.

Arabs and Sudanese alike have a distinct sense of humour (though it may be truism to say so) and much appreciate the quick thrust and parry of smart repartee : an ability to make a neat and epigrammatic reply furnishes a useful passport to the good wishes of the natives of this country and puts the official on terms that render it a simpler matter to handle questions that crop up in the course of his administrative duties. So, in dealing with an Arabic speaking population, the knowledge of a few proverbs may have a definite value — by causing the people to laugh and thus put into the official's hands «that cypher key wherewith we decypher the whole man». Any one can learn a few proverbs by heart to quote when occasion demands while most of us, unfortunately, can only joke wi' deeficulty, more especially in an alien tongue.

1. الامه عريانه ما يكسى خالته [1] «He whose mother is naked is not likely to clothe his aunt». In other words, Charity begins at home. A somewhat similar proverb is in use in Egypt : الزيت ان ما كفّ البيت حُرّم على الجامع «if there is no oil in the house one cannot very well give it to the mosque».

[1] Note that ل is the Sudan form of the relative pronoun corresponding to the Egyptian *Elli*. — Ed.

2. ملكين فوق ككر كان دا غاب داك حضر «Two kings on the same throne, when one is absent, the other is present». There is some divergence of opinion as to the exact meaning. A *kakar* is the name of the so-called throne on which the Fung Kings sat : the term is rather a misnomer as the throne in question seems to have consisted of little more than a sugar box with two sides removed. Another kind of *kakar* is in possession of Ḥamad el Nil Abd el Bāgi, the Fiki (parish priest) of Tayiba, but this only dates from about the year 1840, two decades after the kingdom of the Fungs had been destroyed by Ismail Pasha. This particular «throne» is about 12 inches high and 24 inches long.

The obvious parallel that there cannot be two Kings in Brentford does not appear to be a correct one; the usual explanation given is that the proverb applies to a man who is of such importance that he is always conspicuous : either the sun or the moon is always shining upon him. We may compare the saying that the sun never sets upon the British Empire[1].

3. الّما يخدم ضُراعه لمّا النهار يجمّر يُخدّموه الرجال لما يعمى «He who does not work when the dawn reddens, will have to work for others when he is blind». The same sort of idea is contained in the Egyptian proverb : القرش الابيض ينفع فى اليوم الأسود «white money is useful in a black day»; in other words, put a little bit away for a rainy day. Similarly : الحس مَسَنّى وأبات مَهَنّى «I lick my strop and sleep happily»; it is better for me to lick my strop myself instead of getting someone else to do it; heaven helps those who help themselves.

4. منشان عين تُكْرَم الف عين «For the sake of one eye a thousand eyes are honoured»; «love me love my dog» is almost the idea. The illustration usually given is that of the followers of a Fiki who stop at a village and are treated hospitably on account of their connection with the holy man.

5. الكلب ينبح والجمل يفوت «The dog barks, but the camel passes on», one of the neatest of the Sudan proverbs that has often been quoted with effect

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[1] We have heard this used not as proverb but as a riddle, the answer being : «the Sun and the Moon». — Ed.

when a harassed official has to calm the ruffled feelings of some person who imagines that his so-called *sheraf* (honour) has been insulted by a junior.

There is some difference of opinion as to whether «the camel» refers to the camel itself or its rider, but in any case the meaning — that a man of importance need not bother about the snapping and snarling of the common mob — is plain : an acquaintance with the supercilious hauteur of the animal makes the former alternative preferable and, in point of fact, the superior airs apparently assumed by the camel are generally recognised by the Arabs themselves who state they are due to the fact that the camel knows the hundredth attribute of Allah, although such knowledge has been withheld from man.

6. يا ساعى وين الراعى «Thou owner of herds, where is the herdsman?». If a man has flocks or herds, he must go to the expense of hiring some one to look after them.

7. جزا المعروف اربعه كفوف «The reward of kindness is four slaps», rather a cynical view to take of human character though one that finds many parallels in Arabic. One of the commonest of these used in the Sudan is as follows : ايدى فى خشمك صُباعك فى عينى «my hand in your mouth, your fingers (fist) in my eye». I gave you to eat with my own hand and you retaliated by giving me a black eye.

A more generous expression is also quoted locally, though of alien origin : انّ أخا الوفى من يسعى معك ويضرّ نفسه لينفعك «the true friend is he who goes with you and harms himself to help you».

8. وطنى ولا ملو بطنى «My home before my stomach». Better poverty at home than riches abroad. «Où peut-on être mieux qu'au sein de sa famille?» «There is no place like home.»

9. جمل الحوش ولا شيخ العرب «A camel in the compound rather than a Sheikh of the nomad Arabs». In its narrower signification this proverb is said to be only in use in large towns and is not employed even in villages. If a rich nomad with matrimony in his eye came to the house of a townsman and offered two hundred camels as a dowry, the father of the girl would refuse in the phrase quoted above, the implication being that townspeople are civilised clean individuals, while the nomads are a dirty bar-

baric crowd. Most people will find themselves in agreement with the sentiment expressed in the latter half of the sentence, though acquaintance with some of the denizens of the larger towns of the Sudan leads one to suppose that the towns-people generally take rather an exalted view of their own cleanliness. At any rate the idea is that poverty with a clean respectable member of town society is preferable to the uncertainties of a wandering life with a rich but unwashen nomad husband and is illustrative of the deep-rooted antipathy that exists between sedentary and nomadic Arabs. The proverb also has a somewhat wider interpretation that comfortable penury is better than uncomfortable plenty. « Better is an handful with quietness than both hands full with travail and vexation of spirit. »

An instance of the application of this proverb occurred quite recently where a certain Mamur wished to purchase two bulls from a nomad Arab in Kordofan; the owner refused in the words of this proverb, in spite of having been offered a very good price, and stated that he knew his bulls well and, as they could carry his children without throwing them off, he did not wish exchange them for others of uncertain temper that might always be putting his offspring on the ground. If he sold his old bulls, he would have no guarantee that he would not have a good deal of trouble with his new ones and this would not compensate him for the fact that (as far as money was concerned) he had made a profit over the transaction.

A rather similar proverb is also in use : قرد يسليني ولا غزالاً يبكّيني « an ape to amuse me is better than a gazelle that makes me weep »; a plain but cheerful wife is better than a pretty one that annoys you.

10. كوس لك غرابا جزّه « Look for a crow and pluck it ». This is a proper reply if a man comes and asks you to do something in his interest or against your own.

11. كثرة النقر بتكسر الحجر « Constant dropping of water breaks the stone ». There is some uncertainty as to the exact meaning of the word *naqar*, which is also explained as continual nagging on the part of a shrewish wife. The comparison of continually dropping water with the ceaseless wagging of a shrew's tongue is not uncommon. Solomon, who had a somewhat extensive acquaintance with the weaker sex, was quite alive to the similarity between them when he wrote : « A continual dropping in a very

rainy day and a contentious woman are alike». The word *naqar* is commonly used in the Sudan of a fish nibbling the bait off a hook. Mrs. Singer spells the word with a *K*, but the balance of opinion (at any rate in Wad Medani) inclines to a *Q;* and if the meaning given above is the correct one, a parallel may be found in the sentence : الماء مع رقته يقطع الحجر مع شدته «water although gentle breaks a stone in spite of its hardness».

12. القرد الكبير ما يتعلم الرقيص بها «An old ape cannot learn to dance». The same idea is contained in the Egyptian proverb : بعد ما شاب وَدُّوه الكُتَّاب «after his hair had become grey, they sent him to school».

13. جَرَادة فى الكف ولا الف طايرة «A locust in the hand is better than a thousand flying things»; similarly عصفورة فى الأيد ولا عشرة على الشجرة «a bird in the hand is better than ten upon a tree».

14. العِندة بليلة بِعَشِّى «He who has a little *belila* (millet soaked in water) can join the feast» : if a number of neighbours have met together for a dinner a friend who only has a little to bring to the meal may join them with what he has to contribute; if he has nothing to share among them, he cannot do so. The idea seems to be the same as that contained in the proverb «when poverty comes in at the door, love flies out of the window», or, «wealth maketh many friends, but the poor is separated from his neighbour».

15. بليلة المباشر ولا ضبيحة المكاشر «Better is a little *belila* from a man who smiles upon you than a slaughtered sheep from one who frowns». «Better is a dinner of herbs where love is than a stalled ox and hatred therewith.»

For *debiḥat* the word *ṭabikhat* (cooked meats) is sometimes substituted, but the meaning is the same.

«La façon de donner vaut mieux que ce qu'on donne.»

A similar proverb is quoted in Egypt : لاقينى ولا تِغَدِّينى «welcome me rather than give me a meal».

16. ابن العبدة منه للخير جَبَدَه ومنه الشر يبدى «The son of a slave is a long way removed from good, but the bad is near». «You cannot gather grapes from thorns nor figs from thistles». The sentiment is a common one and the Spaniards have proverbs to the same effect, that it is of no use to seek pears off an elm-tree and that you will never make a good arrow of a

pig's tail. Other proverbs with the same meaning may be quoted, *e. g.* ابن الخادم لئيم «the son of a slave is a vicious creature».

17. البان لك بان الكماتير فى ام صويبينه «Take care that the fate of the Kamātīr at Um Suweibina does not overtake you too». During the first years of the XIXth century, the Fung Kings (who had ruled a great part of the Sudan from the end of the XVth century onwards) had lost nearly all their former authority and were, for all practical purposes, in the hands of their Hameg advisers. From time to time however various supporters of the old dynasty attempted to restore the authority of the Fungs. In the year 1805 a certain Sheikh called Kamtūr came to blows with Mohammed Abu Rīsh, the ally of the Hameg viziers. A fight took place in which the latter was wounded in the hand. After the fight, the principal religious leaders reconciled the two factions but, in spite of this, Kamtūr and his followers treacherously attacked Mohammed Abu Rīsh at a place called Um Suweibina, not very far from Wad Medani. Twelve of the followers of Sheikh Kamtūr were killed and the incident is now quoted as an example of the fate of those who do not respect treaties. Prosit omen. A somewhat similar proverb to the effect that unless a man behaves properly he will meet with the fate that overtook Imam Wad Ḥabūba (when he led a rising against the Sudan Government in 1908) is generally coming into use in the Blue Nile Province; but it has not yet crystallised into epigrammatic form.

18. لا بد للمرحه من جُدل «A running animal must find a root». The usual illustration of this saying is that of a donkey running about with its head in the air as if it was Lord of creation; suddenly it trips over an unseen root of a tree lying on the ground; «Pride goeth before a fall». The proverb is applied in a different sense to a man who is always complaining about something or other and when he really does got into trouble no one helps him out. The same sort of idea is contained in the tale of the boy who was always crying out «wolf! wolf!».

19. كل مره ما تسلم الجَرّه «Every time the bowl is not safe». «The pitcher does not go so often to the water, but it comes home broken at last». Another proverb with a similar meaning is also quoted : الحجر الدايِر لا بد من كسره «the rolling mill-stone must inevitably get broken».

20. ارباب الدرت مسكين الرشاش « He who imagines at the time of harvest that he is really well off and need not trouble to cultivate, finds when the rains come round again that he is a poor man ». « The sluggard will not plow by reason of the cold, therefore shall he beg in harvest and have nothing. » The proverb is applied in Wad Medani to a certain Sudanese Officer now on pension who does not work when it is time to plant his crops and has to beg or borrow money when other people have gathered their harvest.

21. ابيض جناح اسود مَراح « White wings, black house ». « All is not gold that glitters »; « fine feathers do not make fine birds ». The proverb is applied to a man who wears white clean clothes as if he was very well to do whereas his home is dirty and his cupboard bare.

22. الناقة النبّاحه حارسه لجناها من المرفعين « The she-camel cries out and guards her young from the hyena ». If a man has two wives, one of whom has borne him children while the other is barren, the former is always bothering her husband for money and so on in the interests of her child and to prevent the husband from lavishing all his wealth upon the barren wife.

23. الما بتاكله ما بيخنقك « What you do not eat cannot choke you », if you are accused of stealing a sheep and have not done so, you can face the judge with a clear conscience : a somewhat more sanguine belief in the administration of justice in the Sudan than is contained in the Egyptian proverb فى الحبس ياما فى مظالم « how many are unjustly in gaol! ».

24. ان غلبك سَدَّها وَسّع قدها « If you are unable to shut the hole, open it still more widely ». If you are in debt and cannot face your creditors, spend still more freely, advice that has been followed in other communities. « In for a penny, in for a pound ».

25. ان ضاق بيك الامر اشرب لك قزازة خمر « If you are in trouble, drink a bottle of wine », a phrase in common use (and practice) among the Ja'lin, Kawahla, Khawālda and Arakiin in Medani District.

Solomon, who appears to have been a man of the world, again has a parallel: « Let him drink and forget his poverty and remember his misery no more ».

H. C. Jackson.

NOTES

ON THE HABITS, BREEDING AND FOOD

OF SOME WHITE NILE FISH

BY WAINO PEKKOLA.

Contents. — Introductory. — Polypteridæ. — Mormyridæ. — Osteoglossidæ. — Cromeriidæ. — Characinidæ. — Cyprinidæ. — Siluridæ. — Cyprinodontidæ. — Ophiocephalidæ. — Anabantidæ. — Serranidæ. — Cichlidæ. — Gobiidæ. — Tetrodontidæ. — Summary.

INTRODUCTORY.

This is the second paper dealing with observations which I have made with regard to the fish found in the White Nile during the last four years.

In my first paper I considered the various fish as food for man, pointing out the time of the year during which they were obtainable in the Khartoum market and also their edibility. In the present paper I propose to review very briefly some of the facts concerning their habits, food and breeding places which have come to my knowledge.

Polypteridæ. — Of the three members of this family, *Polypterus bichir* Geoff. 1802, *P. endlicheri* Heck. 1849 and *P. senegalus* Cuv. 1829, the last mentioned is far the commonest. It seems to love more marshy shores and swamps than the other species. As stated in the previous paper, it seldom occurs in Khartoum. However at Gebelein it becomes common and everywhere in the Upper White Nile it is very plentiful. During the hottest hours of the day, it comes to the surface just on the outer edge of vegetation and, when disturbed, it goes to the bottom with great rapidity. The food of Polypterus, as is well known, consists of fish. Whilst fishing at Gebelein in May 1914 I got several specimens of *P. senegalus* ovaries of which were filled with eggs which were apparently ready to spawn; and, in July of the

same year, small larvæ with external gills, from 28 centimetres upwards, were very common in the Upper White Nile. The breeding season is therefore during May and June. But *P. endlicheri* spawns much later. At Khartoum this species generally has its ovary filled with ripe eggs during July and August. The roe resembles caviar, but the taste is quite different, being very unappetising. I have got only few specimens of *P. bichir*.

Mormyridæ. — Many of the large Mormyrids are bottom-fishes and their snout is specially developed to enable them to procure food such as worms and insect larvæ from the mud, but some, with a larger mouth, feed principally on fish. The smallest species live on vegetable matter, worms and larvæ of insects.

Of the genus Mormyrus I have met with three, *M. caschive* L. 1762, *M. kannume* Forskål 1775 and *M. hasselquistii* Cuv. and Val. 1846. Only a few specimens of the last mentioned have previously been reported, but in my experience it is not rare in the White Nile. It appears on the Khartoum market every year and, in March 1915, it was represented therein almost daily. The largest specimen which I caught at Gebelein measured 44 1/2 cm. The food of Mormyrus consists of Chironomus larvæ, Oligochæta and sometimes water insects. *M. caschive* and *M. kannume* breed during May.

It is remarkable that such a large fish as *Mormyrops anguilloides* L. 1764, has not been reported from the White Nile, though many ichthyologists have made collections therefrom. According to Boulenger, it is known only north of the first cataract. As already mentioned in the first paper, it occurs commonly during spring and summer at Khartoum. For its food Mormyrops generally uses fish, sometimes Crustacæ and water insects. It breeds at least as far south as Tonga on the Upper White Nile. During July and August 1914 I got numerous small specimens there varying from 40 millimetres to 12 centimetres, and in June I obtained specimens at Khartoum heavily laden with eggs. The largest which I have measured was 1 m. 15 cent. long.

One of the largest Mormyrids, *Gymnarchus niloticus* Cuv. 1829, feeds mostly on fish and crustaceans. The spawning season is very indefinite; the nest has been found near Khartoum in May. In August 1914 I got a large

specimen of this fish measuring 1 m. 45 cent. long on the Upper White Nile the ovary of which was laden with ripe eggs.

Hyperopisus bebe Lacépède 1803 is the only Mormyrid which lives chiefly on Molluscs mostly on Cleopatra bulimoides and small Corbicula, though not seldom the food consists also of Chironomus larvæ, water insects and rarely vegetable matter. It spawns in May and its eggs are yellow having a diameter of a little more than 1 millimetre.

In May 1914 I bought from the market at Khartoum two large specimens which specially impressed me because of their narrowness and dark colour. Both were females, one being 488 millimetres long with a greatest body depth of 90 millimetres, and other was 428 millimetres long, and the depth of the body 96 millimetres, that is to say the depth was considerably narrower than is usual. The number of the rays in the dorsal fin was 12 and in the anal fin 57. Usually the numerous specimens which I have examined have possessed at least 13 rays in the dorsal and 58 in the anal fin. The largest example which I have measured was 53 centimetres long.

The commonest of all the Mormyrids is a small *Petrocephalus bane* Lacepede 1803 which occurs abundantly at any time of the year.

Gnathonemus cyprinoides L. 1764 is also common, but is never found in large numbers.

Gnathonemus pictus Marcusen 1864, of which only a few specimens have been previously reported, I have seen at Khartoum. During May and June 1914 there were numerous specimens on the market. The food of this fish consists mostly of vegetable matter, grass, etc.

Marcusenius isidori Cuv. and Val. 1846 is the commonest member of this genus. It is a small fish reaching not more than 10 centimetres in length. Almost as common as the previous one is *Marcusenius petherici* Boul. 1898. The largest specimen which I have measured was 23 centimetres in length.

Of *Marcustnius harringtoni* Boul. 1905 only one specimen is known. I have seldom seen this fish. The largest specimen which I have got was caught in the White Nile near the meeting point of the Blue and the White Niles. The total length is 375 millimetres. The colour is uniform, plumbaceous, darker above than below and with a black streak on the front of the dorsal and anal fins and along each lobe of the caudal fin.

Besides these species of Marcusenius I have got a small member of this genus which has not been previously found in the White Nile.

Osteoglossidæ. — *Heterotis niloticus* Cuv. 1829 is very common in the regions where the shores are marshy. The fish is known to make a nest in the grasses at the river's edge, the nest being described as having the appearance of a small lagoon, but I have never seen one.

While fishing in the Upper White Nile in August 1914, I often saw the young fish which had already left the nest and I observed that they swam in dense shoals coming to the surface every few minutes, thus making the water appear as though boiling. This habit is continued till the fish reach the length of 4 centimetres, though there are always in the swarm larger ones reaching up to 5 1/2 cm.

Cromeriidæ. — Of the interesting dull aluminium coloured *Cromeria nilotica* Boul. 1901, I got some specimens at different places on the Upper White Nile.

Characinidæ. — The voracious Hydrocyon, which has powerful jaws and large sharp-pointed teeth, uses fish exclusively for its food. It is commonly known by the characteristic name *Kelb-el-Bahr* (river dog) by the population but not by the fishermen. All the three species *H. forskalii* Cuv. 1819, *H. lineatus* Blecker 1862, and *H. brevis* Gunth. 1864 occur in the White and Blue Niles, but the two latter are not very common.

All the members of Alestes are carnivorous, the food generally consisting of Crustaceans, Chironomus larvæ, Coleoptera, etc.

The four species *Alestes dentex* L. 1757, *A. baremose* Joannis 1835, *A. nurse* Rup. and *A. macrolepidotus* Cuv. and Val. 1849 are abundant in the White Nile.

I have also got from the Upper White Nile a fourth species of Alestes previously unknown in these waters.

The beautiful coloured *Ichthyoborus besse* Joannis 1835 is very common in Khor Barboi, near Tonga. It lives among the grass and its movements are very Pike-like. It feeds chiefly on small fish and crustaceans.

Nannæthiops unitæniatus Gunth. 1871, a small Characinid, was also common in the vicinity of Tonga in 1914. Its food consists mostly of

vegetable matter. At the end of September 1914, when I left Tonga, this fish was beginning to spawn.

Distichodus, like the previous genus, is herbivorous. The two species *D. niloticus* L. 1762 and *D. rostratus* Gunth. 1864 are very alike and can be distinguished only by close examination, but so far I have never met with the latter. *D. engycephalus* Gunth. 1864 and *D. brevipinnis* Gunth. 1864 I have got often at various places on the White Nile.

Nannocharax niloticus Joannis 1835 is common at several places on the Upper White Nile.

Of the two species of Citharinus, I have seen only *Citharinus citharus* Geoffroy 1809. It is herbivorous and very common.

Cyprinidæ. — I have met at Khartoum all the four members of Labeo. *L. niloticus* Forskål 1775, *L. norie* Heckel 1846 and *L. coubie* Rüppell 1832 are common. They are herbivorous and breed in the spring. *L. forskalii* Rüppell 1835 is rare in the White Nile.

The Genus Barbus is abundantly represented in the Blue Nile and especially in its head-waters. In contradistinction to the Blue Nile but few species are found in the White Nile.

The largest, *Barbus bynni* Forskål 1775, I have found at different places on the White Nile, but it is not plentiful anywhere.

Of the several small species of this genus which I got from the Upper White Nile, I may mention here only *B. anema* Boul. 1903 and the beautiful coloured large scaled *B. pumilus* Boul. 1901 which was very common in the neighbourhood of Tonga. The small species of Barbus love shores covered with vegetation and are herbivorous whereas *B. bynni* prefers clear water and eats Mollusca, small Nodularia, and Mutela.

On the contrary, the small Barbus, *Barilus niloticus* Joannis 1835 and *Chelæthiops bibie* Joannis 1835, also a small Cyprinid, love sandy shores and though abundant in the vicinity of Khartoum and at some distance further south still these are very uncommon in the Upper White Nile, where the shores are covered with vegetation. The former was common at Sennar on the Blue Nile, but the latter I have not seen in this river further up than some 20 kilometres from Khartoum. They breed in June.

Siluridæ. — The Siluridæ are carnivorous, though some especially small ones, use also vegetable substances for their food.

Clarias anguillaris L. 1762 feeds on fish and molluscs.

I have never seen this fish come out of water on to the ground and eat grass, as was noted by Mr. Loat, though it was very abundant in a Khor near Tonga, where I was fishing for a long time and only once have I found Algæ in the stomach, but never any green stuff which grows on the ground. I wonder if Mr. Loat's statement is correct, as even the fishermen do not know anything about this supposed habit. The fish grows to double the size mentioned by Boulenger reaching 1 1/2 metres.

Clarias lazera Cuv. and Val. 1840 I have found only seldom at Khartoum.

Heterobranchus bidorsalis Geoffroy 1827 is not an uncommon fish in the White Nile. It feeds on crustaceans and fish.

The small Siluridæ, *Eutropius niloticus* Rüpp. 1829, *Schilbe mystus* L. 1762 and *S. uranoscopus* Rupp. 1832 are very voracious. The food of the former consists of insects, seldom of fish. During the locust season their stomachs are often filled with these insects.

Schilbe lives chiefly on fish and sometimes I have found molluscs and insects in its intestine.

Bagrus bayad Forskål 1775 and *B. docmac* Forskål 1775 eat almost exclusively fish. The spawning season is in May and the eggs are white, having a diameter of little more than 1 millimetre.

Chrysichthys auratus Geoffroy 1809 lives on small fish and vegetal matter.

Clerotes laticeps Rüpp. 1829 feeds chiefly on molluscs. The greatest part of the intestine is often quite full of large *Mutela nilotica* and *Spata*. Sometimes fish is found among the molluscs in its bowels.

The small mouthed *Auchenoclains occidentalis* Cuv. and Val. 1840 eats worms, chironomus larvæ and other insects.

The food of *Synodontis schall* Bloch-Schneider 1801 is composed of animal and vegetal matter, being chiefly molluscs (Corbicula and Cleopatra bulimoides) but often also green stuff. The fish is easily caught with hooks, baited with bread.

Melanism which sometimes has been observed in this fish when kept in an aquarium, is caused by parasites. Heavily infected specimens are more

or less dark and one, which had very numerous parasites of 9 different species, was absolutely black.

Synodontis serratus Rüpp. 1829, which greatly resembles the previous, is not uncommon in Khartoum.

Synodontis nigrita Cuv. and Val. 1840 I have never got at Khartoum, but on the Upper White Nile, at some places it is common.

In August 1914 I saw near Tonga, after sunrise, enormous numbers of *Synodontis schall* and *S. nigrita*. They came to the surface breathing very quickly with their snouts sticking out of water and were so numerous that the surface was seething for a great distance.

Synodontis membranaceus Geoffroy 1809 feeds mostly on plants and decomposed débris, though small crustaceans, insects and their larvæ are often to be found among the vegetable food stuff in its bowels.

Synodontis batensoda Rupp. 1832, which resembles the previous, but does not attain such a large size, is often to be met at Khartoum.

Very seldom I have found *Synodontis frontosus* Vaillant 1895 and *S. sorex* Gunth. 1864 and only once *S. caudovittatus* Boul. 1901 and *S. cupterus* Boul. 1901.

Of the two species of Mochocus, which are represented in the White Nile, I have got only *M. niloticus* Joannis 1869.

The interesting small Silurid, *Andersonia leptura* Boul. 1900, of which only few specimens have been found, is not uncommon in the Upper White Nile. I have got it in many places.

The food of *Malopterurus electricus* Gmelin 1851 consists chiefly of fish, seldom of molluscs, and very rarely of vegetal matter. In April and May the ovary is generally laden with eggs, apparently ready to spawn. The eggs are yellow, with a diameter of a little more than 1 millimetre.

Cyprinodontidæ. — Of the genus *Haplochilus* three members, *H. bifasciatus* Steindacher 1881, *H. marni* Steindacher 1881 and *H. loati* are common in the Upper White Nile.

They swim always in shoals numbering from 4 to 50 or thereabouts and keeping to the surface. They feed exclusively on insects and their larvæ which they catch from the surface of the water. At the end of August 1914, when I left the Upper White Nile, they were beginning to spawn.

Experiments have been made with these fish as mosquito controllers.

Ophiocephalidæ. — *Ophiocephalus obscurus* Gunth. 1861, a common fish at many places on the Upper White Nile, lives mostly at the bottom of the river, but during the hottest time of the day it lies on the surface like Polypterus. It feeds chiefly on fish and while keeping it in an aquarium, it ate every other fish which was small enough for it to swallow, even its own species. After a big meal it lies on the bottom, but very often comes to the surface to take air.

Anabantidæ. — *Anabas petherici* Gunth. 1864 is called by Werner an herbivor. I have kept this fish in an aquarium and it always preferred animal food such as living fish, insects, and meat. If there is not food enough, they eat the fins of their companions.

Anabas murici Boul. 1906 which is very closely allied to the previous, occurs at many places in the Upper White Nile, but is much more scarce than *A. petherici*.

Sebranidæ. — The food of *Lates niloticus* L. 1762 is nearly always fish, only seldom I have found molluscs in the stomach. It breeds in the spring, and the young has a very different colouration from the full grown individual, being dark brown with yellow and blackish spots and irregular cross-bands.

Cichlidæ. — A common fish in the Upper White Nile is *Hemichromis bimaculatus* Gill 1862. It always keeps among the grass, feeding on crustaceans, water-insects, and fish. In an aquarium it preferred living fish.

Haplochromis strigigena Pfeffer 1893 I have got at many places on the White Nile. This fish carries its eggs and young it its mouth which nursing habit is common among the Cichlidæ. The spawning of this species seems to occur during a very indefinite period. Mr. Loat got specimens with eggs and young in their mouth from the White Nile in April. At the end of June 1917 I caught numerous specimens from Gebelein with brilliant breeding colour and carrying young in their mouths. In August 1914 I got two specimens from a khor near Tonga, both carrying young in their mouths.

Tilapia nilotica L. 1757 breeds in the vicinity of Khartoum at the end

of April and in the beginning of May when specimens carrying their young can often be obtained.

All the specimens of *Tilapia zillii* Gervais 1848 which I have got were of a beautiful white colour, with a greenish shine and with dark more or less visible transverse bands.

Tilapia galilæa Artedi 1757 I have met only on rare occasions.

In addition to the above-mentioned species I have obtained two Cichlids which have not previously been found in the White Nile.

Gobiidæ. — The only member of this family is *Eleotris nanus* Boul. 1901, and only few specimens have been found. In a khor and in the White Nile near Tonga in 1914 this species was common, but being a small fish only some 3 centimetres long and living on the bottom it has previously escaped observation. In an aquarium it lies on the bottom on the same place for hours.

At the end of June 1917, while collecting snails at Gebelein by means of a bottom net, I found this fish to be quite common. It is absolutely carnivorous, eating meat and any kind of insects or worms.

Tetrodontidæ. — *Tetrodon fahaka* L. 1762 lives chiefly on molluscs; sometimes half the intestine is filled with Cleopatra bulimoides. Only once I have seen grass in the contents of the intestine. Though I have got this fish at different periods of the year, I have never seen the ovary developed. The largest specimen I have found was 49 centimetres long.

SUMMARY.

It will be observed that, notwithstanding the limited area of the White Nile in which I have fished, there are certain species recorded in the above notes which have not previously been found in this river, and I believe that many still unknown species remain to be discovered.

It will also be noted that several species which I have met with abundantly have previously been found only very rarely.

My notes with regard to the habits, food and breeding of these fish are very brief and very incomplete as the consideration of fish has only been a by-product in my work in Khartoum, but I feel that, if others would

only follow my example and record in this journal similar brief and incomplete notes of observations which they may from time to time make with regard to these interesting and valuable (from a human food point of view) fish, in the course of years and gradually solid knowledge with regard to these matters will be obtained.

W. Pekkola.

THE SHILLUK'S BELIEF
IN THE EVIL EYE.

THE EVIL MEDICINE MAN

BY REV. D. S. OYLER.

1. — THE SHILLUK'S BELIEF IN THE EVIL EYE.

To the animistic mind of the Shilluk, the occult powers are always near, and the fact that they can not be seen makes them none the less real. Around, about him everywhere are the spirits, and daily he comes in contact with people, who are the possessors of occult powers. They recognize five classes of people, who are in possession of hidden powers. They are :

The servants of the king, that is the people in whom is the spirit of one of the kings;
The beneficent medicine men or witch-doctors;
The malignant medicine men or witch-doctors;
The people with the power of the evil eye, and
The people possessed of the evil spirit.

Some say that the class of people with the power to cast the evil eye receive their power from the evil medicine men, and would class them together, but very few make that classification. However, in talking about the evil eye, it always brings up the subject of the malignant medicine men. The powers claimed for the two classes are very similar.

Many say, with good reason, that the people possessed of the evil spirit should not be so called, but that their affliction is merely a disease. We would call it insanity.

These articles do not exhaust the subjects, but a little has been gleaned from the contradictory tales of the Shilluks. Often the ideas of the natives

are hazy as to the powers which animate the different classes, but they have no doubt as to the power of the people who make the claims.

The Shilluks believe firmly in the power of the evil eye. A few claim that the people who cast the evil eye belong to the evil medicine men, and receive their power from them, but the people are almost unanimous in saying that they have their power separately, and they think that it comes from God. The fact that the power is inherited tends to prove that they are really a separate class.

When one person in a family has the evil eye, the house is spoken of as the house or family with the evil eye, though all the members of the family may not have that power. A man may have this power, and his wife be all right, or it may be the wife that is affected, but in every case all their children are affected, though the unaffected husband may have untainted children by another wife. This taint is carried by their descendants, and theoretically at least is supposed to extend to the end of time.

A girl who has the power of the evil eye is not sought in marriage, and while the man afflicted in this manner is not desirable as a husband, yet he does not have so much trouble in getting a wife. This is not because they differentiate between the sexes, but because a man pays a heavy dowry for his wife, and he does not want to buy a tainted wife, whose children will also bear the taint of a hidden power. If the afflicted man has the price, the father is very often willing to accept him for a son-in-law, and that is especially true, when the daughter is not very desirable. As a class the people with the evil eye try to keep their neighbours ignorant of their powers.

In addition to those who inherit the evil eye, others suddenly receive the power. It suddenly falls upon them, or comes on them. They know not how it comes, but suddenly they find themselves with that dread power.

A person possessed of the evil eye can not always be distinguished. The fact that a certain person has that power is known in his own village, and the stranger coming in soon enquires about it, and is told. However one mark can be relied on to some extent, and that is if a person has eyes in which the whites are small, and the iris is large in proportion, and the iris is very dark. This test is not sure as some people of the class do not have this mark, and others, who do not have the power have the mark.

The possessed is conscious of the fact that he has the power and may even mention the fact. The power is made operative by looking fixedly at the person to be made the victim. The person exercising the power is usually in anger when the deed is done. The person who is bewitched says the eye went into me, and if the person who did the deed speaks of it, he will usually say that his eye went into the person.

The evil eye does not always take effect in the same part of the body. If the curse falls on the eye, the person will have sore eyes terminating in blindness. They recognize three causes of blindness, other than accidents. Blindness may follow the small pox, or measles, or else it is the result of the evil eye. When the evil eye strikes the ear, deafness is the result, and when it is on the head, sores and swellings appear on the head. When the body is affected, it is covered with sores. The intestines or the liver may be the part afflicted, and they swell to unnatural size, and the worst part about it is that the swelling is permanent. One young man, who was a very fine looking child, was afflicted thus, and ever since he has been out of proportion. The doctors called it enlargement of the spleen. A man who is a very swift runner may have the evil eye take effect in his feet, and in that case the feet swell, and the victim has trouble in walking. The curse may fall on the teeth, and they decay. The evil eye may strike the unborn babe, and it disappears. The most dangerous place to have the evil eye take effect is in the heart, and in case it does the victim can not live through the day.

The evil eye is not confined to the body, but it may also affect the domestic animals belonging to a person. When a person drinks the milk of a cow that has been touched by the evil eye, it causes his insides to swell. A very fine appearing cow is not permitted to go into the village by herself but is kept with the herd, and she is to be kept in the middle of the herd so that she may not be seen, and the curse come on her. A very fine calf is always kept hidden. Sheep may become the victims of the evil eye.

The power extends beyond animate things to the inanimate. A blacksmith may make a very fine bracelet, and it breaks as he is putting it on the wrist of the owner. The bracelet was bewitched by the evil eye. When a very fine spear breaks when it is being polished just after it is made, it is because of the evil eye.

As can be seen from some of the effects of the evil eye, the Shilluk's idea of sickness has much to do with the increasing of their belief in the evil eye. They do not think of a disease as being contagious so much, as they think of it being spread by some hostile agency. Some people carry their views to such lengths, that they are inclined to think that every accident, and every case of sickness is caused by some occult agency. The power may be exercised by some other agent than the person with the evil eye.

When a person is taken sick, all the symptoms are very thoroughly discussed by the people of the village, and if some mysterious features or circumstances are brought to light, it is immediately looked upon as a visitation from some occult power. Most cases of sickness present some puzzling features, and so it is easy to give credit to the evil eye for much of it. Most accidents occur not because someone was careless, but because some hidden power was invoked against the person. The patient is then taken to the good medicine man. He goes through certain forms to determine the source of the evil charm. He may decide it is from the evil eye, or from an evil medicine man.

When a medicine man undertakes to cure a case of the evil eye, he aims to do two things. The first is to cure the person suffering, and the second is to put that particular charmer with the evil eye out of business. A sheep is brought, and the medicine man heats a nail red-hot. With the nail he blinds the sheep. He then tells the patient that he is cured, and at the same time the burning out the eyes of the sheep is a type of what will happen to the person who cast the spell. His eyes will waste away. If the eyes of the person who cast the spell do not become inflamed, the cure does not take effect. When the person who casts the charm hears of the cure performed by the medicine man, he hastens to him at night, and beseeches him to spare his eyes. The medicine man exacts a good fee from him, and then assures him that he will save his eyes, but warns him not to do it again, and threatens to kill him if he sees him casting the evil eye on another person.

A person with the evil eye can cure a person who is suffering from the evil eye. Of course he gets a good fee for it. Before he takes the case he gets a small fee, such as a sheep or a hoe, and after the case is cured he

demands a large fee, usually a cow. The patient sits down near the person who is to treat him. The latter says: «You have come near me, therefore you will not die». He then grinds up a bit of wood, and putting it in water, makes the patient drink it.

The spell of the evil eye may be cast in the presence of people, and all present even to the victim may be ignorant of what is being done, though it may be known. The man with the evil eye may be seen staring at the victim. For that reason the Shilluks do not like to have a person look them in the eye. When a person stares at a Shilluk, he usually averts his eyes, or protests.

When the evil eye has been cast on a person, he very seldom tries to discover the identity of the person who bewitched him. Should the person boast of having done it, he will be fined as though he had killed a man. The victim may have seen the person staring at him, and directly accuse him of the act, but that is not always safe, as the case is brought before a medicine man. If the person accused of casting the evil eye shows fear he is guilty, and must pay a fine equal to that paid for killing a man. If he shows no fear, it was a false accusation, and in that case the accuser must pay an equal fine for his false charge.

The motive for using the evil eye is usually envy or jealousy or anger, for the evil eye always picks a shining mark, it does not fall on poor people, nor is a poor thing bewitched. A poor man may occasionally be the victim of the evil eye, but it is always an accident, as he has eaten food that has been bewitched to catch a richer person. They take some precautions to avoid the evil eye.

If a person has some very choice food, it is covered so that the evil eye may not fall on it. Food is very often bewitched, but it is usually meat or fish that is tainted, and it is very seldom that food made from grain is affected. Food that has had the evil eye cast on it can be made fit to eat by giving some of it to a dog. They say that the dog takes off the eye. The milk of a cow that has been affected can be cleansed by taking some of it in a vessel, and pouring it on a fire. The fire is put out, and from that time the milk of that cow is safe to use. If these precautions are not taken, the food will cause nausea. After the nausea has passed, evil consequences may remain, or a person may be all right.

The natives weave their hair into fantastic shapes. If a person has very fine hair, he puts a few thorns in it to keep off the evil eye. Should the evil eye fall on his hair, his head would break out in sores.

When a person has his body well oiled or covered with some fine ashes, he is very likely to have the evil eye cast on him. To escape that misfortune he takes a cucumber like pod from a wild plant, and takes out the seeds. Some of the seeds are put on the temples, and some on the neck, and others on the tip of the shoulder blade, or the entire fruit may be worn suspended from the neck.

When butter is boiled to clarify it, the work is usually done at night so that the evil eye may not be cast on it.

The Shilluks will not say that they are in good circumstances, lest it be heard by some envious person, and he should cast the evil eye on their possessions. When a rich man is asked in regard to his property, he usually says I have one or two cows, but they are very poor cows.

The parents of a very fine looking child do not like to let people see it for fear someone will cast the evil eye on it, and the parent is very angry when someone comments on the good appearance of the child. Should the child be taken sick, the parents call on the person who made the remark, and demand that he pay the fine required when a person is killed. The accused usually holds out, and a compromise is affected. He brings a sheep, and one of its ears is cut off. The sheep then is a witness against the man, and by doing that, he assumes the responsibility for the child. If it dies, he pays the fine as though he had killed it. Even if the child reaches maturity and dies, the man is responsible and must pay the fine.

Frequently people have hard knots in their flesh. These are really stones that have been put there by someone with the evil eye. The swellings do not disappear.

The Shilluks have a custom that when a person is threshing his grain, they go to beg from him. Sometimes they go in such numbers that the man has very little left for himself, but he does not dare to refuse for fear someone in the party may cast the evil eye on him. He gets even by going to beg from some other person.

They give a few warnings as to conduct when with a person who has the evil eye.

If you walk with a person who has the evil eye, let him walk in front, for if you go in front you give him a good chance to cast the evil eye on you.

When a person with the evil eye begs from you, grant his request, because when he accepts your present his power over you is broken, and he can not injure you. He may regain his power if he comes again and is refused, for if you refuse him, he becomes angry and casts the evil eye on you.

When eating, let the oldest of the party take the food first, so that if the evil eye has fallen on the food he may detect it, and the food can be cleansed.

When eating with a man who has the evil eye, do not eat much or he will kill you.

When you are angry at a certain village, do not enter that village or you will get the evil eye.

Do not speak harshly to a man who has the evil eye, or he will cast the spell on you.

Once a man gave his daughter to the king to be his wife. The girl had the evil eye, and when the king learned that fact, he gave the woman to another man lest she kill his other wives.

At the present time a chief is suffering from the evil eye. The people of another village had stolen his cow. He went to the village in anger, and talked harshly. While there he felt a chill run through his body. He went home, and took sick. His body has sores on it that have come from the evil eye.

The man with the power to cast the evil eye is feared by the people, but he is not feared as much as the evil medicine man. When he causes death, it is usually sudden, though it may be lingering. When a person with the evil eye dies, the people of the village rejoice, though they do not show their joy openly.

The possessors of the evil eye are deceived even as the people who fear them. They go through life apart from their fellow men in many respects. They believe in their own evil powers, and while their claims sound childish to us, yet we must consider the fact that the history of the English speaking world reveals the fact that our ancestors were afraid of witches, even after they had reached a much greater development than the Shilluk has attained.

II. — THE EVIL MEDICINE MAN.

The Shilluks believe that occult power of a malignant nature is possessed by a certain class of men. The man with this power is called *jal yaṯ* (the first *a* as in lad, the second, as *a* in father and the *ṯ* is a dental). It means the man of the tree, or medicine, as *yaṯ* means either a tree, or the injuring or healing powers of certain compounds, which are usually derived from trees.

The men of this class are all born with the distinguishing mark. Three different marks divide them into three divisions. The first have but one testicle showing in the scrotum; the second have two, but they are very small, and the third have none. The first class is the more numerous, and are the dominating class. The members of the first and second class are supposed to be equal in the manifestation of their powers, but the third are more powerful.

Children born marked as evil medicine men are thrown into the river at birth, which is called sending them to their own country. The father alone has the power to spare his son in such a case.

The young wife always returns to her own home to give birth to her first child. After that she may either remain in the home of her husband, or go to her old home, but in either case a few hours after the child is born a number of men come to the door of the house and sit down. If the husband is in the village, he is one of the number. If it is in the woman's home, her relatives go through this formality. The men say : « What is it? ». If the women within reply « a boy », the men then ask : « Is it good? ». If the women reply immediately « it is good », the men go away happy, but if the women hesitate or answer : « It is bad », the men go in to investigate. If they find that the child is an evil medicine man, they immediately begin to go through certain forms. When the child is born in the wife's old home, a messenger must be sent off to the father. Should the messenger merely say that a son has been born, and not tell of his deformity the husband can recover part of the cattle he has paid for his wife, and his relatives-in-law become responsible for any damage the child may do. When the father is told that the child is bad, he usually says it must be killed. He

fears to trust his relatives-in-law lest they yield to the pleadings of the mother, and so he sends a messenger to see that the child is killed. Should the father permit the child to live, he is responsible for all the evil done by him. If the father is present, he gives immediate judgment, and if it is for death, the sentence is carried out immediately.

The helpless child is always killed in a certain way. A little basket is woven, and the child placed within, and then the top is also woven shut. The basket is then put in a boat, and taken to the middle of the river, where it is committed to the water. The basket is a necessity, as they think that the powers of the babe are such that without the basket to restrain him he would immediately swim ashore, and escape.

When the evil medicine man is not killed, his mother loses the power to become a mother again, and when she weeps for the death of the little one, her next child will be deformed in the same way.

If the father spares the child, and someone else kills it, the murderer must suffer the usual punishment for murder, which can usually be atoned for by a fine.

After an evil medicine man has reached maturity, he can not be openly killed except under certain conditions. The people of his village may tire of his evil practices and conspire to kill him accidentally. To accomplish that end they invite him to join them in the chase, and they manage to get him well to the front. When he is in the right position, they all throw at the animal, but he is their real target. When he falls, the men all cry out : «an accident», and no one is responsible for his death. They do not seek to kill such a person in their local fights lest their own side be thrown into disorder.

This occult power is not hereditary, but many think that the mother of an evil medicine man has some occult power, if her husband is not of that class. She does not work as the men do, and the majority seem to think that such a mother is not tainted.

The evil medicine man always works on his own initiative, and never at the request of another, and for that reason he never receives fees. He uses as his tools, owls, snakes, eggs, sodom apples, lizards, and crows. The medicine or power in these agents is the same as the power belonging to the man, and in action unite with his power to work evil.

As a class they are without mercy, and do not intercede for the children, who are killed. However, if an evil medicine man has a son afflicted in a like manner, he spares his life. They try to keep people ignorant of the fact that they have the evil power, and when someone mentions the work of the evil medicine man in the presence of one of the class, he usually says « why are they so evil? ».

They belong to the dark as they always work at night, and when one is seen casting his charm on the house of another, if he tries to run away he may be killed, and no punishment is inflicted on the murderer; but if he is caught, and held, and then killed, the murderer is fined. If he is caught, he must pay a fine as though he had killed a man. It is very difficult to hold them, as they blind their captors temporarily by throwing some medicine in their eyes.

The statement is made that they usually try to cast their charms on houses where people are sick, and that accounts for some of their apparently wonderful achievements. This statement is also borne out by one case at the mission. The calves had been dying from some disease. One night an evil medicine man came, and made a great hole in the mud wall of the barn. Some object, perhaps a snake, had been dragged among the calves, and sticks were placed in a certain manner in front of the opening. The herder was in great distress, as he was sure all of the calves would die, but not another one died from that disease.

The people firmly believe in this black art, and apparently in many cases at least the victims believe themselves possessed of this power. They go out into a desert place at night, and pray thus : « You, who are God give me this person to kill. Why was I created thus if it was not that I was to kill? » If he does not succeed at the first attempt, he tries till he is successful. Their belief in their own powers is also shown by the fact that the little boys of this class work charms on their little play fellows, apparently practising their powers. Perhaps the child has heard much of his own evil powers, and he desires to learn whether or not he can do the wonderful things attributed to him, and as he tries he becomes convinced of his own power.

To call a man a *jal yaṭ* is a serious matter even though it is a well known fact that he has the power. The person making the statement must

pay a fine unless he has caught the man actually working a charm. The accused says : « Whom have I injured in your house? ». He does not try to plead that he is innocent of such work, but only that he has not injured his accuser.

The malignant medicine man has many means of bringing disaster to people. If he is able to get a bit of hair, the parings of the nails, spittle or any thing else that has been part of the body, or the clothing of the body, he can work a charm on it, so that the owner will die. If he is ignorant of the identity of the owner, he can do nothing with these things. For that reason, when a man cuts his hair or his nails, he either hides the part removed or else puts it on a public road, so that the identity of the owner can not be learned.

A case that illustrated their belief in that power occurred here once. One afternoon a man came in great wrath with his daughter. He said someone on the place had killed his daughter that morning. As she seemed to be in good health, his statement seemed to be a little ridiculous. When asked to explain, he said that she had been carrying water, and that she had laid off her outer garment which was of calf skin. When she returned to get her garment, she found that someone had cut a piece out of it. We was sure a man with the occult power to kill had done the deed. When examined the edge of the marred place was seen to be rough. Others, who had been working were called to see if the identity of the person doing the wrong could be ascertained. At last a boy said that he had seen two pups playing with the skin and dragging it about. He had driven them away, and returned it to its place. The man was satisfied that harm had not been intended against his daughter, and she returned to work.

Over a bit of mud taken from the wall of a house, or a bit of grass from the roof, a charm can be worked that will kill the owner of the house.

When a man's club falls into the hands of one of these evil men, he buries it, which is symbolical of the burial of the owner which will soon occur, or he may kill the man by cutting the club in two, or a hoe may be given to him by the children while the older people are away. He throws the hoe into the river, and the arm of the owner is destroyed so that he can not hoe. He may also steal a cow rope or a spear and work a charm on it that will kill the owner.

Many things are done by the evil medicine men. He cuts off a cow's tail, and it becomes barren; but if he treats a bull in the same way, it brings disaster on the house of the owner. Any mishap that may come to him is sure to be caused by the fact that his bull was maimed.

He may not be able to get a person in any other way, and finally kills his dog. That causes the death of the master. He slips into a house, and cuts off a bit of the skin on which the people sleep. The people who sleep in that house all die. He watches a person as he walks and counts his steps. The person dies. He defiles food, and those eating it die that very day. If the food is given to a dog it coughs, and swells, but it does not die. He cuts a bit out of the loin cloth of a woman, and she becomes sterile.

For one special device of the evil medicine men the good medicine men have a special counter. The evil man makes a mud image of the man he expects to kill. He sticks nails in the ears of the effigy, and puts it in the fire. The man will either die or go crazy. The good medicine man makes another image of the man when he comes for help, and it is put in water, and that tends to neutralize the heat on the other image.

They have the power to bewitch a herd of cattle so that all the milk is found in the udders of their own cows, or they can injure the grain in the fields. One of the evil medicine men sees the field of a certain man yielding very abundantly, and he becomes envious. He waits till the next crop has been planted, and is just coming up. He then goes to the field at night and pulls up a bit of the grain, and then throws a dead snake in the field. From that time on the field will not bear, and the owner takes a new field and leaves the old one. He may hear that a certain person is a very fast hoer. He goes at night and takes a bit of the soil from his field, and in so doing achieves a double victory. The owner of the field loses his power to hoe, and the field loses its fertility.

These men with the occult power are said to be envious of the man with a large family, and for that reason they cast many spells on little children, and they must be guarded so as not to come into the presence of such an evil man. When he spits on a child, it dies. The reason for this envy is that the man can not have a large family. He may have many children, but as a judgment for the blood on his hands most of them die in infancy.

The evil medicine man takes advantage of the carelessness of the people. A man may be gathering the old stalks on his field to burn them, but fails to burn them that evening. An evil medicine man comes at night and burns them, and then the owner gets the ashes on his hands, and his hands swell. Or the large stick used in planting the grain may be left in the field at night, and the owner of the malignant power enters the field, and burns it. The grain will grow well till it gets to be almost ready to yield the harvest, when it is burned by the sun so that it dies. Water that is left in the garden over night may be defiled, and the people who drink it die.

The evil charmer is envious of the successful fisherman. He gets a bone of a fish that the man has caught. The fish bone is burned in the fire. That works a charm on the fish spear, so that in the future it will not be able to take the fish.

Accidents which terminate in blindness are caused by the evil medicine men.

In the hot season, when the people sleep in their yards, the evil medicine man comes at night and sprinkles blood on the sleepers, and they die.

After a person has been buried, the grave is watched for three or four nights lest the man of evil should take a bit of the earth, and by working a charm on it kill the whole family of the deceased; but after a short time he can not work that charm, so at the end of the fourth day the watchmen are dismissed.

When with an evil medicine man it is well to be on the alert. When a person is sitting with a man of that class, when he gets up he should brush the ground where he has been sitting so as not to leave an imprint of his body for the man to use in his witchcraft. When a person sees such a man walking behind him, he should return, and if the man is stepping exactly in his tracks, he should be taken and made to ransom the man as he was killing him. It is not safe to sleep in the same house with them, as they may defile a person in his sleep. In eating with them it is best to stop before a person is satisfied. To strike an evil medicine man is to invite certain death. The people have the habit of asking a person to wash their backs when they are bathing. Should a person ask an evil medicine man to do that favour for him he will be very itchy all that night, and later have sores all over his back.

All the evil medicine men keep snakes, but usually they have them in a gourd or den in the fields, though a few of the most powerful have kept the snakes in their houses. To deceive the people, they pretend to fear snakes.

A man, who is reliable, tells this story of a transaction he witnessed. He was making a short trip. He came to a village where the people were very much excited. He found that the cause of the trouble was that a sick man said he had been bewitched by an evil medicine man named Akomadul. Poor Akomadul was brought into the centre of the village, and beaten by all of the people, until at last he cried out : « Do not kill me, I did it, but I will save him. I will remove the charm I have put on him. » Akomadul then went into the house of the sick man, and took out a bit of hollow ambach wood that had been hidden in the grass of the roof. Inside of it were, a charm, an egg, and a lizard. The people were not satisfied, and they began to beat him again. He then went to the field of the afflicted man, and got a charm that had been buried there. It was a large stick with an iron ring at each end, and stretched between the rings was a lizard. He next went to the doorway of the patient, and took up a cooking vessel that had been buried there. The vessel was full of charms, eggs, and lizards. The chief of the village asked him why he wanted to kill the man, and he said : « He cursed me because I killed one of his relatives ». Akomadul then took a white sheep, and said : « I will save the man ». The sheep was cut open while yet alive, and the contents of the stomach were put on the patient, and on his house. The blood was put in the hole where the cooking vessel had been buried. He then said : « The man will get well; even though you kill me, he will recover ». The people wanted to kill the witch, but the chief intervened to save his life. It was reported that the man recovered after a long illness.

It can easily be seen that many ills can readily be diagnosed as coming from an evil medicine man. When the good medicine man has found that the malady was caused by an evil medicine man, he proceeds to break the charm. Different methods are used, but one or two will suffice. While the medicine man is working, the parents of the patient pray for him, if they are living. In case they are dead, his male relatives pray for him. The patient sits on the ground while the healer jumps over him in such a way as

to encircle him with his legs. The medicine man then spits on his hands, and strikes the patient lightly. He then places his hands in the arm pits of the afflicted person, and proceeds to knead his whole body, and then concludes by stretching the patient's fingers. A chicken is then killed, put in a cooking vessel, and buried. A burning torch is then passed in circles about the head of the patient. Three higlig pegs are then driven in the ground near his door, and the medicine man taking water in his hands blesses it, and sprinkles it on the ground by the pegs, and as he sprinkles it he prays : « Help my breast that the man may live. I have worked; the matter rests with you, you are God, it was you, who created, and the tree (medicine). »

Others add to the above by grinding up a bit of a certain plant, and giving it to the patient in water. Then grass is tied in little knots, and scattered on the road, and the patient is then put in a house, and a spear stuck up near his head to guard him.

The evil medicine men kill their own relatives first so as to inherit their property.

Sometimes when the evil medicine man is old, he reforms and leaves all his old practices, and hires his powers to help people. When they try to help, they are very powerful. A story was told by different people, but none of them were eye witnesses of the cure, though they had it from a man who was present.

To begin the cure, two oxen were paid. The patient was tied so he could not move, and laid on the ground. The medicine man then called his two big snakes, and when they came to him, he said : « You see the man, and the fee. Shall we help him? If you assent, go to him. » The snakes went to the poor victim, and much to his terror crawled all over him, and they even went so far as to lick his face. The patient called loudly for help, and even wept. The medicine man called for water, and sprinkled it on the patient, after he had blessed it, and he announced that the patient was cured.

Another reformed malignant medicine man, had such power over a certain bit of water that if a person fished in it without permission, some mishap would over take him. The required permission would be given when the fisherman promised to give as a fee the first fish taken, and

another had such power over the animals in a certain district that it was not safe to hunt without his blessing, which was given by spitting on the hunter and his dogs. If that blessing was not obtained, the hunter would be devoured by lions.

Sometimes an evil medicine man may have the power of the evil eye as well, and then he is exceedingly strong. While most of the natives say that the people with the evil eye, and the evil medicine men are entirely separate some connection must exist, for if a man begins to talk about one he invariably brings in some thing about the other, and it is not always easy to know which he is talking about. One of the chief differences in the method of working is that with one, merely to look on the victim is enough, but the other must get some means of contact.

As a class they accept the reputation given them, and try to live up to it. They are sinned against, and they seek to repay in kind. Shunned as evil they come to believe in the powers ascribed to them. Many of the miracles accomplished by their power follow so long after the invocation of the power, that a less superstitious race would not look upon it as a result of their power.

Through superstition the evil medicine man is a power among the Shilluks. Thoughts of his power may cast a gloom over the most festive occasion, and at night when the world is peopled by the spirits of their fancies, the evil medicine man prowls about. The hooting of an owl or unusual tapping sounds caused by the wind bring a thrill of dread to the heart of the Shilluk, which can not be dispelled by the bright light of day.

D. S. Oyler.

NOTES.

Nuba mountains Province.

Superstitions.

Two months ago the Mek of Rashad brought me an exceptionally fine skin of a leopard which had been killed close to his Jebel. Hearing that a certain Sheikh Musa, of one of the neighbouring Jebels, was supposed to be skilled in curing skins, I sent for him and gave him the skin to cure. After some weeks, as he had not brought the skin, I sent for him and asked for it, and after some quibbling, he owned he had forgotten and left it in water with the result that it had rotted and was completely ruined. I was naturally exceedingly annoyed and told him that he would have to replace it by another. That same night a leopard tried to get into my hosh and then went to my stables and, failing to get in there through the zariba, went to the police lines and broke into a tukl and took two goats. The following night it again came and called outside my hosh, but there being no moon, I was unable to see anything. The next night it did the same thing after which it went into the hills on the Jebel and stayed some time calling — this right amongst the villagers' tukls.

The following day a deputation came to me asking me to send for Sheikh Musa, who, I was assured, had the power over leopards, and to order him to command the said leopard to go away. They insisted that he had brought it out of spite and that it would harry everyone in the place, that in point of fact it was what they described as *Dul* (I presume they meant a ghost) and that it was well known about here. They went on to describe how until two years ago there was a certain old woman who was supposed to be mad living completely alone on a neighbouring Jebel (Abu Shok) and who had the power of turning herself into a leopard and assailing anyone who tried to climb her Jebel. That woman had now died and appeared in the shape of a leopard. I assured them that as soon as there was a moon I would sit up for and kill it. This however considerably upset them and they assured me that it was a ghost and that if I fired at it I should only annoy it and it would do more harm. They would hear of nothing but that I should tell Musa to use his power to send it away.

From that night I have never heard or seen any sign of the leopard and I afterwards found out that, doubting that I should send for the Sheikh, they themselves went to him and firmly believe that he alone is responsible for its disappearance.

L. A. Deane.

Rashad, February 1st, 1919.

Sennar Province.

West African Experiences.

I noticed in the *Times* the other day an article entitled *Superstitions of the Niger Delta, ghosts and other Fears*, by D. and P. Amaury Talbot, and think the following experienees may be of interest, though for obvious reasons I shall abstain from quoting names and localities.

The experiences were all personal.

Mosquito *Ju Ju*. — I went once to spend the Kurban Bairam with West African friends at a new village during the rains; as the sun set, the evening prayer was called and the village went to its grass mosque to pray. Shortly after sunset mosquitoes came out in millions and when the candles were lighted the candle-sticks had to be put into basins of water on account of the innumerable winged pests. While I was fighting for my dinner with the insects, one of my friends came up and, on my invitation, sat down for a talk. After watching me trying to keep the insects out of my food and slapping mosquitoes, he looked at me with a smile and said : « Shall I send the mosquitoes away? ».

I thought he was joking and said « Yes do ».

He turned half round in his chair and as he did so the millions of insects hopping and flying against my candles gradually vanished until not one was left, nor even a hum or a buzz. I was absolutely bewildered and asked him if he could bring them back; he said : « Yes, but it would take longer to send them away again ». So I told him to bring them again. They come gradually. First a grasshopper or two, and then the hum of mosquitoes, until things were as before. When I had had enough, I asked him to send them away again. This time it took about ten minutes for them to go.

Another time I had to camp in a swamp. The insects and mosquitoes were exceedingly bad. My friend was ill at the time, but I told my servants and police not to worry as my friend had medicine for them. My servants had

already seen the mosquito *Ju Ju* on a former occasion, but the police with me were respectfully sceptical. About half way through dinner a West African came to me and said « Your friend salutes you ». I sent back salutations, but, as I was talking, every insect and mosquito vanished and I and all my party slept undisturbed without mosquito nets.

Later I asked my friend to tell me the secret for the benefit of humanity, but he said that it was a death-bed secret and that only two others knew it in the whole of Africa. I watched most carefully : no drug or smoke was used.

Some months later I had to accompany one of my seniors on a tour of inspection.

We went on board a steamer and, incidentally, my West African friend was on board. I told this official my experience of mosquito *Ju Ju* and he was frankly sceptical and ridiculed me. No man likes to be thought a fool, so I went and saw my West African friend and asked him to fetch every mosquito in the place to cheer my white brother up. He said : « No. This is my village and I have had enough trouble clearing mosquitoes out of it; but (pointing to a diamond shaped stink bug on the table) that is a dear little fellow very sociable and he eats mosquitoes! » He looked at me with a queer twinkle in his eyes, so I awaited developments. Sure enough about half an hour later it was hardly possible to walk on the deck for stink bugs. The mosquito house during dinner gave a sort of poor refuge from them.

Of course my West African friend denied that he had anything to do with it when I taxed him with it later.

Crocodile *Ju Ju* has already been written about by Mr. Hussey. I have never seen the actual hunting, but I used to be sent crocodiles as presents.

The tribe that catch the crocodiles are from the swamps of the Niger and fishermen by birth.

I forget whether Mr. Hussey mentioned the *Ju Ju* for new born children of that tribe. Roughly it is as follows : after the child is born it is smeared with some preparation and left on the river bank all night. If it is there next morning it is a true born child of the tribe, if not the question has settled itself. These people are called crocodile Sultans.

I have also heard of Elephant Sultans and tried to get one to give me proofs of his powers but I was unable to find one amongst the tribes under me.

This is the legend of the Elephant Sultans :

Having found your man, you ask him to bring you a good tusker. He goes away and returns leading a herd of Elephants. He will then point out one

elephant and give you permission to kill him. You are only allowed to kill one elephant. After that he leads the herd away again.

The West Africans when about to form a new village invariably sleep on the proposed site and if the portents are not favourable, they will go to another place. One of the favourable portents is a little black ant. The other portents are white Ju Ju.

The first building in a new village is the mosque. To ensure the prosperity of the village five Ushr leaves are brought. Incantations are written on each leaf in Indian-ink. The writing being in Fulani goes from the top to the bottom of the page and not across as in European writing. The five leaves are put into five burmas. The burmas are buried as follows : four to the four points of the compass. The fifth is buried under the Chief's hut.

In a new village I was once asked to shoot a crow and, having done so, I asked what they wanted it for. They told me that it was to make a powder which would prevent the villagers from losing their way.

They used the eyes and certain portions of the crows insides to make the powder.

One day, while visiting my West African friends, I received a worrying business letter and was rather upset about it. My friends seeing me worried, asked me who had been troubling me. I told them. They said : «Don't you worry, he shall die!». I told them they could not reach him as he was something like 2000 miles away. They said : «That is all right, we shall kill him from here». It took a lot of explanation on my part to convince them that the person in question was only acting under orders. Finally they said that as I would not let them kill the man they would compel him to send me a favourable letter. This letter I got; but I have a grim suspicion that there is a bank manager somewhere who has had the narrowest squeak of his life.

Lady Lugard, in her valuable work *A Tropical Dependency*, writes on page 232 about the «Dark Sea». I am told that there is such a river. Its name is «Baginroi» and lies between Nufé and Illori. Baginroi means Dark Water and it is, in fact, a dark river.

A West African friend of mine has also seen the Egyptian monument spoken of on the same page.

It is colossal ram, about the height of a man. It is at the top of Jebel Dala in Kanu.

E. W. Hay-Drummond-Hay.

Dueim, February 6th, 1919.

Upper Nile Province.

A Caterpillar with a portable house.

The Caterpillars of the *Psychidæ* make for themselves cocoons protected by an outer covering of twigs, spines or leaves, and live in these houses which remind one of those of the caddis. The ones illustrated feed on the red-barked acacia (acacia seyal); the larger caterpillars make their houses of broken

Psychidæ Caterpillars feeding on Acacia seyal. Life sized.

twigs fastened to the outside of a toughly woven cocoon or bag. Some of the smaller ones make the outer cover entirely — as in the middle illustration — or partly of the acacia thorns. Sometimes these latter, on outgrowing their old home, will make a new and larger house using the old one as part of the new wall.

When alarmed, or when resting, the inmate closes up the bag-like mouth of the cocoon by drawing it together and inwards with the fore-feet. When the insect wants to move, it opens the mouth of the bag, puts out its head and first few segments (right hand illustration) and crawls along the branches, clinging to them with its fore-feet and dragging the cocoon after it, suspended from its body. It is not attached in any way to the cocoon, but holds it in position with its suckers. When a suitable leaf, or part of the branch — for it eats bark as well as leaves — is found, the cocoon is slung up to a convenient twig by one or two silken threads and it commences to feed. If danger threatens it withdraws its head, closes up the mouth of the bag and remains hanging as in the left hand illustration. It has great powers of contraction and can withdraw itself into a very small compass, it then looking like a shrivelled up caterpillar just about to turn into a chrysalis. At the bottom of the bag is a small self-closing aperture through which its evacuations are passed.

The colour of the head and first few segments is creamy white, spotted with black, whilst the remainder of the body is black.

I once took one of these caterpillars out of its house and placed it on a branch. It immediately started to feed, apparently in no way embarrassed by the loss of its house. However very soon it was attacked by the small ants, with which these acacia always swarm and they soon killed and carried away the unfortunate creature. I have seen these ants attack the head of one feeding and, after it had hurriedly withdrawn into its bag, they remained a considerable time trying to find a way in before abandoning the attempt.

So ubiquitous and ferocious are these little ants that it is surprising that any kind of caterpillar, not so protected, can live. Presumably all kinds must be protected in some way, either by acrid taste or smell, or by the possession of spines. Coloration would be of little help against such an enemy as these ants appear to be quite blind.

The female moth of the *Psychidæ* is wingless, she does not emerge from the cocoon but remains inside and lays her eggs there. Some acacia are festooned with hundreds of these cocoons, but comparatively few seem to reach maturity, great numbers become the victims of an ichneumon fly whilst, in spite of all precautions, the ants seem to dispose of many more.

Other species of this family feed on grass and make the neatest little cylindrical boxes of sections of stalk, others make their houses of odd bits of leaves, which gives them the appearance of ragballs or burrs.

C. H. Stigand.

White Nile Province.

Were-Hyenas.

Legend of Jebel Arashkol as told by Nazir Ismail Dud of the Dueih Tribe.

I heard the following from one of my friends :

During the Turkish Government, a nomad Arab was passing Jebel Arashkol in the evening. As he passed, the hyenas came down to him and said : «We do not wish to eat you, but we want you to take a message for us. If you do not do so, we shall eat you. We wish you to go to Jebel Walad el Matori, east of the White Nile, and inform Azrak Wad Dabrak that his daughters are grown up and wish to marry and that he is to come. If he comes, you are to come with him, if not, you are to bring a letter from him.»

The Arab agreed and went to Jebel Walad el Matori and called three times «Ya Azrak Wad Dabrak».

There ran out to him a pack of hyenas wishing to eat him and with them was Azrak Wad Dabrak.

The Arab called out to the hyenas : «I have come with a message to Azrak Wad Dabrak. If he is with you, let him talk to me, if not, guide me to him.» Then El Azrak Wad Dabrak came near to the Arab and said : «What do you want?». The Arab replied : «I have a message from your friends at Jebel Arashkol». El Azrak Wad Dabrak then sent away the hyenas, while he himself changed into the form of a man and said to the Arab : «Speak and do not be afraid, no harm will happen to you». The Arab gave the message.

El Azrak Wad Dabrak gave him money, warned the hyenas not to touch him and sent him back to Jebel Arashkol with the message that he would come.

The Arab went to Jebel Arashkol and called out «Ya Azrak Wad Dabrak». In the evening the hyenas came down to him and took the message which was that El Azrak Wad Dabrak would come as soon as he had finished his affairs at Jebel Walad Matori.

As night fell, the hyenas conducted the Arab to a cave in the hill and became men and women.

He was shewn vast wealth in gold bangles and rings taken off women eaten by the hyenas and he ended by marrying one of El Azrak Wad Dabrak's daughters.

All the Hyena folk had hair in their ears and on the palms of their hands when they were in human form.

In Dervish days Mohammed el Fadil Wad el Mahdi attacked Jebel Arashkol and put to the sword and burnt all its inhabitants as Hyena folk.

Curiously enough the legend of Jebel Arashkol was well known in Sennar District while I was there, and I have met several men there who had the reputation of being Were-Hyenas. Needless to say they had no hair in their ears or palms. They were all blacks and as far as I could make out humbugs. In Arabic they are called *Saharin*.

E. W. Hay-Drummond-Hay.

El-Dueim, February 5th, 1919.

CORRESPONDENCE.

Beni 'Amer Marriage Customs.

In Mr. Fleming's note on Beni 'Amer marriage customs in the last number of *Sudan Notes and Records* (p. 74-76) there are two references to the use of dung. At an early stage in the proceedings the bridegroom's relatives are freely bespattered with dung by the female friends of the bride, and at a later stage a piece of dry camel dung is inserted in the *'amma* of the bridegroom. The latter usage shows clearly that some special significance is, or was once, attached to dung and the former practice, which might be dismissed at first sight as mere horseplay, is curiously parallel to a custom of the Masai on the occasion of the circumcision of young men. In his *Primitive Paternity*, vol. I, p. 110, Mr. E. S. Hartland writes that on this occasion: «The barren women come in order to be pelted by the youths with fresh cowdung for by the universal belief of the Masai they will thereby be rendered fertile». It is suggested that the same idea of the fertilising property of dung may underlie both the customs mentioned by Mr. Fleming. In the same connection it is interesting to note also that the Masai youths at this ceremony «like to appear as women and wear surutya earrings and garments reaching to the ground» (Hollis, *The Masai*, 1905, p. 298) very much as youths do in this country on the same occasion.

J. W. Crowfoot.

February 15th, 1919.

Census Superstitions.

When David insisted on counting the people, misfortune immediately followed and he early repented of his sin [1]. The same feeling seems to prevail among Arabs in relation both to their children and to their flocks. A tribe in Berber District, for example, is so averse from making the ill-omened census for herd-tax, that the Nazir has offered to pay a larger total, provided that the tribe be left on tribute.

In his *Tent work in Palestine*, Conder says «every town endeavours to conceal its numbers so as to escape taxation». May there not be another reason

[1] II *Samuel*, chap. xxiv.

also, namely the fear of limitation or the superstition that makes one humbly touch wood, when wishing to boast?

Another superstition that I have found common to many parts of the Sudan, that of removing shorn hair or nails from off the ground, in case some one trod on them and thereby gave the original owner a headache, has been explained to me as akin to the common belief that an enemy could work magic on his rival if only he procured something that had been part of him.

Is the story of Samson and Delilah due to a belief of this kind? For it was after she had cut off his locks that Delilah began to afflict Samson. But how [1]?

It has been suggested to me that the reason why a Hadendawa refused to allow me to take a photo of his wife was not the fear of the evil eye, so much as the fear that I should procure her effigy and work magic upon that.

Do you know of parallels to these two superstitions in the Mohammedan Sudan? Parallels to the latter superstition are probably numerous in pagan Sudan.

W. I. CHEESMAN.

Berber, February 7th, 1919.

Fish poison.

It may interest your readers to know that the fish poison mentioned in Major R. G. C. Brock's article on the Zande tribe [2] is obtained from a plant called *Tephrosia Vogelii* Hook. f.

It is used throughout Tropical Africa, and apparently the methods adopted are much the same everywhere.

It is a shrub 8-10 feet high with white silky leaves and a purple or white flower.

It owes its properties to the presence of a crystalline substance called Tephrosine, which is extremely toxic to fish of all kinds.

Hanriot (*Comptes Rendus*, 1907) states that one part in fifty million of water will kill fish in under two hours.

At this dilution, assuming that Tephrosine is as poisonous to man as Aconitine, one of the most poisonous plant alkaloids, it would be necessary to drink 525 pints of water before a fatal dose could be taken!

R. E. MASSEY.

Khartoum North, December 15th, 1918.

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[1] *Judges*, 16, 19.

[2] *Sudan Notes and Records*, vol. I, p. 257.

Local chronology.

The following chronological table may be of some interest; it is used by the Natives of the Northern end of the Red Sea Province :

1910. Sărăr haiyuk	Year of the comet.	
1909. Hŭnguĭl	—	— itch.
1908. Yĭ oweiyai	—	— locusts.
1907. Hŭgŭmbir	—	plenty at —
1906. Sărărbeir	—	long trek.
1905. Bĭsharăn	—	plenty in Bisharin country.
1904. Mădămlăn	—	plenty at Madam.
1903. Hămăsh darag	—	dried up plain.
1902. Gămbit	—	much milk.

NOEL E. WATERFIELD.

Port Sudan, December 12th, 1918.

NOTE. — Years since 1910 are described as the first, second, third year, etc., after the year of the comet. Only years remarkable for some exceptional occurrence receive a special name.

Logo.

A good deal of new light is shed on the hitherto little known peoples West of the Nile by some notes on Logo which have just reached me. I earnestly hope that a promised Vocabulary may follow shortly.

Logo is a language spoken amongst the Azande, together with a kindred dialect Agambi, but looked down upon by the ruling class as the speech of the common people. The notes in themselves are not sufficient for a careful analysis; but they are so highly suggestive that I venture to make a brief comment on them in the hope that some reader of *Sudan Notes* may be able to add to our scanty stock of information.

Logo is one of a group of six languages which appear to be merely dialects of one original, though they may not be quite mutually intelligible. Their names are Logo, Agambi, Ngyang-Bara, Madi, Avukaya and Logbwari. The numeral system up to ten is identical; the third member takes a slightly different form for ten and the numbers above it; otherwise the identity continues up to twenty; the variations above twenty are rather dialectic than due to a new language. Madi and Logbwari use a different word for five, and

Logbwari has an alternative word for ten. The variant for five, is a perverted Bantu numeral; Ma. *tou* : Logb. *to, tan* : all for Bantu *tano*. Going down the vocabularies such as they are at present the close resemblance of the words is remarkable — especially to any one who knows the perplexing diversity of Negro word roots.

These Logo notes shew a language of markedly negro type superimposed upon a Bantu foundation. Ibo on the lower Niger is a very similar type of language and so also is Nupe; Gbari still further up the Niger and extensively used in the Zaria province rather suggests the same thing. There is a marked preponderance of monosyllabic forms consisting of consonant and vowel only; these are distinguished by intonation and often expanded by affix and suffix.

The Bantu affinity of Logo is conclusively shewn by the nasalisation of consonants — a feature quite impossible in a true negro type. Only the consonants G, J, D, B, and V are affected, not the whole range as in pure Bantu. Moreover it is remarkable that in the score or so of nouns and verbs given in these notes, at least four (excluding foreign importations) have Bantu roots; viz. *jo* «a house»; *uzi* «to ask»; *afe* «to give», and *ta* «to say» — Bantu *nju*, *-buza*, *-pa* and *-ti* respectively [1].

The negro type is amply substantiated by the use of intonation and the special sounds *kp* and *gb*. Moreover there is no gender.

A third peculiar element is the combination *tr, dr;* e. g. *tro* «much»; *dri* «a hand»; *ndri* «a goat». As these sounds belong neither to Bantu or Negro, they are very characteristic; not improbably they are shortened from vocalised forms such as *teri, diri*, which are not at all uncommon in Bantu [2]. In support of the theory that *tr, dr* result from contraction, cf. Avukaya *nji dala na* (five and three), *nji dile nsu* (five and four) with the corresponding Logo *nji dri na* «eight», *nji dri su* «nine».

Higher numeration in Logo is by scores — twenty is one score; thirty is a score and ten; forty is two score; fifty is two score and ten, and so on. The other members of the group (Agambi possibly excepted) do not follow this rule. Exactly the same feature is met with in Ibo and Nupe, except that Nupe

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[1] *-ti* in Zulu as a verb «to say» in several idiomatic forms is traceable through many Bantu languages with a similar meaning, though no longer used as a verb.

[2] Bantu *l, d, r*, being of a cerebral type are virtually one sound and any attempt to combine them in Bantu would result in an emphatic *d*; therefore *tr* and *dr* arose from non-Bantu influence.

has discarded the cumbersome forms for thirty, fifty, etc., and substituted forms borrowed from the neighbouring Yoruba.

There can be only one inference from these phenomena. At some date a negro tribe impinged upon the northern fringe of the Bantu area and caused a great upheaval whose effects were felt as far south as the Fang, westwards certainly as far as the Ibo and Nupe and perhaps even up to the Temne of Sierra Leone; eastwards the movement spread to the Shilluk group of the Nile Valley languages and spent itself against the Hamitic migration which gave rise to Masai, Turkana and Bari.

The centre of this disturbance was the region immediately north of the Ubangi river where it flows from east to west. On the map there still appears a name N'dri, with this peculiar *dr* combination, a little west of the bend at Fort Possel where the Ubangi begins to turn south. Eastwards and westwards of this central area the peculiar *tr, dr* gradually faded away and was known no more.

The Fang are now found over an extensive area, from the neighbourhood of Yaunde in South Cameroon almost up to the coast at Duala. Duala, the coast language spoken for about thirty miles inland, is different from Fang. Fang is a remarkable instance of a Bantu language having successfully withstood a negro invasion; it retains its characteristic class prefix and alliterative concord, but otherwise has lost much of its purity. Moreover it has adopted intonation systematically and also the negro combinations *kp, gb*. Several languages of the Congo River district have also imported the *kp* and *gb*, possibly from the Fang.

The extensive nature of this movement cannot be questioned; and Logo has given us the key shewing unmistakeably that it commenced when Negro thrust into Bantu territory. This being so, the most obvious origin of this negro invasion would be the Teda. Once the Hamites pressed down from the north into the Teda country, these people, generally accepted to have a large Negro element still amongst them and in all probability originally pure negroes, receded south before the invasion and the pressure continuing the migratory movement spread along the line of least resistance further and further eastward and westward.

Such a widespread movement might well account also for the alleged Teda origin of the Kanuri language of Bornu. Philologically we find that the root used in the Shilluk group for ten turns up again in Kanuri, but not elsewhere so far as we know at present. Thus, Shuli *apar* «ten» (Shilluk *pyar* or *piar*) *pi ario* «twenty»; *pir adek* «thirty», etc.; in Kanuri *pi ndi* (two tens)

« twenty », *pi yasge* (three tens) « thirty » and so on up to ninety *pi legar* (nine tens).

The Logo group word *mudri* « ten », in the light of the above, may not improbably stand for *mudiri*, i. e. *mupiri;* and thus be the same root. What was the old Teda word for ten?

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P. S. — Major Brock's statement that the Azande wave was still active in the Meridi district in 1905 would quite agree with the philological evidence that Azande is a later language than Logo.

So far as present evidence goes the Logo group is quite distinct from both the Shilluk-Dinka group and the Masai-Turkana. Out of 120 or so Ngyang-Bara words collected by Morland, only four or five can be said to have some possible resemblance to the corresponding Bari word. The difference from Shilluk is equally marked.

None the less the word *bong'o* « cloth » (quoted by Westermann in his list of Negro roots) used by the Logo is the word habitually employed in the Shilluk-Dinka group for that commodity. Most probably too the Bantu word *olu-bu'go*, barkcloth peculiar to Buganda and Bunyoro is the same root as *bong'o*.

Further the Ganda and Nyoro word for « cow », undoubtedly introduced by the BaHima herdsmen, is *ente;* the true Bantu word is *ng'ombe*. Now *ente* is the word *ti* a cow found in Avukaya and Logbwari, *a-ti* in Ngyang-Bara. We can trace this word in Madi *tien;* Teso *aki-teng;* Masai *engi-deng;* Shilluk *dhiang* — in all these cases expanded by the addition of nasal *ng*. Which is the older form — *te* or *teng?* What was the old Teda word for « cow »?

Incidentally the word for « cow » is wanting in Colombaroli's Azande Vocabulary. Major Brock also notices that the Azande shield is made of *reed*. Are we to infer that the present Azande rulers came from a marshland where cows would not live and buffalo were scarce?

W. A. C.

White ants, Elephants, and Changes of climate.

B's remarks on the white ant have attained the distinction of quotation, doubtless with approval, in *Nature* [1] consequently it seems desirable to draw attention to a discussion of the same subject by Henry Drummond [2]. He noticed the contrast between African forests and those of the Rocky Mountains and the Western States of America where it is often impossible to ride through by reason of the meshwork of interlocked branches and decaying trunks. Attention was drawn to the manner in which the white ant fills the place of the earth-worm where conditions are adverse to the existence of earth-worms. A further point was the influence of the white ant on processes of denudation, and Drummond closed the chapter with the suggestion that had Herodotus lived to-day, he might have gone farther than stating that Egypt was the gift of the Nile.

B. upholds the white ant for the manner in which it clears off the dead vegetation, but it would be interesting to know if such a contention can be supported by comparison with tropical districts where there are neither termites or similar animals. In temperate climates the decay is generally fast enough to prevent any deleterious accumulations of dead vegetation. The transformations proceed in ways that are regarded as directly beneficial to growing plants. Humus is formed [3] and this is said to increase the water holding powers of the soil and improve its texture besides providing plant food. Very marked increases in the nitrogen content have been recorded at Rothamsted [4] in connexion with a plot which had been allowed to run wild between 1881 and 1912 and where the vegetation was allowed to die down naturally and never removed. B. refers to the action of earth-worms in moist climates such as Europe, in the removal and destruction of large quantities of vegetation but, surely, the principal result of their work is the transport of great quantities of soil and the production of a surface layer of mould rich in vegetable matter [5]. It seems likely that the worms are not the prime factors but only exist on the vegetation after the micro-organisms have started the decay. Incidentally, Mr. King informs me there are several species of termites

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[1] Vol. 102, p. 71.
[2] *Tropical Africa*, 4th edn., London, 1891.
[3] E. J. Russell, *Sci. Prog.*, vol. IV, p. 253.
[4] A. D. Hall, *Nature*, vol. 89, p. 649.
[5] A. D. Hall, *The Soil*, London, 1908, p. 14.

in the tropical forests of the New World, but presumably their homes do not extend to the temperate regions of the forests cited by Drummond. The effect of removing dead foliage from woodland soil is said to be positively injurious [1].

None can deny B's statement that, in the northern parts of the Sudan, very little decay can occur during the long dry season. The question remains as to whether the short rainy season which suffices for the growth of the vegetation, still, may not be enough for its decay in subsequent years even if there are no termites. The presumption is that the processes are more rapid than in a temperate climate, but it seems useless to discuss this point further for the simple reason that it may be open to observation in this country even if it has not already been recorded. There must be situations unsuited to the white ant and where other kinds of changes can be watched. Perhaps some islands in various reaches of the Nile are free of termites and may permit comparison of soil conditions with those prevailing on the neighbouring banks.

The white ant destroys vegetation very completely and appears to produce little or nothing that can be regarded as plant food or as influencing the texture of the soil. It may be suggested that those types of soil indicated by Drummond as too hard for the earth-worm, would not exist to the same extent if it were not for the destructive action of the white ant. It seems possible that the termite, instead of being beneficial, may be harmful to such an extent that in future, measures for its control may be sought.

Elephants.

This subject arises from Mr. Sterry's letter in a former issue of this journal [2]. On his return from Kordofan, Gordon records on October 15th, 1877, that he had been met on his arrival at Khartoum by the six elephants which had been sent up from Cairo [3]. Details about their journey are given by G(eorg) S(chweinfurth) in a foot-note [4] which relates that six Indian elephants had been sent up from Cairo by Ismail Pasha. They travelled the long distance of 2000 miles, uninjured and swam the Nile six times. The subsequent history, doubtless of these same animals, was referred to by Edward

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[1] J. Nisbet, *Sci. Prog.*, vol. IV, p. 507.

[2] Vol. I, p. 297.

[3] *Colonel Gordon in Central Africa*, London, 1884, p. 291.

[4] *Emin Pasha in Central Africa*, Trans. Felkin, London, 1888, p. 390.

Schnitzer (Emin Pasha) in a letter dated December 25th, 1881, associated with the foot-note already mentioned. He remarked that there were then three of them at Makaraka, but they were scarcely used for transport for want of persons to attend them. Schnitzer commented on Gordon's parsimony whereby, for the saving of a few guineas, the drivers who had come from India, had been sent back before any local men had been trained. The consequence was that the elephants had been entrusted to Shilluk soldiers and possibly the remark that these like all negros took very little interest in animals except as articles of food, may bear on the elephants' fate.

Climatic Changes.

These are referred to by Capt. Willis [1], who states that there is little doubt that the country flanking the Nile in the Dongola reach has been gradually drying up in the last few centuries. The evidence appears to be connected with routes formerly practicable but now impossible from sand-drift or the drying up of wells. In dealing with climatic changes it seems possible to distinguish between what may be termed «pulsations» and secular changes continued over long periods of time. A detailed account of the Dongola evidence would be most valuable and would enable the extent of the changes to be gauged and perhaps correlated with conditions elsewhere. In the Egyptian part of the Nile Valley there seems to be very little evidence of change during historic times, and the succession of Nile floods appears to have been much the same as still continues — with their pulsating series of fat and lean years. The question arises as whether it may not be possible to account for the changes referred to by Willis Bey, by slight pulsations involving a very small amount of rainfall over the desert for a term of years.

G. W. Grabham.

Khartoum, January 10th, 1919.

Did the Shukrīya speak Ruṭāna?

I see much reason to doubt the accuracy of Werne's statement that the Shukrīya at the time of his visit spoke a dialect identical with that of the Bishāriyīn and the Hadendoa (p. 71 of this volume), and the point appears to be of sufficient interest to claim a little of your space. If we are to believe Werne, the majority of the tribesmen were bilingual, but there were some

[1] *Sudan Notes and Records*, vol. I, p. 294.

who knew no Arabic at all, and with these Werne had to converse through his host who translated his remarks into the tribal dialect. This is a state of things such as might be expected to occur in a community which is in the process of adopting a new language, and resembles conditions actually existing in parts of Dongola where Arabic is gradually ousting Dongolawi. It would follow that at a period shortly prior to Werne, Arabic must have been practically unknown among the tribe. The reasons why I feel forced to reject Werne's statement are as follows :

1. The time which has elapsed since his visit is too short to account for the complete disappearance of the Beja language, if in his day it was still commonly used. At the present time all Shukrīya speak Arabic as their mother tongue, though a few may have picked up Beja through intercourse with their Bishārī and Hadendoa neighbours.

2. The Arabic spoken by the Shukrīya has every appearance of being a genuine tribal dialect with distinct features of its own, which it would be exceedingly difficult to account for, if it is a borrowed speech only recently adopted. The Bedairīya of Kordofan who still spoke Ruṭāna among themselves at the outbreak of the Mahdīya (MacMichael, *Tribes of Kordofan*, p. 72) now speak Arabic only, but they betray their origin in their articulation of *'ain* and *ḥā*, for which they substitute *hamza* and *hā*. The pronunciation of the Shukrīya, on the other hand, like their vocabulary, is genuinely Arabic.

3. I have recently had an opportunity of studying a collection of historical traditions of the Shukrīya chiefly dealing with their wars with other tribes of the Buṭāna. The oldest stories go back to a date considerably anterior to that of Werne's visit, but there is no hint in these traditions that they were of different speech to the other tribes or that they thought of themselves as anything but Arab. On the contrary, one of the tales in referring to a visit paid by certain Shukrīya women to the famous Tajōj, the beautiful daughter of a Ḥumranī Shaikh, states expressly that the wife of Abū Sin, being of the Bishārīyīn, was able to converse with Tājōj in her language; this remark would be pointless if a knowledge of Beja was common among the Shukrīya; and to judge from Danagla and Berberine analogies the women of the tribe would be likely to retain the ancient speech even after the men had taken to Arabic.

4. The stories just referred to are interspersed with poems by the tribal bards celebrating the victories of the tribe and eulogizing the chiefs. All these

are composed in an Arabic of very distinct and individual type. It is exceedingly difficult to believe that the public to which these songs were addressed, was confined to the shaikhly families (who certainly are of Arab origin) and that the majority of the tribesmen were unable to understand and appreciate them. The oldest poems I have seen can be certainly dated prior to 1790, i. e. nearly 50 years before Werne's visit.

It appears to me that the cumulative effect of these arguments is pretty conclusive even if each point taken separately is open to some objection. It remains to account for Werne's mistake since there is no reason to assume that he was deliberately untruthful. Two explanations occur to me as possible: The Shukrīya and Bisharīyīn were on friendly terms and their shaikhs often married Bishārī women; it is possible therefore that the men with whom Werne was unable to converse without an interpreter, were a party of Bishārī visitors or a Bishārī ferīg temporarily attached to the Shukrīya. The other explanation is perhaps more plausible: Werne's knowledge of Arabic, as appears from his spelling of proper names, was very limited; such as it was, it had been picked up in his intercourse with Turks and Egyptians, and he had no ear for the language. It is conceivable therefore that what his interpreter did was merely to translate his «Khawāga Arabic» into the Arabic spoken by the tribe, an experience the like of which must have happened to many speakers of «Bimbashi Arabic» under the present regime. The shaikhs who were accustomed to the speech of Turkish officials no doubt could converse with Werne without an interpreter, but such was not necessarily the case with the wild tribesmen from the Buṭāna.

Finally it should be said that this question of language does not prejudge the quite distinct problem of racial origin. That the shaikhly families of the Shukrīya are Arab I regard as certain; that the common people may include aboriginal elements of Beja origin is a tenable hypothesis, though the present state of our knowledge does not enable us to decide either for or against it. I feel convinced however that any Beja elements found in the tribe had become Arabicized at a considerably earlier period than the end of the XVIIIth century.

S. Hillelson.

Khartoum, February 20th, 1919.

ERRATA.

Vol. II, no. 1, p. 5. For «*Dong Dit*», read «*Deng dit*».
— — p. 17. For «*Zēlā*», read «*Zolti*».

SUDAN NOTES AND RECORDS

Volume II. No 3.

CUSTOMS OF THE ACHOLI

BY

CAPT. E. T. N. GROVE.

BIRTH. — A curious custom attends the birth of a child which is known as the *Kwēr*. For three days after the birth of a girl (four in the case of a boy) the mother has to abstain from certain acts, varying from village to village, on pain of the disease or death of the child. In some cases she may not eat salt, in others she may not look in the inside of a hat, in others she may not eat porridge flavoured with ardeb fruit. During this period the baby is not allowed out of the house. At the end of the period the mother calls her women friends together for a meal and generally formally commits the previously forbidden act. The baby is then free to go out of the house and is hung round it's neck with various charms against disease, etc., by it's father.

MARRIAGE. — Marriage is a somewhat lengthy process among the Acholi. Usually the young man begins by courting the girl (often at a dance), and having won her consent (in most cases essential), he goes to her father and pays a small instalment of dowry (*otono keñ*). After this the pair are considered as betrothed and this condition of things may go on for a long time. Meanwhile the man has to help his future father-in-law with the crops, bring him presents of merissa, etc., and generally make himself agreeable. As soon as he has found some of the dowry, the girl then comes to him on a visit and stays about a month in his house and works for him. She then returns to her father's house again for one or two months while

the young man completes the dowry. During the whole of this period she is still not his wife, but only on probation, and if she has intercourse with another man at this time, her father gets the fornication fine which is that of a girl and not of a married woman.

When the dowry is completed, she again comes to her husband but is put to live with his mother. During this period she sleeps with her husband in the *Otōgo* (bachelor's quarters) and goes back to his mother each morning. The bridegroom's food is also prepared by his mother at this time. This state of affairs goes on for about two months, when the girl finally comes to the house which her husband has built for her. On this occasion the girl's mother-in-law collects the women of the village to a feast and formally presents the bride with the symbols of her office, *i. e.* various kinds of cooking pots, etc. The marriage is then complete and the girl ceases to be a *ñako* and becomes a *dako* or housewife. Theoretically the girl is the absolute property of her father before marriage and of her husband after. Practically a girl nearly always marries the man of her choice and leaves him for another if he bores or maltreats her. The men are usually pretty philosophic about their wives leaving them, saying that if a woman does not want you, it is better to get your money back and find one who does.

Divorce is thus pretty common, the new husband paying his dowry to the father of the girl who then hands it back to the old husband.

Divorce is easier for a woman than a man as a man is held responsible for the maintenance of his wife unless he can send her back to her father or find a new husband for her. From the financial point of view, it costs 5 sheep to sleep with an unmarried woman and 15 with a married one. The marriage mal is usually about 35-45, sometimes rising to 60 and 70. This may be paid in sheep, spears, hoes, and latterly in money. It is rarely paid in cows in the Sudan, but sometimes tobacco and lumps of unwrought iron are included.

There are various customs and superstitions connected with marriage. If a woman dies in her first child-birth or without children, the husband has to pay 15 sheep to the woman's father.

In the case of a woman running away from her husband and marrying another man if the first husband conceals her personal belongings and

especially her *Cip* or front ornament, she will not bear a child and may die.

A woman producing a child with only one testicle is driven out of the house, as the child is supposed to be *jok*.

The fines for fornication and adultery are due to the idea that if a man has intercourse with a girl her mother will become ill and that if he commits adultery with a married woman her husband will become ill and perhaps die.

Intercourse with an unmarried girl is thought little of and a fine is not usually exacted unless it affects the health of her mother.

Adultery is not thought well of and a fine is always exacted in the event of discovery. Prostitution is practically unknown.

Relationship. — A man's closest relations after his father and mother are his brothers by the same mother and next his maternal uncle. A man has to give one tusk of his first elephant to his mother's brother and one to the chief.

Inheritance is always however in the male line and runs roughly as follows : (1) sons, (2) father, (3) brothers, (4) half-brothers, (5) uncles.

On a man's death his son or failing sons his brother takes over all his wives.

Death. — On a man's death all his friends are gathered together for the death dance. Sheep are killed and merissa is brewed and the man is mourned from two to five days according to his age and importance. He is buried by the entrance of his hut, and trees are sometimes planted on the grave and a sheep sacrificed.

Chiefs are buried in special chief's burying grounds wrapped in clothes and placed on an angareeb. The grave is kept open and watched by a young man and a girl till decomposition sets in when it is thought safe to throw sand on the body and fill up the grave. The grave is then planted with trees and a fence built round it.

It is thought a great misfortune for a man to die a natural death and not be buried in his house. This explains the extreme reluctance of sick men to leave their homes and come to a government station for treatment.

A man who is killed in the bush however hunting of fighting is thought lucky, even though he is not buried at all and his body is eaten by vultures. A special ceremony is then performed under the direction of the « Ajwaka » to call the spirit back to the village.

About three months after a man's death, his son builds the Kac (see below).

NAMES. — A properly equipped Acholi has five names. Fortunately for the sanity of Inspectors, two of these can only be sung and not said.

(1) The *Ñiṅ Kwun* (bread name).

This is the name with which a man is christened and is generally taken from some event at his birth, *e. g. Ulum* (born in the grass).

Odo. Stick (probably because the father has been thrashed for illegitimate intercourse by the girl's brother).

Okec, hungry (born at a time of famine).

Some of these names may be split into two or three. *e. g.* a man named *Okec* may also be called *Laṅgara* (locust), because the famine at his birth was caused by locusts.

(2) *Ñiṅ Moc.* Flirtation name.

This very curious name must not be confused with a nickname. It is generally taken from some curious act or saying on the part of a man — most frequently when he is courting a girl. A man says or does some peculiar thing and his companions immediately acclaim his *Ñiṅ Moc.*

e. g. Okwiyo. She whistles (a man's wife calls him to food by whistling for him).

Yo Dok Olaṅ (a man courts his girl by telling her she sways her buttocks like a bell).

Okwuto Cet Pa Mare. He broke wind at his mother-in-law's.

Thus if a man is christened the hunch-back or the dwarf or the fat man this is not a *ñiṅ moc* because it has not been acclaimed as the result of some peculiar act.

Animals, trees, even bread and water have their *ñiṅ moc* as well as their ordinary names.

Ñiṅ Toṅ. Spear or war name.

As soon as a man has killed somebody, he is given a spear name usually ending in *Moiñ* (war). These names are almost impossible to translate.

e. g. Lokoyamoiñ (a man has killed some Lokoyas).
Gạlamoiñ (he has killed a soldier).
Lulmoiñ (he has killed a man in a forest).

Ñiṅ Bul. Drum name.

Each man has a name or call which can only be beaten on a drum. Thus people at long distances are able to tell who is beating the drum. They are usually set to some rather Rabelaisian jingle without much meaning. *e. g.* Àlocèt ròmo tòl — A tape worm is as large as a piece of string.

Ñiṅ Bila. Horn name.

Each man has also his own call on the *bila* or small hunting horn. By blowing it he can summon his friends to his assistance or to share his kill. It leads to a heavy fight if one man takes another's name in vain.

HOUSES AND VILLAGES.

Villages are generally fairly large and surrounded by a strong defensible zeriba or stockade. There is generally only one entrance strengthened with timber. One has to crawl on all fours to get in. The stockades however are not built as strongly now as in the old days of constant warfare.

The village is a chance and not a family group. Each married man has an ordinary tukl for himself and one for each wife.

The young unmarried men live together in curious houses called *otogo*. These houses are raised on stilts as it were, the floor being about three feet from the ground. They are entered by a small circular opening just large enough for the head and shoulders, and often made of earthenware like the mouth of a pot. They can only be entered head first with a sort of dive. From two to five young men may live in one of these houses. The floors sometimes have a trap door to allow of escape in case one of the inmates is caught inside with his young woman by her angry relations.

The children often build little imitation villages in the bush (*giyere* or *ot tuko*) where they play at housekeeping and often live for many days.

Each village is divided according to size in two or more Clubs called *ō*.

These are not family gatherings, though members of one family usually belong to one *ō*. There is also no division as regards age, marriage, etc. They are simply fortuitous groups of people who build their houses together and form a club. A stranger coming to a village chooses his own club and then builds his house in the same group as the other members. These clubs build their own club houses. Long logs are placed side by side, parallel to and on opposite sides of a small open space which is left for a fire. The logs are raised in tiers one above the other so that they slope down to the centre like the seats of an amphitheatre. Forked poles are put up at the sides to hang shields, spears, etc., on and a covered rakuba is sometimes built at the side for rainy days. Here the members of the *ō* sit and gossip, smoke, take their meals and discuss their affairs. There is considerable rivalry between the neighbouring *ōs* and a good many sham fights take place from time to time when a member of one *ō* has been insulted by a member of another. The more serious personal quarrels of the members are also taken up by the other members and real fights often used to take place. The *ōs* also take each other on at *Undilo* (a kind of hockey. See below).

It is interesting to note that the sections of a company in the Equatorial Battalion are always known to the men as *ōs*.

DRESS.

The men usually go naked, but are extraordinarily fond of clothes when they can get them, and usually keep them extraordinarily clean. The older men generally wear skins. Many young men and even boys wear a front cloth hung on a chain. Girls wear nothing but beads bracelets and anklets. Some are quite naked. Others wear one thin chain round the waist with another chain hanging down in front. This dress is optional. As soon as a woman has a child however she puts on the *Cip* which is a more substantial covering of beads chains or fibres hanging down in front. Sometimes they also add the *ceno*, which is a sort of tail hanging down behind.

Both sexes shave the head, the men generally leaving a small top-knot of short hair which is cut into different shapes and sometimes plaited in

little tufts. It is considered dirty not to shave the head. Both sexes also extract the two lower incisors, though no one can give any explanation of this custom. A girl will not marry a man who has not had his teeth pulled out in this way.

ILLNESS.

Illness is usually attributed to evil spirits, each illness being a different kind of spirit. It is also attributed to spells, curses and the ill will of enemies.

It is treated (usually by the Ajwaka) by a combination of exorcism and medicine. Cases of small-pox and cerebro-spinal meningitis are generally isolated and whole villages often burnt after an epidemic.

Vaccination is practised, the actual pus of a patient being rubbed into a cut on the forehead of the man who is being vaccinated. This drastic treatment is often of course fatal.

Many diseases are attributed to foreign bodies having been introduced into the body and a class of doctors known as the Jotago makes a speciality of extracting bits of wood, stone, charcoal, etc., in large quantities from the body of the sick man. A man once showed me quite a bundle of miscellaneous objects which he alleged that a Jotago had taken out of his game leg.

Epilepsy is regarded as a spirit (jok) which has got into the head of a man. It is driven out by a dance in which the *Ajïa* (gourd filled with small stones) is shaken over the sick man's head. If prompt measures are not taken, the Jok will take to himself a wife and his offspring will go off and take possession of the heads of the neighbours.

WAR.

War was the constant occupation of the Acholi before the Government took over their country and usually took the form of night raids on other villages. The surprised party generally ran away even from inferior numbers, but some times considerable execution was done. Sometimes war was raised however on a more formal scale. The chief who wished to make war on his neighbour would first of all send round a spear (known as the

Alem) to his allies. This spear represented his cause and if this was good he was likely to be successful. If his friends thought the war unjustifiable, they probably refused the Alem.

Sacrifices were then made, a dance held and the Alem (the cause in which they were fighting) blessed by the old men. Notice was then sent (accompanied by insults) to the enemy.

Formation and Weapons. — Each man was armed with a shield, four or five spears and a circular knife carried like a bracelet round the wrist. On meeting the enemy, the older men lined up in front while the younger men threw spears over their heads at the young men of the opposing side also lined up behind the old men. The duty of the old men was to ward off the spears of the opposing side from the young men behind them. When the enemy began to weaken, the young men charged through the ranks of the old who remained in position. If the charge was driven back, they returned through the ranks of the old men whose duty it was to protect them again and ward off the counter-attack.

When the fighting was over, those who had succeeded in killing someone else were christened with their spear names and for three or four days devoted themselves to exorcising the spirits of the people they had killed. This was done by fastening bells to their arms to drive off the spirits and by smearing their bodies and faces with the yellow fruit of a certain wood. Sheep were generally also sacrificed. After this they cut the *Gora* on their shoulders. The Gora is a pattern of dots cut on the right shoulder if you have killed a man, and on the left if you have killed a woman.

In connection with war may be mentioned the *Kuga* or alarm, which is only called in the event of war or the attack of wild beasts. It is different from the ordinary *Nduru* which is the ordinary alarm note.

Blood whether spilt in war or by accident has to be avenged by blood, unless a girl is handed over as blood fine (*Kwur*).

HUNTING.

About January the whole countryside turns out to hunt and the men often live in the bush for weeks on end. The whole country is divided up into various hunts and it is a *casus belli* if a chief trespasses on his neigh-

bour's hunt. Joint hunts are often arranged and these generally ultimately lead to fighting over the spoils. The hunting usually begins with sacrifices.

The *Jok Tim* (spirit of the bush, generally regarded as a snake) has to be propitiated by gifts of milk and merissa which are set out in the bush for him to drink. He will then collect all the game together in a favourable spot for the hunters. Next the hunters bring their spears to the *balacar* or game altar to be blessed by the Ajwaka and the old women. The balacar is an erection of forked wooden stakes on which are hung the horns, jaw-bones and skulls of game killed in previous hunts. Before going hunting the men all bring their spears and hang them on the balacar where they are formally blessed. The hunt usually consists of surrounding a large tract of country and burning the grass inwards. The animals are then speared as they burst through the ring of fire. Occasionally even elephants are attacked without fire and the procedure is always the same. The animals are surrounded and those whom they attempt to charge run away while the men behind run in and stab. As soon as the animal turns, the process is reversed and those who were previously running away turn while those who were previously stabbing from behind run. Pit traps, nets and snares are also used. There are several superstitious customs connected with the hunting.

Exorcising. — The spirits of dead lions and leopards are exorcised by their killers in the same way as those of people.

Omens. — The *Aduge*. A knot from a tree at which game are always eating is strung on a bracelet and brings luck.

Otel. — There is a small bird with a red head called *Otel*. If this cries on your right as you go to hunt you will kill a male. If on your left, a female.

Odwaro war. — Omens are taken with the sandals (odwaro war) which are thrown into the air, spinning. The position in which they fall shows whether you will kill or not whether it will be a male or a female, what direction the kill will be, and whether you will be attacked or injured.

Skinning. — If on skinning the animal the muscles are seen to be twitching, you will kill another animal of the same kind shortly.

Division of kill. — In the old days the first to see an animal and bring news of it was its owner if killed. Now however the first to spear the animal is its owner. He must however give a haunch to the man who speared it second and a haunch to the chief. In the case of an elephant, he takes one tusk and the chief takes the other.

CULTIVATION.

There are two systems of cultivation in vogue, one of the Eastern and hill Acholi producing three grain crops a year, the other of the Western Acholi and Madi producing two.

The rotation of crops on one piece of ground is as follows.

Spring 1918 :

(1) New ground heshed and sown with summer beans (*ŋor cwir*)

(2) Above crop picked about July and the ground heshed and sown with telebun and dura seed mixed (*kal ki gaya oro*). The telebun is reaped about November and the dura ripens about the end of April in the following year as

(3) Spring dura (*gaya oro*). The ground is then heshed and sown with :

(4) Telebun and simsim. These ripen about July as *kal ki ñim cwir* and the ground is then again heshed and sown with :

(5) Simsim and beans (*ñim ki ŋor ora*). These ripen in November and the ground is then abandoned.

During (3) fresh ground is prepared and the rotation is begun on it. Thus there are always two lots under cultivation. Ful Sudani is sown on different ground altogether.

Western Acholi and Madi. — Spring 1918 :

(1) New ground heshed and sown with beans, ful or simsim. This ripens in July and ground is heshed and sown with :

(2) Telebun and dura mixed. Telebun ripens in November and dura the following June as :

(3) Spring dura. Ground is then heshed and sown again with summer telebun (no dura being mixed this time) and simsim, which ripen in November as :

(4) *Kal ki ñim ora*. Thus they do not get the middle crop of telebun owing to the spring dura ripening later. The spring dura in this system is however a bigger crop, the spring dura of the Eastern Acholi being simply intended for merissa.

In both systems the big and important crop is the last which ripens in November. The « ploughing » of the ground is done by the men and not by the women. A woman frequently runs away from her husband because he does not cultivate for her. The women however help in the weeding and reaping, etc.

The ground is really turned over almost to a foot in depth by means of a large heart shaped hoe used as a pickaxe.

Food. — Consists firstly of the *kwun*, a kind of unleavened bread made with the dura or telebun flour. Second of the *dek* which is anything eaten as a relish with the kwun, and may be meat, salt, white ants, simsim, salad, etc.

The flour is also made into a kind of porridge which is flavoured with sugar, ardeb milk, etc. (*ñōka*).

The real Acholi are clean feeders, but they have been corrupted by dirty feeding tribes like the Latuka, Madi, etc.

They will not eat monkeys, snakes, vultures, kites, hyenas, leopards, lions, dogs, etc. Epileptics and the relations of chiefs may not eat the flesh of elephants. Women may not eat certain things which may only be eaten by men, *i. e.* wart-hog and chickens. Men may not eat certain things which may only be eaten by women, *e. g.* land crabs. Men and women always feed apart.

White ants are the greatest luxury, and at the time they begin to come out, the whole country holds festival. The spring dura is just ripe and a lot of merissa is made, all the people turn out at night to catch the ants and the rest of the time is spent in dancing, drinking the new beer, eating the ants and flirtation. The maktab is generally pretty full after the white ant season.

The Acholi can keep well fed for an amazing time on bush fruits and roots. One in particular (Kiñu), a sort of vine with roots resembling a large potato, has often kept whole villages from famine through the whole dry season.

Songs, proverbs and fables. — The moment anyone does anything odd or eccentric he is immediately lampooned by the local poet and the song sung at the next dance.

A man who can sing and make songs and play the *naña* (a stringed instrument) is thought as highly of as a warrior — especially among the women.

The solo is generally sung in a falsetto and the chorus in a curious chest note. The tunes of some of the war songs are very much like Scotch bagpipe airs. The words do not generally mean very much and even an Acholi cannot generally understand them until they have been explained to him. Most songs only live for a few months, and then are abandoned for others and completely forgotten. A few of the best survive however. For instance No. 7 Coy. Equat. Batt. has sung the same song on the march for nearly two years. It is fairly typical and being translated means.

Solo. The Dodinga are like the soldiery.
The soldiery are still behind on the road.

Chorus. The fathers of the country run from the soldiery.
The black soldiery are behind the stockade.

Dodinga calo gala,
Gala podʼeen obedo yo.
Wuru nom riño gala
Gala macol tie ne gaṅ.

Proverbs. — These are endless in number, and the wisdom of an old man is usually gauged by the number of proverbs he knows. They are usually quite unintelligible until explained. For instance, on seeing a big chief humbling himself before the Government, a man will say *Amuga luoro lyec* « the rhinoceros fears the elephant ». This refers to the rhino's habit of scattering his dung. He is supposed to do this lest the elephant should come along and seeing the other's dung think that someone had been trying to imitate him and so go and kill the rhino.

Fables. — There are also an unlimited number of fables and fairy stories — mostly rather rabelaisian. The hero of these is generally the hare or sometimes the tortoise, and they turn on his various methods of fooling the other animals. They are generally told in the evening as the people sit round podding the Ful. Historical legends are practically non-existent, though there are some rather curious myths.

One of the quaintest of these is that of the tree of life.

After God had made the world, he called together the sun and moon and stars and man that they might eat the tree of life and live for ever. The sun and moon and stars arrived and they all sat waiting for man. After they had waited for some time, God sent someone to look for man and he came back and reported that man had only just started and was loitering along the road in no hurry at all. At this God became very angry and gave the whole of the tree of life to the sun, moon and stars, so that when man arrived there was none left for him. And that is the reason why the sun and moon and stars live for ever and man has to die.

Games. — The chief game is of course the dance. When the crops have been good and there is consequently plenty of beer, they dance very frequently. The full dance dress is very fine. A colobus monkey skin is tied round the waist, a broad band of cowry shells with a giraffe's tail hanging from it is put on the upper arm, an ornamental horn is hung round the neck, and sometimes a leopard skin is worn on the back. Each man carries a spear and shield, and the whole body is painted in brilliant broad patterns of blue, yellow, green, and red, somewhat like a harlequin, *e. g.: right leg,* hip to knee, bright red; knee to foot, bright green. *Left leg,* hip to knee, bright green; knee to foot, bright red. A large blue diamond on the right shoulder blade and a large yellow one on the left side of the back.

The head-dress varies. Chiefs and important men wear a tall head-dress of black ostrich feathers looking exactly like a guardsman's bearskin. Others wear a thing like a bowler hat without a rim made of human hair and sown all over with elaborate patterns of cowry shells (*lalokana*).

The young men wear a small cone about 4 inches high and 2 in diameter. This is generally covered in brass work. A long stiff piece of thin

whale-bone is stuck into it with a big ball of closely cropped ostrich feathers on the end. This sticks out behind and hangs down the back.

The dance is divided into two, that of the men (*lalaño or myel bul*) and the women's dance (*laloba*). The first is a war dance and the second is purely erotic. Each village comes in to the ground in close formation with shields held high over the head, and there follows a series of sham fights for the drums between the various villages. This is the war dance and the women merely look on. Groups of four or five men run out with a sort of dodging spidery run and threaten and defend themselves against an imaginary enemy. This play with spear and shield is called the *oc* and a man's standing with the women is decided by his proficiency or otherwise in it. As soon as the war dance is over, the spears and shields are put aside and each man gets a gourd and a stick with which to beat it. The women come on and begin dancing the laloba in the centre and the men close round them in a circle, beating time and dancing but not changing their ground. This dance goes on for hours and during it most of the courting is done. A man shows his approval of a woman by blowing his horn in her face and then taking her hand and shooting it straight up above her head.

At every dance there are always present one or more fools. These get an enormous gourd and cut holes for the eyes, nose and mouth, and paint it to resemble a sort of ludicrous face. They then stick it all over with long feathers and put it right over their heads. They then get a dreadful worm eaten old shield all full of holes and a crooked broken spear, and tie themselves all over with bits of broken cooking pots. Whenever they see a particular « nut » bucking and showing off to his young woman, they come up behind him and parody his actions.

Although the movement of the laloba is always the same, the music varies. They will dance for some time to one song and one drum rhythm, and then someone will come and claim the drums by banging the big drum once. Whereupon a fresh lot of drummers takes over and a fresh song begins.

Undilo. — A kind of hockey. The ball is cut out of bone and the stick of hard heavy wood. The root is cut more or less like a hockey stick.

Two goals are selected about two or three hundred yards apart, and the game begins in the middle of the ground. There are no rules of boundaries, and the number of players is unlimited, people beginning and leaving off much as they please. There is a rough division into forwards and backs. After a goal has been scored (our cows have drunk your water, or we have captured one of your women), the game begins again in the middle. If a second goal is scored, the woman is said to have had a child. As the number of players may amount to a hundred or more; as there is no shoulder rule; and as the ball is of heavy bone; it is not a game that a cautious man would care to indulge in much.

Obap. — A kind of cup and ball. The players all have a stick with a noose of string on the end. An object something like a diabolo is thrown into the air, and the object is to catch it as it falls in your loop of string, and to prevent the other players from doing so.

Yago. — The hunting game.

The long sausage like fruit of a certain tree is tied on to long pieces of string and two players with sticks in their hands drag these sausages off into the bush and pretend to be elephants. Two or three others go and hide in the grass to represent lions. The remainder go through all the forms of a big hunt and having surrounded the elephants those in rear rush in and throw dura stalk spears at the fruit on the ground. The elephants then wake up with characteristic noises and gestures and charge the nearest people to them, who run like hares (they get a good hiding from the elephants sticks if caught). The remainder follow the elephant throwing their spears at the trailing fruit and ready to turn and run at any moment. When the fruit is sufficiently full of spears the elephant is dead and they proceed to cut him up. This leads to a fight as to the ownership of the tusks, during which the lions generally intervene, and carry off one of the combatants and eat him. There is then a terrific fight with the lions (casualties strewing the ground in all directions) and finally the dead lion is carried off in procession and the very impressive ceremony for exorcising its spirit is then performed.

The boys are always playing at war and so practising for the real thing.

Spear throwing is practised by bowling a hoop past a line of boys who try and throw dura stalk spears through it as it goes by. They all make themselves wicker work shields (*ocal*) and tremendous fights take place between the shepherds of the different villages. Sticks take the place of spears, and they try and beat each other over the head instead of stabbing. This of course gives them excellent practice in manipulating the shield. The victorious side drink all the milk from the sheep of the vanquished.

Coro. — This is the game universal in the Sudan, consisting of four rows of holes each with two pebbles in them, which have to be manipulated so as to capture the pebbles of your adversary. It is played constantly.

CHIEFS.

The chief is the master of the people and the rain and the leader in war, but he is not the owner of the land. In all villages there is as well as the chief the *wun ŋom* or owner of the land, who has no authority but who has to be consulted in all questions of moving villages, sites of crops, boundaries of hunts and who is responsible for propitiating the various spirits of the country. He is probably the last survival of the original inhabitants from whom the country was conquered.

The main source of the chiefs' authority is derived from his control of the rain. The « rain » consists of curiously shaped crystals, which are only found in the beds of streams. No private person will touch them or even look at them if he can help it. If one is found, it must be brought straight to the chief on pain of death by dropsy. Young chiefs even will not touch the rain for fear of becoming sterile, but hand it over to an old wife of their father. Each chief has two or three special pots (*abine pa kot*) each containing ten or twenty rain crystals, handed down from his forebears. When he wishes the rain to fall, these are smeared with oil and water poured on them. When the rain is to be driven away, they are put in a tree in the sun or worse still in the fireplace.

The belief in these stones is the profoundest the Acholi has and his fear of them is extraordinary. I once had to have two pots of « rain » brought into my office during a case of disputed succession. None of the police could be induced to go within yards of them and when I picked one up to

have a look at it, there was a universal groan of horror because they thought I should almost certainly die that day and they would be blamed for it. It is thus easy to see that the chief wields a tremendous authority, for if anyone annoys him he can dry up the whole of the people's crops. There is another curious superstition with regard to the rain which may be mentioned here. The head of the ground hornbill if buried in the ground will keep away all rain from the direction in which its beak is pointing. The presence of one of these things is most serious and may upset a whole district. If found a sheep should be sacrificed over them and they should be thrown into the river.

Ton Ker. — Each chief has also his hereditary spear from which his power is derived. It usually has an iron half and sometimes a double point like a V. It is used for oaths (see below) and a false oath on a chief's spear is absolutely fatal.

Succession. — Each chief has as many wives as he pleases, but none of their sons will succeed him. As soon as he begins to think about getting an heir, his people choose him a girl who is brought to him on an angareeb, with much dancing and excitement, and she then becomes his *Dak ker* (woman of the authority) and she alone can beget future chiefs. If she has many sons, the eldest succeeds, though in many cases the chief leaves the succession to a favourite son, often the youngest. If she has no children, another *dak ker* is found, and if she is sterile the succession will go, not to the chief's sons by other wives but to his own brother who is also the son of his father's *dak ker*. On a chief's death all his personal property is divided among his other sons, the new chief merely getting the succession and nothing else, the idea being that the chief will easily find money but that his brothers may not. A chief keeps open house for all visitors and his people have to cultivate for him to keep up this establishment. He also gets a tusk of every elephant and haunch of every animal killed by his people.

RELIGION AND SUPERSTITION.

Acholi religion chiefly consists of ancestor worship. Three months after his father's death the son builds the *kac* or altar to his father's spirit just

outside the door of his house. The *kac* is a family affair in charge of the eldest brother. Brothers by a different mother have a separate *kac*.

The form of the *kac* varies. Among the hill Acholi it consists of a low tripod about 18 inches high of three stout sticks whose tops are brought together. Among the other Acholi it is a miniature house without sides. When a sacrifice is to be made, the family is called together and a sheep killed. The meat and bread are then eaten and a small portion put in the *kac*.

The world and the people in it were originally created by one god who is still supreme (*lubaña*) but who is more or less inaccessible. In addition to creating people he also created a parallel world of spirits (*Jok*) who are active forces for good and evil (generally the latter) in men's lives. These Joks marry and have children like human beings. Every stream has a Jok — sometimes in the form of a snake — rarely in the form of a hairy dwarf. This river Jok may be annoyed in various ways and the result is usually death. For instance, if you take water from a child who has been sent to fetch it by its parents, the Jok will get you. It may also become peevish if too much wood is cut on the banks of its stream; or if disputes take place near it. To see it is almost certain death. Hills sometimes have their own Joks and the bush also has a Jok of its own to whom milk and beer are offered before the hunting so that he may bring the game together in one place. All cases of epilepsy are due to Jok having got into the patient's head and curative measures consist solely in attempts to drive it out again. If not driven out it will ultimately marry and its children are liable to get into the neighbours heads when the accommodation in the original head becomes crowded.

The unemployed *Joks* spend their time in interfering in various ways with men's affairs. It is dangerous to be too precise in trying to understand the Acholi point of view. When an Acholi is unlucky, he will say that his Jok is a bad one to-day. For a long time I took this to mean that everyone had his own special tutelary *Jok* who happened to be in a bad temper that day. As a matter of fact it is not nearly so definite. It may mean that his ancestor's spirits are annoyed with him, or it may mean that some particular one of the company of Joks has been out against him. It does not mean that he has one Jok particularly attached to him who brings him good or bad luck according as he is well or ill disposed.

When things go wrong and disease or misfortune fall upon him or his, the Acholi immediately goes off to the Ajwaka, whose duty it is to diagnose the cause of the trouble and to provide a cure. In the case of some diseases he is simply given medicine. In the case of other diseases and all misfortunes, the business is not so simple.

The Ajwaka first sets himself to find out the cause of the trouble by divination — this is done with a collection of small stones shaken up and down in a pot (*coro*).

The trouble may come from many causes. Firstly it may be his ancestors. He may have neglected too long to sacrifice at the Kac and his dead father may be hungry. Or he may have gone to live in a new village and neglected to build a new *kac*. In this event they probably go off to the Kac and call the family together to sacrifice while the Ajwaka calls up the spirits. It is possible that the Ajwaka resembles the medium of a modern spiritualistic seance, as voices are said to be heard. The man in trouble addresses a prayer not only to his deceased father and grandfather but to «Everything that went before or begot him». He addresses himself to God and the sun and moon and «my ancestors spirits, and all you who begot me», throwing a sort of general responsibility for his being there on the universe at large, and pointing out that as they were responsible for putting him there they ought to do something about it.

Secondly the trouble may be due to the evil influence of some other man. The unfortunate one may have eaten Awola; or a lajok may have looked at him; or a *wun añaña* may have pointed at him; or a Latal may have danced in his doorway at night. Here again the Ajwaka must find out the person who caused the trouble and prescribe an appropriate remedy.

Lastly the man's fellow villagers may be envious of him or evilly disposed towards him and their ill will has brought him bad luck. It is a very rooted belief that ill will or envy on the part of even private individuals with no supernatural powers will bring misfortune on its subject. The remedy for this is for all the villagers to be called together to bless the unfortunate one. They all spit in a bowl of water with which he is then anointed. After that his luck will charge or at any rate deserves to.

It will thus be seen that the Ajwaka is a very important person. Not only is he the universal resort in case of trouble and the chief authority on

medicine but he will also for a fee bring bad luck or death on others also by means of his magical Coro.

The Ajwaka also manages the trial by ordeal (*kwir*) which is resorted to in cases where there are no witnesses or where the nature of the case does not admit of proof. The most important ordeals are those by fire and water.

Water Ordeal. — Suppose that one man has accused another of intercourse with his wife and that the other denies it. Both parties then go to the drinking place and the Ajwaka prepares two gourds of water in which he sprinkles his own preparation (sometimes the *Toṅ ker* is dipped in the water). The two principals then drink off the two gourds. If the accusation is false, the person accused will immediately be sick. The accuser on the other hand will begin to swell. A sheep is then hastily brought and killed and the undigested food from its stomach smeared over the man who is swelling. He is then also sick (not unnaturally) and on his recovery he has to pay a fine to the man he had slandered. If the accusation is true, the reverse process takes place. The accuser is sick and the accused cannot be sick and so swells.

Sometimes this ordeal is carried out by proxy each man bringing his own chicken who are made to drink the *kwir*.

In the ordeal by fire the two parties are struck by the Ajwaka with a red hot spear. The one who is burnt is guilty. These processes are also used for detecting Lajoks, Latals, etc.

Oaths. — Oaths are a good deal employed in disputed cases and are really much the same as the ordeals. The ordinary form of oath is taken on a weapon (spear, rifle, knife, etc.). The man taking the oath calls on the spear to kill him if he is lying and then licks it three times. In a few days the man accused (if guilty) or his accuser (if innocent) will become ill and die, unless the proper measures are taken. The spear is said to have caught him. As soon as he gets ill, he calls in the other party to the oath and pays him an appropriate fine (usually 15 sheep). A sheep is then brought to the sick man and killed with the weapon on which the oath was taken, on the spot where the oath was made. The sick man is then smeared with the

food from its stomach, and the anger of the weapon is thus diverted into the body of the sheep.

All weapons are not however equally vindictive. If the oath is to be made a certainty, it should be taken on a weapon which has previously killed a man or on the *Ton ker* of a chief.

There are also other forms of oath, some of which are rather curious. Sometimes the wicker work of a door is put on the ground and the people taking the oath step over it. Sometimes a child is put on the ground and stepped over, and sometimes the oath on a weapon is taken by stepping over it instead of licking it.

Life after death. — The spirit is supposed by all to continue living after death. This belief is involved in their ancestor worship. Opinions vary with different localities as to its habitation. Some say it goes and lives in streams. Others that it lives in its old village, others that it lives below the ground. All agree that it can be called up and made vocal by the Ajwaka. The ordinary spirit is called Tipu which also means shadow, but I think this is merely a case of extension of meaning. The Acholi do not appear to believe that a man's actual shadow is his spirit, and I have found no custom or superstition relating to shadows.

A ghost (as apart from the soul of a dead man) who comes and haunts you is called *Cen*. The distinction between *Cen* and *Tipu* is exactly the same as the English distinction between ghost and soul or spirit. The *Cen* is always malignant (see below under *Kwun*).

Apart from the disasters that may be caused by the unseen world, there are various unpleasant people, already alluded to who can by supernatural means do an infinite amount of harm. In the good old days, these people used to be smelt out by the local Ajwaka and killed and burnt. The Sudan Government has however seen fit to stop this practice.

The *Latal* is supposed by some to owe his powers to the root of a plant treated in a secret way and eaten. If he has a grudge against you (or is merely envious of your wife or your wealth) he will come and dance in your doorway and spit blood on the lintel for three nights in succession. If you can catch him at it you tie him up till morning when you collect your fellow villagers and kill him. But if you fail to catch him at it you

will die on the fourth day. The Latal is hardly human and is reported to be addicted to unnatural vice. He has to be carefully protected by the Government.

The *Lajok* is in some localities supposed to have a snake in his stomach, which has been seen crawling out of his mouth on his death. He has no particular ceremony to go through, like the Latal, but can simply blight you with the evil eye.

The *Wun Añaña* is not a supernatural person, but is the possessor of an almost supernatural drug (*añaña*). If he picks up a little of the *añaña* on a piece of grass and points it at a man 100 yards away, the man will fall dead. If he puts it in the path or over the doorway of a hut, whoever passes will die. If the wind blows it in your direction it will kill you, and if he puts it in your house it will be struck by lightning.

The *Wun awola* is simply a poisoner and probably really exists. I have personally seen cases of men who had been or who were supposed to have been poisoned by *awola*. Their bodies had wasted away to nothing and they were simply skin and bone.

They died in a few weeks. It is only known to certain women, and in the Sudan is supposed to be made of dead men's skin dried and ground; elsewhere it is thought to be dried snake poison. It takes from two to three months to kill and is given in the food.

The *Joku* is a man who has the power of turning himself into a leopard and so of going and killing his enemies. This power runs in families and there is a whole village of these people at Opari who are at the present moment supposed to be engaged in eating a Kuku village on the other side of the river. In actual fact nearly 50 deaths have occurred from man eating leopards during the last four years at the village in question. In the case of the Opari leopards however some say that they do not actually turn themselves into leopards but that they have a charm which enables them to send ordinary leopards to do the work for them. Before the Government came, this leopard village enjoyed enormous power, men coming from long distances to have their cases heard by the chief. It is a strong inducement to carry out the judgment of the court promptly if you know that in the event of your failure to do so the judge will turn himself into a leopard and eat you.

The women of the family share this power and if you marry one, when you come to the bridal bed you will find a leopard in it. Really of course it is your wife and if you keep your head there is no danger, as the girl has merely adopted a rather drastic method of testing your courage.

Whether these superstitions have anything to do with the leopard societies of West Africa or not it is difficult to say. I am inclined to think not.

NATURAL PHENOMENA.

The Acholi has some curious ideas about natural phenomena. His idea about the rain has already been described. The lightning he believes to be a large black chicken, and states that it has frequently been observed sitting on the tops of houses that have been struck. It does not strike indiscrimately but selects particularly the houses of the prosperous which are full of wealth. The Acholi has a strong idea, like that of the Greeks, that if you are too prosperous the envy of the gods will fall on you.

It also sometimes strikes individual people as a punishment for particular crimes. If a house is set light to by lightning, it is useless to try and put it out with water. The only cure is homœopathic, and torches are brought and the roof lighted in several places. The lightning and the fire then put each other out. This theory however unfortunately failed to work out when my own house was struck.

The rainbow is quite harmless if you dont go too near it. It comes down to rivers to drink, but if it happens to catch you in the vicinity, it will burn you bright red all over. It is not fatal but merely disfiguring.

MISCELLANEOUS BELIEFS.

Kwuṅ. — If a starving man comes to you and you refuse him food and he dies, you must in the future refuse food to all other starving men who may happen to come to you. As long as you maintain your attitude of refusal no harm will follow, but if you give food to another man, the *Ceṅ* (ghost) of the original man who died will kill you or one of your family. As long as you continue to treat all alike, the *Ceṅ* does not mind. But as soon as you show favouritism it says (in effect) «Look here. You

refused food to me and I died of starvation. What do you mean by giving it to this other man?".

This curious belief does not only apply to the above case but to all cases in which death has been caused through you. A man comes to you for shelter from his enemies. You refuse it and he is killed. You must in future refuse protection to all other fugitives. A man steals your hat and you beat him to death. In future you must beat all other thieves to death.

Moreover not only does this haunting apply to you but to all your descendants for ever; the warning that there is a ghost lying in wait for incautious charity being handed on from father to son. The house of such a man is said to be *Kwuṅ* or haunted.

The principle leads to all sorts of curious anomalies. I know one household for instance where the men may not call the women to bring food. The house is *Kwuṅ* but what the exact origin of it was in this case was, no one knew. It was too many generations back. In another case *A* had married *B*'s sister. After a couple of months the girl got tired of *A* and returned to her brother *B*, *A* then came along and took a big piece of cloth that he had once given to the girl, out of *B*'s house, on the assumption that if he could not have the girl he might as well have his presents back. Unfortunately *B*'s house was *Kwuṅ* and *B* under an obligation to kill all thieves on the pain of being punished by the vigilant *Ceṅ*. He was obviously unable to kill *A* as they were both soldiers in the same company, and he went and explained the situation to *A* and asked him to bring a sheep to appease the incensed *Ceṅ*. *A* refused and next day *B*'s wife was taken with cerebro-spinal meningitis and died. *A* then became responsible for compensating *B* for the dead wife.

Kin. — This is another belief somewhat akin to the above in its root idea. Two brothers who are living together quarrel, and shortly after the quarrel, one calls the other to food and he refuses to come out of bad temper. If the one who refused ever comes and eats with his brother again he will die.

Dubo. — Crops are protected by burying heads of chickens on the edge of the crop. Anyone who comes by and steals will then get leprosy.

KENDO (the fireplace). — If a woman runs away from her husband and before doing so breaks up the fireplace and scatters it in the bush, her husband will die.

WE (partially digested food in the stomach of an animal). — In all sacrifices of animals it is the *We* which is the important part and with which purification is performed.

YAT (lit. : «a tree». Hence a drug). — The belief in the efficacy of a *yat* (meaning half a charm and half a medicine) is enormous. Everything whose workings are not comprehensible is explained by a *yat*. The government carbine shoots (moderately) accurately at 500 yards because there is a *yat* in the barrel. The inspector does not die after handling the rain crystals because he has a secret *yat*.

There is no doubt that they have many drugs of which we probably know very little. I have actually seen my own servant handling scorpions with perfect impunity. They were not tame scorpions, with which he could have tampered, but ones which I had found in the bush. He picked them up and I examined the sting carefully (while it was being held) and on all occasions the scorpions were extremely lively and made repeated attempts to sting my stick and boot, though they would not even raise their stings to the foot or hand of my servant. He said that this was due to a *yat* that he had bought, but when asked to produce it, he said he hadn't got any left. There is no doubt that a year ago before he bought his *yat*, he was extremely frightened of a scorpion that I discovered in my bed one day and would only pick it up with a pair of scissors.

SPITTING. — Is regarded as a form of blessing and most ceremonies freeing people from curses, evil spirits, etc., include a spit in the face at some point or other.

SNAKES. — There seem to be traces of snake worship in Acholi belief, though they do not hold all snakes sacred. As has been pointed out before, the spirits of hills, rivers and forests are usually snakes; the Lajok has a

snake in his stomach; and certain snakes it is supposed to be unlucky to kill. In general, if a supernatural power wants to take visible form, it will take the form of a snake.

Omens. — An owl crying, or hyenas copulating in the vicinity of a village foretell death, or war. A mist is also a sign of war.

E. T. N. Grove.

ANGELS OF THE NILE

BY

J. W. CROWFOOT.

It is said that in the days of Abdullahi a fisherman was casting his net into the river and caught a girl about ten years old. He asked her whose daughter she was and she answered, I am a daughter of the River Folk. So he took her to the Khalifa who asked her the same question and how she got into the net. She said, Oh Khalifa, I am a daughter of the River Folk and I had just gone out of my house to chop up a little fire wood when the net swept me up. And when the Khalifa heard that she belonged to the River Folk, he was afraid to take her and after consulting with his advisers they put her into the fisherman's boat and dropped her back in the river exactly where the White Nile meets the Blue.

Stories like this [1] are told all along the banks of the Nile about the so-called Banāt el Ḥūr who are said by those who know to be small and white and to shrivel up when they are taken out of the water. Some of them seem to be harmless enough, there is a foundling at Argo, for instance, who is reputed to come from the river and to be none the worse for it, but for the most part they have an evil name as sorceresses of the Circe type and the Khalifa did wisely to replace the girl whom the fisherman caught. It is hardly to their credit again that certain sand-diviners who have no known earthly wives should profess to be married to Banāt el Ḥūr.

These Banāt el Ḥūr, however, are not the only people who live in the river. There are also Holy Ones, El Ṣāliḥīn, or as they are often called, Angels of the River, Malā'ikat el Baḥr, or, in Dongolawi, Mariya; they count for a great deal in the native ritual and are none the less interesting because they are not quite orthodox. The very name of River Angels, you may be told, is really forbidden because the Book makes mention

[1] Compare Amery, *English-Arabic Vocabulary*, p. 439; Russegger, *Reisen*, vol. II, Part 3, pp. 54-56; *S. N. and R.*, vol. I.

only of Angels in the sky and Angels in Paradise : none the less, men, women and children make offerings to these River Folk and pray to them for health and strength in spite of the preachings of the « Ulama » that God only can give health and strength. The best opinion seems to be that these Good Folk unlike the Banāt el Ḥūr are invisible to ordinary mortals :

We see them not — we cannot hear
The music of their wings —
Yet know we that they sojourn near

but they too are very human in many respects, they have a passion for koḥl for example and you should always give them plenty of it.

These Angels, who are to be conceived as wingless, have no individual names like the great angels of the Books, Michael, Gabrial, Raphael and the rest, or like the spirits invoked at modern Zārs : they are more like the nameless « Angels of the Lord » who appear so often in the Old Testament or those of whom Saint Paul was thinking when he wrote that a woman ought « to have power on her head because of the Angels », and he, it may be remembered, like the « Ulama » warned his readers against the worshipping of angels (*Colossians* II, 18). In Dongola it is said that no child can be born unless an angel from the river assists at the birth and when a smile crosses the infant's face it is a sign that the child has caught a glimpse of the angel. The same story is told of Guardian Angels much nearer home and the chief peculiarity of the spirits which are feared or worshipped here lies in their river home and even in this they are not unique : rivers elsewhere have their spirits and the land here has spirits also; in the Sudan it is considered equally dangerous for a pregnant woman to cross either a river of running water or a deep rut in the road, for in both bad spirits may be lurking. The river spirits are more prominent in myth and ritual here simply because the river plays so great a part in the life of the people.

In some of the customs which I propose to describe[1] it may seem

[1] What follows is based partly on what I have seen myself, but to a larger extent especially so far as women's customs are concerned on accounts obtained for me by natives from their female relations. For one report of the Mariya ceremony I am indebted to Yuzbashi Kamel Gabriel, Sub-Mamur of Kosha district.

that angels and in particular angels of the river have little or nothing to do with the case, but it is submitted that to understand the beliefs of a people on a subject of this significance it is essential to see them in their proper context. Viewed in this light it is hoped that many apparent irrelevancies may find a measure of justification.

The area from which my material is drawn includes all the northern Nilotic provinces of the Sudan, in particular the provinces of Halfa, Dongola, Berber, Khartoum, the White and the Blue Nile : similar materials might probably be found further south on both branches of the Nile but I do not happen to have obtained any myself from these parts. Within the area mentioned there are marked varieties of detail, but in spite of some native statements to the contrary, I do not think that these varieties follow the popular tribal divisions, and this for the simple reason that these customs are much older than the tribal names, which were introduced into our area after the disruption of the old Christian Kingdoms in the xivth and xvth centuries of our era.

Marriage and circumcision feasts have already been described in a paper on the *Customs of the Rubāṭāb* (*S. N. and R.*, I, p. 119 *f.*). On each of these occasions the boy or man is dressed like a woman : he wears a necklace and bracelets, in some places also a circular or crescent-shaped ornament called the Zumām upon his forehead, and his tōb is made of silk or with embroidery such as only women wear. The ornaments and the unguents which are freely poured upon his head are known collectively as the Jirtiq, a word said to be Dongolawi from which the local verb yujirtiq has been formed to describe the act of celebrating one of these rites. The minor details of both ornaments and ceremonies vary considerably in different families and groups in our area. Among some families, for example, the most important object is a green stone which is threaded on a piece of red silk, with a long tassel hanging from it to form one of the bracelets and this green stone is regarded as a precious heirloom which is handed down from mother to daughter, that is, according to the law of motherkin. Among other families the most important bead is a sômīt, and some time ago a Shaigi wedding had to be postponed at the last moment because a green stone had been produced instead of the family sômīt. The beads of the necklace are usually strung on horsehair, and they should be dipped in

milk before use. After marriage they are worn for forty days, and after circumcision until recovery is complete.

Some of these details appear peculiar to this district and, as already said, they vary within it, but the curious custom of robing a bridegroom as a woman is not uncommon : Frazer (*Adonis Alfis Osiris*, II, page 433) quotes examples from classical Greece, mediæval Egypt and the Maori of to-day, but dismisses it as « an obscure and complex problem ». In recent numbers of *Sudan Notes and Records* (vol. II, p. 75), Fleming quotes a similar practice among the Beni Amer in the Eastern Sudan, and MacMichael (p. 92) describes another example on Jebel Midob in the far West. If these were any evidence for the previous worship of a great Nature Goddess in this area such as was worshipped in Mediterranean countries, the custom might be explained as the survival of rites in which the principal performers robed themselves like the goddess they worshipped. But the only evidence for such a belief which occurs to me is that provided by the rock sculptures at Jebel Geili, which is too slender to build a theory upon.

It is hardly necessary to add that these customs are looked at askance in very orthodox quarters such as the Magazīb of El Damer while near neighbours like the Shukria jeer at them as womanish and absurd, and also that the people who practise them most religiously are unable to explain why they should wear women's ornaments on these occasions. This is not, I think, because the people shrink from speaking freely, for this is by no means the case, but because the custom belongs to a circle of ideas which they have out-grown and forgotten. How many brides at home could say why they wear a veil during the marriage service?

A third occasion on which these ornaments are worn is called the Rubāṭ or Jirtiq el Ḥimla; it usually takes place in the seventh month of a woman's pregnancy but may be earlier or later. The following description of the custom has been sent me from Rufa'a on the Blue Nile. « The Rubāṭ is a feast similar to the marriage feast. The husband orders according to his means a hairpin, called the Ibra, of gold or silver with little chains of gold or silver hanging from it. He lays in also a plentiful supply of scents of various kinds and provides a sheep or two for his wife and her women friends. After they have eaten the sheep the women fix the pin on the right side of the woman's head and cover her head with the unguents over which

they sprinkle powdered sandalwood, and anoint their own and their daughters' heads at the same time. Meanwhile the husband or mother of the woman goes to a Holy man and obtains a thread with nine knots, the Rubāt, representing the nine months of pregnancy : after the Holy man has prayed over the thread, the husband or mother gives it to the women who tie it round the woman's belly where it remains until the child is born. » The Ibra and the other ornaments of the Jirtiq should be worn until the confinement, but in many families there is no Ibra (one man told me the habit was a mere trick to extract a costly present from the husband, which it certainly is not). Some Dongolawi and Ja'li families, on the other hand, are more noble : the woman herself gives plain needles threaded with red silk to her special women friends, who put them in their own heads and return after the confinement to make presents to the child [1], at the same time sticking the needles still threaded in the wall above the mother's angarib : the red threads are not taken out until forty days later when they are thrown into the river with other offerings to the Angels of the Nile.

Such are the main features of the woman's Jirtiq as described by various informants but one only has given me a reason for it : he said it was held in or near the seventh month because about this time or earlier the infant becomes more restless and kicks more and consequently may escape the protecting eyes of the good angels and expose itself to the assaults of wicked jinn. I give this explanation for what it is worth, but all agree that it is believed that unless this ceremony is carried out the mother may miscarry or be unable to nurse the baby or the baby may be born with some deformity, just as a boy who has been circumcised may suffer from fears or sleeplessness or bad dreams or continuous bleeding unless he is scrupulous about wearing all the Jirtiq ornaments. It is noticeable that most of the dangers to which people are exposed on these occasions are dangers which may not unintelligibly be attributed to the working of spirits. The efficacy of bead amulets, knotted strings, needles and metals of all kinds

[1] A similar custom has been reported to me from El Fasher, the Capital of Darfur, where it may however have been introduced by the Danāgla who have long been settled there.

to drive away ghostly enemies was one of the earliest discoveries of humanity, and calls for no comment.

The next custom which I wish to describe is peculiar, so far as I know, to Sukkot. It is called the Mariya, which bring interpreted means the Angels, and is celebrated within a day or two of the birth of the child, that is, before the child has been suckled by its mother. At this festival the midwife naturally takes the principal part and it is she who leads the visit to the Mariya which is the climax of the little drama.

Before the child is born a grass platter called the Tirkir is put in the room where the confinement is to take place, and is filled with dates and dura : the midwife lays the razor which she uses in delivering the child on this platter. Then when the child is born and before the cord is cut, the midwife takes seven dates from the Tirkir, bites them and touches the cord with them at the spot where she means to cut : the dates are given to anyone present who feels hungry and the cord is cut. The midwife next takes a koḥl pencil, sticks it into an onion, touches the child's eyes with it and lays the child on an angarib. After this they attend to the mother, she is fumigated, stretched, bandaged and given refreshing drinks and the others present also refresh themselves with whatever good things the house can provide. The Mariya proper takes place some time later, according to one account on the third day after the birth, but according to all accounts before the mother has begun to suckle the child. Various preparations have to be made : the house is swept and the sweepings, the afterbirth and the midwife's razor are all put together : a little raft or float is constructed of wheat stalks and an oil lamp is placed on it, and a big cake of wheat flour is made. The midwife herself takes the baby and goes down to the river with a number of attendant women and children, carrying with them besides the objects above mentioned a brass basin containing the koḥl pencil and the koḥl-pot already used and some of the dura and dates from the Tirkir. On the way to the river the midwife throws the grain about right and left crying « This is the portion of the Mariya, Oh Angels! », and the women accompanying her drum on the koḥl-pot and basin and pray « By the Mariya, by the Angels and by this new face, grant us, Oh God, our desires ». At the river side the infant's face, hands and feet are washed

and they put the raft with the lighted oil lamp and the cake on it into the water, but snatch the cake back before they finally push the raft out into the stream. According to one account the afterbirth is also put on the raft, but it is generally I believe thrown straight into the river with the sweepings. The midwife then fills the basin with river water and cuts four palm branches to put in the four corners of the room. On her return to the house she washes the breasts of the mother with the river water and gives her the baby to nurse. At the same time the baby's eyes are painted with kohl and a cross painted with kohl on its forehead, another cross on the wall above the mother's angarib being painted with the baby's meconium which is regarded as peculiarly pure because it comes from the child before it has received any «worldly» nourishment. According to the sex of the child a boy or girl of known good character is then brought to the baby and given seven dates which he is expected to chew and spit out at the child, telling it to grow up like himself and its parents. The mother's relatives next congratulate her and offer her presents according to their means, and the midwife goes home taking the Tirkir with her and scattering about whatever is still left in it on the way.

According to another account, crosses are painted outside the house where the child has been born and also on the bins in which grain and dates are stored : these crosses are made with blood of any animals which are killed for the various feasts in connection with the birth, naming and so forth, and this practice being an obvious relic of the Christian period calls many animadversions from the orthodox, especially from those who have studied «religion and good learning» in El Azhar University. In Dongola Province also crosses are made with the infant's meconium and again afterwards at feasts with the blood of animals and call forth the same condemnation from the «wise» [1]. In Dongola also a variant of the magical

[1] Sheikh Muḥammad Faḍl, Headmaster of the School at El Fasher, tells me that there the blood of the sacrifice of the 'Aqîqa, which is offered on the 7th or 9th day after birth, is used to make crosses on the doors of the house, the foreheads of the child and its mother and of any women present who care to mark themselves so. He adds that the bones of the victim at this sacrifice should not be broken but kept to be thrown into pools of water during the rains.

rite with the boy or girl of good character is in vogue : here the parent selects according to the sex of the child a notable man or woman of good character to chew three dates and place them in the mouth of the child in hope that the child may take after him or her. One informant adds that, if, as will sometimes happen, there is no one present who possesses qualities which the parent desires the child to acquire, this part of the ceremony is postponed until the naming festival on the seventh day after birth.

So far as my information goes, the rite of the Mariya above described is confined to Sukkot, but a very similar custom called the *Arba'în el Wilâda* is much more widely spread : it has been reported to me from Sukkot, Dongola and Berber and it may be observed frequently on the banks of the river in Khartoum and Omdurman and further south. The following account of the ceremony as practised in Khartoum province is based on notes given me by my wife of what she has witnessed herself. The rite begins about sunset on the fortieth day after the birth of the child, which is or should be the first day on which the mother leaves her house. She then rides or walks down to the river carrying the baby and attended by her women friends and children of both sexes : on one occasion the mother was preceded by two little naked black boys carrying a basket which was said to contain the house-sweepings and the afterbirth (?)[1] and a little girl with a calabash full of dates and other offerings : the midwife plays no part in this rite. The women in attendance carry palm branches in their hands if they can get them, otherwise any green thing will serve the purpose, and on the way to the river they sing songs in the vulgar tongue of which a specimen is given in the Appendix to this paper.

When they have reached the bank, they throw the palm branches into the river and also dates, dura, alum, kohl and any other offerings they

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[1] The after-birth is generally disposed of as quickly as possible, being either thrown into the river without ceremony or buried. Among the riverain tribes I have found no evidence of the special regard for the placenta on which Seligman dwells (*Journal of the Royal Anthropological Institute*, 1913, p. 658) and which Roscoe describes in Uganda (*The Baganda*, p. 54) as follows : «The afterbirth was called the second child, and was believed to have a spirit, which became at once a ghost».

have brought, and the contents of the basket above mentioned are tipped into the stream. Then the mother hands the baby to one of her friends and washes her own face, hands and feet, next the baby is washed in the same way and held up in the air amid the trillings of the women who wash themselves at the same time. Then they all drink from the river and the children who have taken no part in the proceedings are given water to drink out of the calabash. Before they return to the house more palm branches or other green things must be cut and carried home, and sometimes they remain on the river bank and eat their evening meal there, throwing into the river part of what they are eating as an offering to the Angels. In Sukkot and Dongola the procedure seems to be similar in all essentials, though more stress is laid by some of my informants on the invocations to the Angels of the River, and in addition to the house-sweepings the rags and wrappings which have been used in the confinement are commonly thrown into the river. Among the Ja'lin in Metemma and probably elsewhere seven white pebbles are also offered to the River angels[1].

These oblations to the Angels of the Nile like the amulets worn in the Jirtiq ceremonies point to a belief in the same spiritual dangers whether ghostly or human as does another custom which remains lastly to be described. In some of the best families of our area the cord of the infant, the birth hair and the first nail parings which are cut on the fortieth day after birth are all handed over to the maternal grandmother, the guardian as it will be remembered of the green stone which is worn in the Jirtiq : the grandmother keeps them in little boxes — the polychrome Meccan ḥūq is the favourite repository, — one for each grand-child, those of the grand-sons receiving another contribution after the boys have been circum-

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[1] Sheikh Muḥammad Faḍl, whom I have already quoted, tells me that in El Fasher there is an interesting variant of the visit to the river on the Arba'în el Wilāda. On the forty-fourth (*sic*) day, he writes, the mother puts on all her jewels and her best clothes and leaves the room in which she has been confined and walks abroad through the town. Her friends carry some flour and butter and the sweepings of her room which have been hitherto carefully kept under her bed, and they all make for a green tree east of the house in which the mother lives. This tree is regarded as a substitute for the river : it is duly smeared with butter and sprinkled with flour, and the sweepings are left at the foot of it.

cised. In other families there are various modifications of this custom : a man from El Damer, for example, half Ja'li half 'Abādi, told me that among his folk the cord of a girl is kept carefully at home because it is not desired that a girl should gad about while the cord of a boy is thrown into the river in order that he may not be afraid of going abroad. Similarly a sheikh from Dambo (Dongola) half humourously complained that while his sister's cord was still safely kept wrapped up in spices at home, the chickens had got hold of his own which was counted a special misfortune because it makes a man flighty. The same idea is at the root of all these customs, namely that what has once been part of a man's body or in close contact with it (the wrappings and house refuse in the confinement cases for example) may influence him and especially may be used by enemies, human or ghostly, to do him harm long after it has been separated from him. Two methods of averting these dangers have been naturally adopted : according to one method, the objects are carefully preserved in some safe or almost inaccessible place, such as a box in the interior of the house; according to the other, they are entrusted to the care of powerful and beneficent spirits such as the Angels of the Nile. Like the wearing of amulets these other practices follow trains of reasoning which are the same all over the world, and in respect of them there is very little difference between peasants here and, say, in the Highlands of Scotland [1].

These considerations have a very direct bearing on what may be called the Descent of the Angels.

The forty days period between child birth and purification has been ordained for mothers by the Religious Law at least since the date of the Book of the Leviticus (c. XII, 4). The use of the cross again, which has been mentioned so often as a protective charm, is an obvious relic of the veneration paid to it as a sign of power during the Christian centuries

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[1] At Abba Island on the White Nile I heard of another use to which the objects collected by Ja'li grand-mothers are put. Among the Arabs there the cord, birth-hair and nail parings are tied up in a rag and on the fortieth day after birth fastened round the neck of any animal, mare, cow or camel, which the father may decide to settle on the infant, the animal and all its progeny becoming thereby the property of the child.

When the forty days period may have been introduced here, though it may be older or later, for Snouck-Hurgronje says (*Mekka*, vol. 2) that Meccan mothers solemnly present their children in the great Mosque on the fortieth day. It might therefore be thought that the belief in Angels or spirits of the River dates from the Christian period and that the ceremonial washings are a survival of the Sacrament of Baptism. It seems to me that the resemblance to Christian belief and rite is too slight to make this view probable, especially when both belief and rite are associated with so many primitive features and can be readily understood as expressions of the beliefs implicit in these primitive features. It is suggested that the belief in Nile Angels, the lustrations and the associated magical practices are all alike to be regarded in the same way as similar «Pagan» or «animistic» survivals in Christian Europe and the Mohammedan East. The ritual washings in the river are parallel to lustrations elsewhere, the veneration and prayers to the River Angels are parallel to the cults of wells and springs and rivers all over the Pagan world : both belong really to a stratum of thought which lies beneath or behind the historic religions of the Book, though slight modifications may have been interpolated to accommodate them to the new Gospels, the prayer to God in the Sukkot Mariya, for example, and the references to Mohammedan Saints in the Songs in the appendix bring intrusions accepted the more easily because the new religions themselves had risen among kindred practices.

Whether the myth or the rite came first, that is to say, whether the people purified themselves in the river because they believed in the Spirits of the River or whether their belief sprang out of their ritual purifications, is a question I cannot discuss, but there is one other point of interest which arises from the matter of this paper. More than once I have referred to the opposition which some of these customs arouse in the superior classes. Native attitudes to these practices vary in exactly the same way as the attitudes of different classes at home. In both countries the women are the staunchest guardians of the ancient ways; but in both they find ready supporters in the other sex. At home you find the keenest students and preservers of old customs among the landed gentry, the country parsons and the untravelled agricultural labourer : here too the old sheikhly families and the village fikis stand in the old paths, the latter not always

disinterestedly. Opposition has come in both countries from those who have run to and fro in the world and seen men and cities and especially those who are filled with new learning from foreign missionary centres.

J. W. Crowfoot.

APPENDIX.

I

SONG SUNG IN KHARTOUM DISTRICT BY THE WOMEN AT THE ARBA'ĪN EL-WILĀDA.

We have come to you, oh river of ours,
the light has shone before us,
the river has welcomed us and our hope is
that our child may grow up and be blessed.

I called upon all the Holy ones,
and the people of God came in great numbers,
they were present at the hour of her pangs,
they delivered her and the Lord has saved her.

I called upon all of the Holy ones,
the People of God came with girded loins,
they were present at the delivery of the child,
they delivered her, and from God is peace.

I called on his uncle, the saint [1],
and el-Bedawī there in Egypt,
they were present at the hour of the rope,
they delivered her and the mother is restored.

I called on the sons of the People of the Foundation [2]
and his uncle the Incomparable one,
they were present at the hour of the birth,
and the baby is very good, oh people.

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[1] Said to refer to sh. Idrīs el-Arbāb.

[2] *i. e.* Sh. Khojalī and his descendants.

They ornamented for you the mare of a governor,
they decorated for him a silken flag.
Oh mother of a veil whose lips are discreet,
may the Almighty guard you with your child.

They ornamented for her the well-girthed mare,
which entirely confounds the evil eye.
Oh you the Holy ones, the Generous ones.
Oh prophet, be upon the mother of the child.

II

VERSES SUNG BY THE SHAIGIYA AT THE ARBAʿĪN EL-WILĀDA.

a) On a boy :

Oh mother, your son is pleasing to you and to me.
When a crocodile meets your son,
your son will clear the river's edge,
your son will draw his sword,
your son will leap the bank.

b) On a girl :

A blessing on you who came a daughter to your mother,
let any one who is not pleased with you groan by himself [1].
You will spin yarn for cloth
and quit your father of his taxes.

III

VERSES SUNG IN EL-FASHER DURING CONFINEMENTS.

Oh deliverer of women in labour of little children,
Gabriel has spoken to his Lord and is come.
Oh deliverer who asks for no recompense,
Oh deliverer who delivers her kindly.
Gabriel has spoken to his Lord and is come,

[1] *i. e.* we are pleased with you and will not pay any attention to people who are disappointed at your being a girl and not a boy.

he delivers her who asks for no recompense.
Oh deliverer of men from men,
oh deliverer, oh Abū 'Asha el-tōr [1],
oh Lady Fāṭima, call on your father,
he of the blessed hand, the deliverer of the fallen.
Oh Mīrghanī, oh Mīrghanī, I am fallen deliver me!

ARABIC TEXT.

I

جين ليك يا بحرنا	شلع النور بى قبلنا
رحب بينا وأملنا	يكبر يتبارك ولدنا
ناديت الصلاح تما	واهل الله جات معظما
حضروها ساعة الما	حلوها والرب سلما
ناديت الصلاح تمام	اهل الله جات كاربه الحزام
حضروها عند وضع الغلام	حلوها ومن الله السلام
ناديت بى خاله الخبر	والبدوى هناك فى مصر
حضروها عند ساعة الحبل	حلوها والأم تتجبر
ناديت اولاد اهل الاساس	وخاله النادر فى القياس
حضروها ساعة النفاس	والوليد ينفع يا ناس
جرتقوك مكلوفة المدير	نغشوله الرايه ام حرير
يا ام ستر خشمك موهبيل	بجناك يرعاك الجليل
جرتقوها المهره ام حزام	التكيل العين بالتمام
فوقك الصلاح الكرام	يا الرسول فوق ام الغلام

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[1] A famous sheikh buried at Abū Ḥarāz in the Blue Nile Province.

II

a) يا بمه ولدك عجبنى وعجبك
يجى نمساح ولدك يشق الواق ولدك
يشيل السيف ولدك ينط القيف ولدك

∴

b) بركه الجيتى لامك بت المسا بيبك اليقنت
تغزل الربطه للتيبان تحلى أبوك من الديوان

III

يا حلّال المشاكل من غلا مَنْ جاهلة
جبريل ناح ربه وجا يا حلّال المابُد وَرجزا
يا حلّال بجلها حلا بلاقيا
جبريل ناح ربه وجا بجلها المابُد ورجزا
يا حلال الزول من الزول يا حلال ويا أبو عاشة التور
يا ست فاطمة نادى لى أبوك أبكَفَّنْ مبروك حلال المدروك

∴

يا ميرغنى يا ميرغنى أنا مدروكة تحلنى

COMFORT AND HEALTH
IN THE TROPICS

BY

Dr. C. CROSSLAND.

I need not emphasise the importance of health in the tropical portions of the Empire from either the personal or Imperial point of view. That certain countries are or were «the white man's grave» because of the mosquitos which live there is nowadays admitted, with slight reservations, by all. Remove the mosquitos and the fevers they carry, and most tropical countries can be made fairly healthy.

When I first went to the tropics only eighteen years ago this was either doubted, or derided as a mere theory. At the same time the West African Coast was described to me as a place where a fortune could be made in quite a short time if you lived. Usually however you died before even the short time necessary for making a fortune had elapsed. Illustrations of what might be done in the tropics if only health and energy were secure are in every reader's mind.

It is evident from the universal distribution of disease germs that if every infection with germs resulted in illness, the human race would soon be wiped out. For illness to result : (1) the appropriate germ must be present in sufficient number; (2) the condition of the patient must be favourable to the growth and multiplication of the germs. It was these conditions that obscured the connection between mosquitos and malaria and supported the contention of those who held that malaria resulted from, *e. g.* taking cold. They were quite right, the «cold» lowered the resistance of the patient to the «attack» of the malaria blood parasite which was thus allowed to develop and so brought on fever which otherwise might not have resulted. In the same way any other circumstance which lowers health may lower resistance to some or other of the disease germs to which one is exposed.

To quote from eighteen years ago again, «It is not these fevers and things that really worry you, its just this d—d prickly heat». This from a man with lifelong experience of India, Burmah and Brazil, who was about to land at Zanzibar.

The Red Sea has a truly tropical climate without the usually accompanying tropical diseases. Experience on this coast may therefore be a guide as to how much of that lassitude which is the bane of hot countries is the result of «fevers» and how much due to heat and damp alone.

All who know this region will I think agree that though we suffer little deterioration compared to those whose duty compels them to live in a malarious district, yet the lassitude due only to heat and discomfort does very seriously diminish our capacity for work and our enjoyment of life. That is to say that unless we in the Red Sea can improve our conditions still further we may take it as proved that no sanitation however perfect will ever enable a European to work in the tropics as he would at home.

I believe however that something can yet be done to improve greatly our comfort and, as a sure consequence, our health. «Its just this d—d prickly heat» and other such trumpery details that spoil life for us, and do it with a thoroughness that wastes our powers and our health to an extent we do not care to think about. If we could be more comfortable in a real and reasonable way we should see fewer men driven to such dangerous comfort as, for instance, sitting in the full blast of an electric fan while the sweat[1] pours from them, attempting (in vain) to cool themselves with iced and alcoholic drinks.

It is so essential to the understanding of the problem that I beg to be allowed to recall a little very elementary physics.

A warm body may be cooled by the passage of air by actual transfer of heat from it to the air, or, if the body is moist, by the evaporation of the moisture. The cooling effect of evaporation is so much greater than what is possible by conduction that as far as the lowering of temperature is concerned conduction, like the radiation of heat, may be neglected and the evaporating effect alone be considered.

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[1] Excuse the use of a good old English word : I fear we are often a stage or two beyond «perspiring» on this coast.

It is a physiological necessity for us that our blood temperature should remain constant. That of a fish or reptile varies with the heat or cold of the water or air in which they live and the habits of the animals alter accordingly. In warm blooded animals any rise of blood temperature means fever, a fall results in sleep and death.

The maintenance of this constant temperature is effected by the production and evaporation of sweat and is controlled automatically by the nervous system. Should this nervous control break down under specially trying conditions, the body temperature flies up and we have a case of heat stroke. On the other hand, a sudden cooling of the skin may upset the control and produce the less dramatic but still dangerous chill which may result in a simple fever or have all sorts of serious consequences.

So far I have written only what is the common-place of hygiene. I regret the repetition but it seems necessary as an introduction to the more original observations which follows.

I must still add to my preface that though my experience may not be that of some others, and that though what I have proved good for myself will not suit everybody it is quite certain that I am not unique and in fact what is right for me is right for 75 o/o at least of my fellows. Further that while Red Sea conditions affect but a very small proportion of the white inhabitants of the Sudan they are far more usual in other parts of the world than are the desert conditions of the greater part of this country.

1. Clothing. — To keep a non-living object at a uniform temperature, the obvious thing to do, whether to prevent ice from melting or a tea-pot from cooling, is to wrap it well up in wool.

In the same way we are advised always to wear wool next the skin and to wear sufficient other clothing to prevent any action of the sun upon the skin of the body. Sudden changes of temperature are thus avoided, but at what cost? To very many, if not most, life becomes unbroken discomfort, the inevitable result being inefficiency and deterioration if not actual breakdown of health.

Personally I should prefer the risk of a thorough-going illness due to chill, than years of discomfort and that lassitude which takes all the spice out of life, but can we not avoid over-clothing and prickly heat and yet run

no risk of chill. Obviously the exercise of a minimum of intelligence would enable us to vary our clothing according to necessity did custom allow it.

What is allowable these days is a great advance upon what was possible a few years ago, and did the majority of men once realise how much more comfortable and cleanly we might be were we allowed to dress as the climate demands and how much more worth while life is under those conditions the bounds would be further widened.

The dress I should choose for day wear on all but special occasions[1] would be :

1. Sun helmet, of the lightest possible pattern. Once a helmet is opaque there is no object whatever in adding to its weight and the discomfort of the wearer.
2. Collarless shirt of the thinnest material, as thin as an ordinary handkerchief. Sleeves generally rolled up.
3. Shorts.
4. Belt if necessary.
5. Shoes of leather, not canvas, and of loose fit.

All clothing of *white* cotton. It is not generally realised what a great difference colour makes to the amount of radiant heat — sunlight — absorbed. Mr. Grabham has made definite experiments on the absorbing powers of various kinds of clothing material, but the matter may be tested in several rough and ready ways, *e. g.* a verandah rail may be partly painted white partly coloured.

You can lay your hand on the white paint but not on the dark when both are equally exposed to the sun; try a coloured patch on any part of your white clothes in contact with your body. The result, when you are in the sun, will surprise you. White painted boats usually have the seats dark coloured. You cannot sit on them without being burned so cushions are provided. At Dongonab we paint seats white whatever the rest of the boat may be and need no cushions, the use of which the nature of our work renders impossible.

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[1] *e. g.* «Special occasions» includes travelling through spiny bush.

I do not recommend any one to dress in this style and straightway spend some hours in the summer sun. Such a proceeding would be at least painful and might be dangerous. Even ordinary sunburn of the legs may cripple a man through an action of the sun on the nerves. Those not used to light clothing in the sun must become acclimatised by degrees, returning to their normal clothing when the skin becomes red and tender. After a short series of exposures the skin becomes brown and any exposure in reason is safe.

Spine pads are generally unnecessarily heavy.

I have not found them necessary for myself but should one be wanted a single strip of coloured cotton sewn inside the shirt will be found enough to keep the skin white beneath it and we may safely take the colour of the skin as a measure of the sun's action upon other tissues as well.

Many men are unable to wear light clothing on account of the indecent amount of perspiration they produce.

A single garment is soaked through so they must wear wool beneath to soak it up and a jacket above to hide the condition of their underclothing.

Now except possibly in the case of those who have just come down from the dry interior such excessive perspiration is unnecessary and avoidable for men in fair health[1]. What is produced can be evaporated from clothing such as I describe. There is no half way course : if only slightly thicker shirts are worn (such as are usually sold for tropical wear) the perspiration cannot fulfil its function by evaporating and so more is produced. One's condition is then to my mind a horrible discomfort and sense of uncleanness, even if prickly heat, insomnia and other evils do not follow.

This does not apply to the dry country inland where the air is avid for moisture and evaporation can take place through clothing to an extent impossible on the moist coast, where the air has but little evaporating power.

My list of clothing is what I should like to wear. In practice one is compelled to wear a collar and socks or stockings.

A hard collar is better than a soft one, as it stands away from the neck

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[1] Except in the worst of Red Sea weather, which I think is not matched elsewhere in the tropics.

and allows ventilation. This again is impossible for the man who perspires freely either through wearing more than is necessary or who takes more than the minimum of alcohol and condiments.

2. House Planning. — Air which is already moist can have little drying, or consequent cooling, effect unless it is in fairly rapid motion. Consequently what is known as ventilation in Europe is of little use in the Tropics and houses designed in Europe are never, so far as I have seen, sufficiently airy for the Red Sea Coast[1].

Take the commonest house plan which, generalised, may be shown as

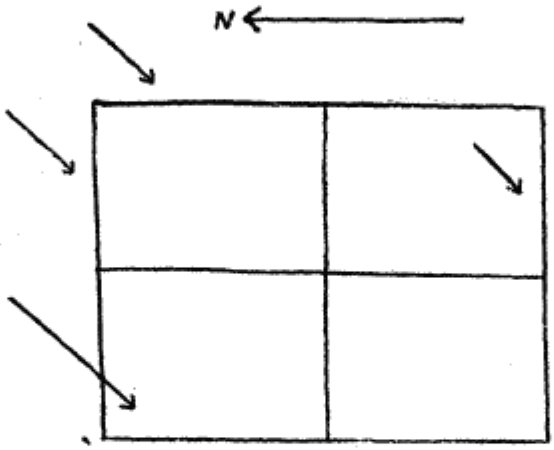

Fig. 1.

fig. 1, doors and windows being supplied to taste. Say the house faces east for example. The prevailing wind by day is north-east or in cooler weather N. N. E.

The extent to which each room of this house receives the north-east wind is indicated by arrows. Room no. 2 is efficiently ventilated and comfortable; nos. 1 and 3 receive a little air and may be comfortable in one corner of each; no. 4 is not habitable.

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[1] The problem is entirely different, and much simpler in dry hot countries like the inland parts of the Sudan (see below).

When the wind is from the south-east, the position is exactly reversed, but as the furniture and other arrangements made for comfort during the north-east wind cannot all be transferred to room 1, at short notice you must make the best of your imperfectly ventilated rooms and of course, put the blame on to the climate. The third prevailing wind is the westerly land breeze of the evening and early morning. Fig. 2 indicates the incidence of this upon our four room house. You must now shift your dining and breakfast things to rooms three and four which are already occupied by beds, etc.

Even were it possible to change from room to room in this way a house of this plan ignores the fact that to get a draught through a room it is

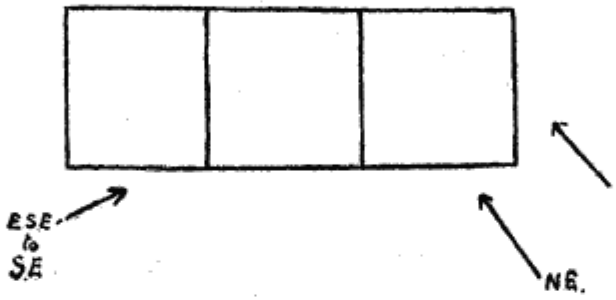

Fig. 2.

necessary to provide exit as well as entrance for the wind. Unless this is *amply* provided for this night wind can get nowhere, it is so light that the fact that the west side of the house is cool, while the east is stifling, is often almost the only evidence that the air is in motion at all.

The only possible plan by which all rooms can enjoy a thorough draught is fig. 2. The house faces 30°, north of east, and every room is open to the prevailing winds. There is no need to move from room to room as the wind changes and none of the rooms become uninhabitable at any time. The town planner will at once object, (1) that I postulate a huge open space round every small house, (2) that one cannot face all houses the same way by the compass, they must face their streets.

I admit objection no. 1 to be serious, but that houses should be built at an angle to the nearest street seems a small price to pay for the boon of finding all rooms habitable where, as things are, only a fraction of

them can be occupied without serious discomfort. Churches are built with their chancels to the east to the gain of the street from the artistic point of view.

I am not describing mere theories as I have carried out my idea in practice and as the results have equalled expectations a few notes on my house at Dongonab may interest others.

The house consists of three rooms 14 feet square, store and bathroom being added to the south-west corner, the quarter whence there is rarely any wind.

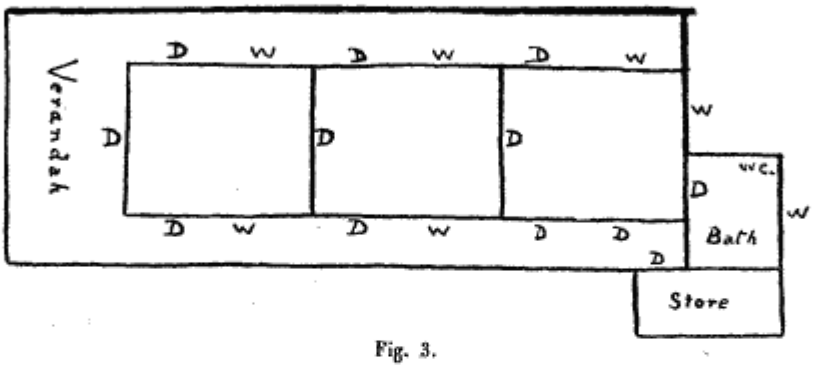

Fig. 3.

Two mistakes have been made, not serious but found worth correction in the houses built subsequently.

(1) My house faces too far north and does not get sufficient of the south-east wind. 60° east is correct.

(2) The verandah should not be widest at the north as this gets the sun on summer afternoons. When circumstances permit, I propose to transfer this large verandah to the east side of the house.

At the same time the balcony above it must stay where it is as if this were on the east side also the roof, which is sloping would keep off the scarcely perceptible night breeze and the balcony would be useless for sleeping on.

There will be need for a wide verandah on the west side. One does not sit out on that side until the wind drops at sunset under which condition a roof overhead checks loss of heat by radiation. It would be an advantage

however to have a floored area raised to the verandah level and surrounded by balustrade on which chairs could be placed.

That it is cooler at night without a roof overhead, even if there are no walls on any side of it, is recognised by the natives whose prayer places consist of two parts, one covered by a roof on posts, open all round, the other open to the sky as well as to every horizon. «We could not do all that bowing with the heat of a roof over our heads at night» is their explanation.

Certain details are worth attention. Of the nine doors to three rooms shown on the plan most are used solely for ingress and egress of wind,

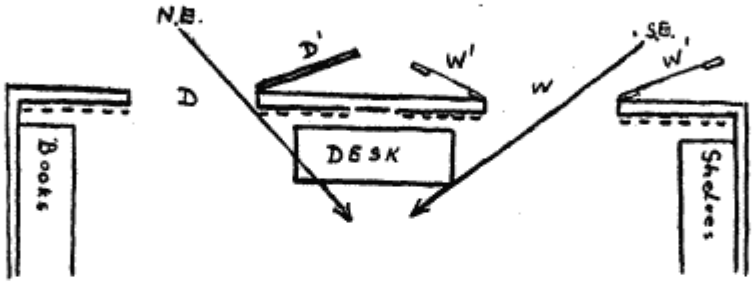

Fig. 4. — D' and W. are the open door and window frame folded back.

several of them being kept closed entirely from November to May. During the summer there are none too many for the sufficient ventilation of every part of each room.

Now a strong wind blowing one's papers about is nearly as uncomfortable as the stifling effect of a stagnant atmosphere, and an intermittent wind is worse. Every door and window is therefore provided with louvred shutters, which are closed when the wind is strong. As it is these shutters that are continually being opened and closed according to the varying strength of the wind and one's own requirements they are inside and the glass-frames, which are often left open for weeks together, are outside.

Now it is obvious at once that if these louvres were hinged, their opening inwards would leave no room for any furniture. They therefore slide along the wall. Fig. 4 shows the arrangement on the wall by my writing

table. The two lines of dashes indicate the positions into which the louvred shutters slide back when the weather is calm and doors and windows are fully open. North-east and south-east winds reach my chair as shown by arrows, and pass out of the room by the opposite door or window which, being on the leeside of the house, are open almost all the summer.

These sliding doors are louvred *to the bottom*, not as is usual only half way down. The reason is that the slats being set at an angle of 45° the wind is deflected upwards by them and that which reaches my body and face when I am seated, comes from the *bottom* of the doorway when the louvres are closed.

The wind which enters through the middle and upper part of the shutters goes over one's head and is practically useless.

The objection to this arrangement is that sliding doors sometimes stick. In practice what little trouble this gives is well worth while. The handles on such doors are placed as low as possible and the grooves are lubricated with soap, not grease. The verandahs at the side of the house are narrow and used merely as passages. To give shade the arrangement shown in fig. 5 is adopted as being cheap and efficient and having a good appearance. Fig. 5 is a cross section of the verandah, the measurements being approximate.

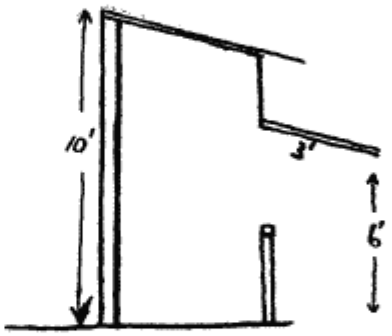

Fig. 5.

The walls are 4″ thick only. Solid stone walls retain heat all night and in any case exclude little by day since in this climate air is passing continually through the house which must take its temperature.

Inland the totally different climatic conditions necessitate a totally different architecture. The dryness of the air enables it to absorb moisture without so much motion and houses are kept cool by isolating the air they contain as much as possible from that outside which is heated by the sun. Fig. 1 is therefore the correct plan of a building which is made as compact as possible. The only suggestion I have to offer is that the windows and

doorways of lower storeys should be provided with iron gratings which could be closed at night for safety against thieves and animals, leaving the doors and windows open. The cooler night air would thus circulate through the house, entering below and driving the heated air upwards and so cool the house walls inside.

If we could do in practice what is theoretically desirable one might construct houses in which the roof would be entirely removed at night! The interior would then be cooled thoroughly by radiation and the night temperature be retained by closing all up again during the day.

3. Town planning. — Should in this and similar countries be carried out in complete subordination to climatic conditions of which the directions of prevailing winds and whether they pass over land or water are the chief.

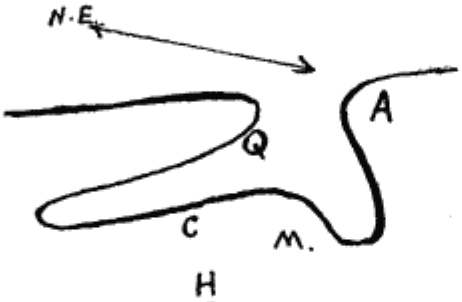

Fig. 6.

Before criticising Port-Sudan perhaps it will shew that I do not under-estimate difficulties if I recount my own mistakes on the small scale at Dongonab. When the reader has thoroughly enjoyed my mistakes, he will be more in the mood to consider those of others.

Firstly I lived for years on the north side of the Harbour before I discovered that the temperature on the south, or leeward side was 10° F. lower. I failed also to note how rapidly the temperature rises as one leaves the sea.

Secondly I built two streets of native huts on a clean hard plain. They are now buried to the eaves in sand! What I suffered from blown sand without any necessity at all will not bear contemplation?

Still less that which I have caused others to suffer through my almost culpable ignorance and blindness.

Fig. 6 is a very rough sketch of Port-Sudan harbour with the positions of Mudiria, Club, Quays and Hospital approximately indicated by their first letters. Directions of north and north-east winds are shown by arrows.

Now if a hot north or N. N. E. wind is cooled 10° F. by crossing two or three hundred yards of shallow water in Dongonab Harbour, the difference between the temperatures over the town site and that marked «A» on the south side of the harbour will be at least as much. Port-Sudan is practically an inland site, the sea breeze having been heated by passage over miles of sand and coral rock, but «A» receives the most prevalent wind directly from the sea. The ground here is high also and it would be quite easy to arrange a road and ferry to the present town. A temperature 10° F. lower than what is usual elsewhere is worth paying for. It is all the difference between what is tolerable and what is intolerable, efficiency and inefficiency.

There is a theory that it is damper near the sea. Now a wind blowing from the sea has taken up all the moisture it can and on passing over the land it can neither gain nor lose any of it. It can however become hotter and it does this very quickly in one or two hundred yards or so. Whether cooler nearly saturated air, or the same air which by being heated is less near to saturation is the more desirable, let the learned argue, I only know which is the easier to breathe. It is a matter of daily experience at Dongonab.

Another advantage of the southern site would be freedom from dust, which is not the least of the plagues of Africa.

To recapitulate my argument :

1. The Red Sea coast being free from malaria and other diseases characteristic of the tropics affords an example of what life in our tropical possessions might be were these diseases eliminated.

2. The lassitude, and inefficiency and loss of happiness due to heat and damp apart from disease are very considerable.

3. Much for which the climate is blamed is due to our being prevented by custom and unfounded fear of mysterious effects of sunlight from wearing such clothing as is obviously called for.

4. Under proper conditions excessive perspiration, prickly heat and the consequent mental irritation and weariness can be avoided.

5. Building construction for dry and damp climates should follow entirely different lines; in damp climates a through draught should pass

through every room, exit as well as inlet for a large volume of air being provided.

6. The best site for a house is close to the sea, facing 60° east of north, receiving wind directly from the sea whether north-east or south-east.

7. A suggestion is offered to those about to build in Port-Sudan whereby they may enjoy a temperature 10° F. lower than that endured by the older residents.

8. Finally I should like to remind the reader that *dew does not fall*, a fact that has several valuable and practical consequences, one of which is that it disposes of most of the objections which will be made to my thesis.

C. Crossland.

SOME STAGES OF EVOLUTION

AS EVIDENCED BY THE FISHES

BY E. G. CORYTON.

I feel that an apology is needed for contributing the following article as it has little to do with the Sudan in particular; but I was prompted to write it by reading the note in Vol. I No. 4 entitled *Hibernating Fishes*.

Much has been heard lately of movements carried out «according to plan», and I think it will be admitted that the fish kingdom shows some very striking examples of this «movement».

As is well known, Darwin and Wallace were the pioneer naturalists who riveted public attention to the existence of a plan in nature and how as a general rule simple organisms gave rise to more complicated and complex animals.

Now the fish kingdom may be divided into four groups, according to their development from the simpler to the more complex.

The example of Group 1 is a small animal about 1 1/2 inches long and known as *Amphioxus*. It is one of the most primitive forms of life which has any attempt at a back bone. I use the word attempt because there is no bone in the true sense, but the amphioxus has got a stiffening chord which is dorsal to the gut and ventral to the central nervous system, and adds strength to the whole body of the animal. Another point to be noted is that this notochord, as it is called, does not extend as far forward as the head. So that there is no resemblance to a skull in any form. Other points are uncovered gill slits and the entire absence of any other form of bone.

In Group 2, which includes the dog-fishes, sharks and rays, evolution has been carried much further. There is a back bone and skull but still only formed in cartilage. However there is a sign of the formation of bone.

Anybody who has drawn his hand over the skin of a dog-fish from tail to head appreciates a sensation like rubbing sand paper. This is due to small spines which project pointing backwards to the tail. These spines are

fastened on to small bases or plates on the surface of the skin, and it has been found by chemical analysis that these dermal plates contain the elements essential for true bone.

In the rays these spines are visible to the naked eye and attain a length of one eighth of an inch or more.

The teeth of a shark or a dog-fish are merely an adaptation of this form of dental plate. On the inside of the mouth there is a continual growth of these plates going on from inside of the jaws to the outside and hence the innermost teeth appear to be pointing in the direction of the throat while those teeth on the outside edge of the jaw will be bigger and will have assumed a vertical position.

The gill slits are five in number and uncovered.

This group would be incomplete were no mention made of the sturgeon (of caviare fame). This fish has large dermal plates of bone, which appear to show that it is the descendant of ancestors who represented another milestone on the road of evolution.

Group 3 contains (with the exception of Group 4 which is a very small group as far as the number of present day species are concerned) all the other fishes in the world. These are the true bony fishes, with proper skulls and backbones and the gills are situated in a common chamber which is protected from the exterior by a stiff gill cover. There is also what is known as a swim bladder, which is a hydrostatic organ for assisting these fishes in moving about at different depths. It is thought that gases formed during the ordinary process of living may be the source of supply for this swim bladder, as of course no free air is available under water. The swim bladder of many fishes has a direct connection with the throat and hence to the mouth.

There is a fish that belongs to this group which has its hind limbs placed nearer its mouth than its fore limbs. It may well be asked how is this, the pectoral and pelvic fins are very much alike and have not the one been mistaken for the other? The answer is however indisputable. If the pair of nerves controlling each of these paired limbs be dissected out it will be found that the nerves going to the pectoral fins go direct in a straight line from the brain to the limbs, but those controlling the pelvic fins go first of all to where those limbs ought to be namely in the position of the cloaca

and that then the nerves go forward in the direction of the head until they finally reach the pair of limbs which is anterior to the pectoral fins. Thus showing that in the process of evolution this kind of fish has found it more suitable for its existence to have its pelvic fins quite in another place. It must not be thought that this change took place at a jump it may have taken thousands of years to accomplish, the movement forward being very gradual.

Group 4 includes those fishes known as the *Dipnoi*. Their fossil remains are found in some of the oldest rocks. The great point of interest about them is that they can breathe by means of primitive lungs. It must be to this kind of fish that Mr. Kemp refers.

As he says, these fish when the waters dry up dig themselves into the damp mud in the bed of the stream and await the return of the water before resuming an active life again.

They manage to do what breathing is required by means of a so-called lung, which is really the swim bladder and to which reference has been made in Group 3. This swim bladder has become vasculated so that the blood can flow in very thin walled vessels in the skin of this bladder, and thus what oxygen is required can be secured by the blood.

When the waters return, aeration of the blood is of course carried out by means of the gills.

A suggestion has been put forward, and it sounds very probable : it is, that as the pools begin to dry up and the water becomes thick and turgid these fishes with lungs do breathe both by means of their gills and lungs. The dirty water would not contain sufficient oxygen, so the fish rise every now and then to the surface to get a breath of fresh air!

In the process of evolution the first life almost certainly occurred in the water, how then did animals adapt themselves as far as their respiration is concerned to a life on land, in which they had to breathe the air direct and not as before extract the oxygen dissolved in the water? Nature by means of these dipnoi fish has very kindly indicated a way in which she could have done it, or indeed may have done it. I do not think it requires a great stretch of imagination to picture this bladder becoming more and more vasculated until finally an efficient lung is developed. It should be borne in mind that we are dealing with a cold blooded creature and hence the lung was not required to be so efficient as in the highly developed warm blooded

animals of to-day, but given the lungs in that form it is only a very short step in evolution to develop the enormous lung and heart power of the modern hunter or race-horse.

Another interesting point about these dipnoi is their geographical distribution which shows that they are an archaic type. Their modern representatives are only found to-day in South America, the Nile Basin, West Africa and Queensland (Australia).

As a group, the dipnoi appears to represent a side track in the evolution of fishes, but when it is remembered that the next higher stage in the development of animals includes the frogs and crocodiles and that they are semi-aquatic, then the importance of the primitive lung from a natural history point of view becomes apparent.

To sum up, it is found that in the fish kingdom a primitive boneless form exists and that there are to this day forms which show intermediate and progressive stages of development from this form up to the more highly complex varieties which are now scattered all the world over, and the evidence is undeniable that there must have been some plan behind it all.

The gelatinous substance to which Mr. Kemp refers is, I suggest, excreted to keep the skin from drying up and to prevent any decaying action by the skin which would require internal nourishment to keep it in normal condition.

All animals which hibernate are really in a state of suspended animation and anything which they can do for themselves to prevent their reserves of energy being used up prematurely must be advantageous to them. Hence their catabolism (or breaking down) must be kept down to a minimum.

Fish in this torpid state and encased in their clay coffins have been brought to England and on being immersed in warm water have come to life again.

When the waters return, the fish emerge from their holes in a very poor condition and have to be extremely busy hunting for their food in order to lay in another store of fat before the long dry season comes round once again, and this brings out an important point that sleep or rest is essential for all animals so that the time spent in hibernation restores their vital energy and tides them over a period of unfavourable surroundings.

I do not think the barbels could absorb sufficient moisture from the ground for the following reason.

Water contains about three per cent of air and this three per cent of air is by no means all oxygen, though oxygen is more soluble in water than nitrogen. Atmospheric air contains about one fifth oxygen; so though more than one fifth of the three per cent would be oxygen, the whole amount of oxygen available would only be about two per cent of the quantity of water to be found on the moist earth, and this would not appear to be sufficient to support life.

If one of these mud holes were carefully examined, I think an air passage would be found connecting with the surface.

I have been told that these fish exist in the khors of the Nuba Mountains Province and that these khors have no connection with the Nile now, but empty into the plain, for example the Abu Habl. If this is correct, an extremely interesting point is raised as to how these fish got there originally; there must have been in the world's past history some connection with the Nile.

E. G. Coryton.

EXAMPLES OF SHILLUK FOLK-LORE

BY Mrs. D. S. OYLER.

The natives call stories of this description « Lion Heads ». Formerly they thought that if a person told them in day light he would be taken by a lion, hence they are nearly always told after the sun goes down. It is impossible to translate them word for word, as much is told in the gestures, and in the face of the narrator. With the above exceptions the following examples are literal translations.

1. The cormorant was looking about in the river, while the crocodile was swimming with his hunger. The cormorant was looked upon as a possible source of food, but then the crocodile noticed his pointed bill, and long neck. It looked too much like a spear and its handle to please the wily crocodile, and so he said, « Friend, why is your beak so sharp? Will it hurt people like a spear? » The cormorant replied, « You have said it ». Then he offered to let the crocodile feel his sharp beak, which he did, and went away scared. As a result, the cormorants have always been able to swim peacefully on the river.

The crocodile then went to the Nile perch. He was afraid of the large mouth, and he said, « Friend, why are you so strong? Why is your mouth so large? Why are your shoulders so great? » It replied, « My mouth has no teeth. Put in your hand and see. » The crocodile did so, and said, « I was afraid of food ». He ate that perch, and since then the crocodiles have eaten the Nile perch.

2. A lion was under a tree eating his kill, and he was discovered by the hyena, and the hyena ran in after the food and he snatched the food, and the male lion ran after it, and the hyena was tired from running, and he covered himself with mud, and he gave battle to the lion. The hyena would bite, and his teeth would sink into the lion, but when the lion bit the hyena his teeth slipped from the mud. And the lion died, and his mate came to

give battle, and she suffered a like fate, and all the lions feared. But the rabbit came and said, «Let us take your case to the judge». «And who will judge?» «The king». But the lion said, «My case is not ready». And they did not finish the case so the rabbit returned to his country.

3. The orial, one of the animals, was fishing for snails, and he was seen by the hyena. The hyena gave chase, and the orial ran away. The hyena returned to find the snails, but they gave him trouble by hiding from him. On the morrow the same thing occurred, and the rabbit saw the hyena, and he said, «What do you seek?». «I seek the orial». «How does he trouble you?». «He is hunting snails». «I will help you». And on the morrow they laid in wait for the orial, and when he had the snails the hyena gave chase. The rabbit hid in the edge of the grass, and got the snails. The hyena returned from chasing the orial, and he said, «Rabbit, give me my snails». «Why should I give them to you? Were they taken by you formerly?» The rabbit replied, «Each one takes his own».

4. The rabbit was feeding a Nile perch. Six times it had fed the fish (hoping to eat it when fat). The lion chanced by that way one day, and saw the fish that it was there, and he pierced it with a fish spear, and he took it, and he cooked it, and he ate it. And he was satisfied with it, and he lay down. The rabbit came, and he found the fish that it was absent. And he said to the heron, «Inform me, who took the fish?». The heron laughed, and the rabbit promised to give him something for the information. And he promised that if the heron recovered a portion of the fish a share of it would go to him. And the heron said, «The lion took your fish». The rabbit went, and he found the lion lying down on the ground, and he feigned to be ill. And the rabbit said, «What do you have?» (Or, you were taken by what?) «I have a cold». «No witch-doctor has been near you?». «None». The rabbit told the women of the house to prepare a great jar of very hot, soup-like gruel. The food was finished and brought by the women, and it was set down in the room, and the rabbit ordered the women to leave. He said, «Lion, open your throat». And the lion opened his throat and the rabbit poured down all the hot soup, and the lion turned on his back, and he beat the air convulsively with his feet, and he died. And

the rabbit went out, and he closed the entrance to the enclosure (or zariba) with dura stalks, and he said, «Women, let no one enter the enclosure». And he took the fish spear of the lion, the one with which he had speared the fish, and he went away saying, «I am going to dig medicine. Let no one enter.»

The evening advanced, and the wife of the lion said to her child, «Should you not go in to see your father?». And the child found her father that he was dead, and the women wept, and the men. The sons of the lion came running saying, «Why?». And they said, «Our father has been killed by the rabbit». And they said, «Remain silent. We will kill some one in our father's place. We will kill the rabbit.» And they went to seek the rabbit, and they found the rabbit eating honey, and he said, «What do you seek?». «We seek you, rabbit». And the rabbit kept one ear fastened down to his head, and one eye closed, as though he only had one eye. And the rabbit said, «Beware, do not kill of another house. Now sit down in the shade of the tree. And see I have only one eye, and my ear is misplaced. Eat of my honey and return.» And he said, «The rabbits are of three different lines (of ancestors), *Kwa Dok*, *Kwa Dong*, and *Kwa Wu Ni Kwaic*. Was the one who killed your father one eyed?» «No». «Beware. Return not again.» And they went, and their father's place was lost. No one died for him.

5. The hyena found the land lizard, and the hyena asked the land lizard saying, «Are you fat?». And he replied, «I am all oil». «Where do you sleep?», said the hyena. «I sleep here on the earth». «Do you know the jagged lightning?», asked the hyena. «I do not know it». The hyena said, «I am going». After he left the rabbit came and said, «Land lizard, you were talking about what to the hyena?». «The hyena asked me if I was fat». «Were you not asked by the hyena because he wants to eat you?» Now at night you climb up in the tree, but leave your clothes on the ground. The hyena came back at night in the rain, hurrying, yet moving cautiously so as not to disturb the lizard. The hyena leaped upon the clothes of the lizard, and devoured them. The hyena cursed the lizard and said, «What ruined it?» (He could not understand why the lizard was not fat). The lizard said, «I am up here in the tree». «Who put you up there?» «Was it not the rabbit who told me to get up here?» The hyena began to curse the

rabbit, and said, «Where is he that I may kill him?». The rabbit who had been hiding, in the grass, and listening said, «Here I am». The hyena gave chase, and the rabbit ran away. They had a very exciting chase until they came to the house of the porcupine, and the rabbit ran into it. The hyena called to the blue heron, «Go get the cham». (The cham is an iron bar used for digging. The name for it is the same as the verb for eating.) The heron flew away to the house of the hyena, and said to the women folk, «The hyena sent me to eat». They cooked food and set it before the heron, and after it had eaten it returned to the hyena saying, «I have eaten». Impatiently the hyena said, «It was not the food I meant a little while ago. It was the cham. Go get the cham.» The heron returned to the house of the hyena, and said, «I have returned. Bring food». He ate and returned to the hyena, saying, «I have eaten». The hyena in wrath said, «Sit down here. Remain here at the door lest the rabbit come out. I am going, but remain at the door itself.»

The hyena left, and the rabbit eyed the door (put his head out), and he said, «The hyena will dig». And the heron cursed the rabbit, and said, «Your ears have been drawn out long by the sun». And the rabbit laughed heartily, and said, «You cursed me, and cursed the hyena with a very bad curse». In turn the rabbit cursed the heron and said, «Your neck is so long it shakes like grass in the current». And the heron laughed, and the rabbit ran out. The hyena came and said, «This is what I meant, this is the cham, the thing to dig in the earth. Is the rabbit here?» «He is here». «He came to the door just now, and I talked to him». The hyena said, «Sit down over there». And the hyena dug to the end of the hole, and the rabbit was not there. He said, «The rabbit is absent. Shall I not eat you?». He said, «Do not eat me thus, but toss me up in the air, and I will turn into fat, and fall into your mouth». The hyena tossed it up, and held it upward with his eyes closed. The heron spit into the mouth of the hyena, and then flew away.

6. A boy named Ajok was not able to speak, although he could hear. A lion came to the village, and said, «I am looking for Ajok». He was told that Ajok could not speak, but he insisted, and said he would make Ajok speak. Ajok was brought, but he answered nothing to the greeting of the

lion. The lion went and killed the ox of Ajok. The people said, «Why did you kill the ox of Ajok?» «I said that I would open the mouth of Ajok». And the lion left. It was told Ajok that his ox was killed, and the people said they would go to kill the lion, but Ajok refused. He said, «No, I will go alone». And he said to his mouth, «My two dogs, and my oxen three I will take». He went, and he arrived at the house of the lion, and the king of the lions said, «The cow in the rear give to me». And the messengers came saying, «We were sent by the king to bring the ox». And he said, «Let the king come himself». And the king came saying, «Give me the ox». He refused, but finally he said, «Take it». And the king took the ox, and he speared the king of the lions so that he died. The people, the followers of the lion king ran, such as were lions ran away, but the servants who were people remained, and served Ajok. The cattle of the lions which were lions in disguise, ran away, but the cattle that were cows remained, and were taken by Ajok. And the gourds with milk in them that were lions ran away, but the gourds of the people remained, and were taken by Ajok (*i. e.* Part of the servants, cattle and gourds belonging to the king of the lions, were actually what they seemed to be, but part of them were lions in disguise).

Ajok went to the domain of another lion king, and the king said, «Bring me an ox». But Ajok said, «Bring it yourself». And the lion took an ox, and Ajok speared him as he had the other lion king, and took over his subjects in the same way. He took also all the property that was of men, and he had many slaves. He took all his property, and went, and built a village near his old home. And a time of hunger came, and his sisters came to his place to gather plants to eat. He recognised them, but he seemed strange to them. He gave them milk, and told them to throw away the grass which they had gathered, and he gave them kaffir corn to fill their gourds. They went home and said to their mother, «Mother, we found a man who looks like Ajok». But the mother said, «Ajok was eaten by the lions». And she was in mourning. She would not anoint herself with oil, and she would not wear clothes, and her hair was permitted to grow. They said, «You go on the morrow». And he gave them milk, and he gave them kaffir corn. She said, «You are my son». And in grief she said, «I will certainly kill myself». And she ran toward the river, and he ran after her, saying, «I am Ajok». And she returned, and he had her head shaved, and

had her anointed with oil, and gave her fine clothes, and gave her a house, and gave her four servants to prepare her food.

7. A great grass fire was raging, and a snake was caught in such a way it could not escape. A man passed by, and he said, «Snake, come to me, and I will save you». The snake coiled about his neck, and he carried it to a safe place, and he said, «Sit upon the earth. We have arrived.» (We have arrived at our destination.) And the snake said, «I refuse. I will not sit upon the ground. Why do you throw me off?» The man attempted to uncoil the snake, and put it on the ground, but it opened its mouth, and it threatened to bite him, and the man feared. And they went, and they met the rabbit, and the rabbit said to the man, «Wherefore?». And the man said, «I am walking with the snake». And he said to the snake, «Wherefore?». And the snake said, «The man saved me from the fire. I was about to be burned. What do you say?» And the rabbit refused, saying, «This judgment is too difficult for me». And he went, saying, «Take the case to another». And they found the king frog, and the frog said to the man, «Wherefore?». And he replied, «I am walking with the snake». And he said, «Snake, wherefore?». And the snake replied, «I was saved by him». «Eh, you were saved by him, but what do you say now?» And the snake said, «Why am I forced to walk my own walk?». And he called upon the frog to hear the case, and the frog said, «In a case the participants are separate. Come off, snake. Move over farther.» And the snake moved off by himself. The king frog said to the chief after him, «Son of the chief, hear the case». (He commissioned his head chief to try the case.) And the chief said, «Man, state your case». And the man said, «Master, I found the snake. He was about to be burned by the fire, and I told him to run to me, and he coiled himself about my neck. I ran with him to a safe place, and I told him to go to the ground, and he refused to leave my neck. And when I laid hold on him he opened his mouth, and wanted to bite me, and his mouth is large, and his teeth are great.» And the frog said, «Man, is that your case? Snake, what do you have to say?» And the snake said, «Why was I taken? Why was I not left to die?» The frog said, «Snake, I condemn you. Has not man saved people from long ago? If there was no man, and you walked on your feet, you would have been

burned». The snake said, «Is that your talk? We will not see each other again. When I meet you, I will eat you, because you spoke against me. When I see you in the grass I will leap on you.» And the frog said, «Very well. When you take me in the grass I will cry, '*Aw, aw*', and the man will come, and spear you». And the frog cleared the man.

8. The rabbit moulded a person of mud, and put it on a calf skin, and put it in their house, and he went to his mother and said, «Give the traveller food». And his mother cooked the food, and put it in the house. And the rabbit drove every one out, saying, «Do not look at the traveller eating». And when the people were out, the food was eaten by the rabbit. And this took place daily, but one day meat was cooked with the food, and the rabbit was absent, and his mother put the food before the person and his mother said, «Why does the person remain in one place?». And she touched the figure, and it broke, and she was surprised, and said, «The rabbit deceives people». And she threw out the figure. The rabbit came and said, «Where is the traveller?». She said, «There was no traveller, but mud. You deceive people. You will be taken by hunger, and eat nothing.» The rabbit said, «A stranger will be killed by you». (Because she accused her son of wrong doing, he accused her of her lack of hospitality in refusing to feed a stranger.)

9. Formerly the wind-fish was a land animal, and it was going to the pool for water, for all the animals drank from a great lake. And all the animals that were in the wilderness were racing to the water, and all the animals passed the wind-fish. As they passed they laughed at him because he was so slow. And the ostrich came last, and he said, «Wind-fish, why are you left behind by the people?». And the wind-fish said, «The people are too much for me». The ostrich put the wind-fish under its arm, and ran swiftly, and it passed all the people (the animals), and it came to the lake first, and the ostrich said, «Wind-fish, drink». And the wind-fish said, «You drink first». And the ostrich drank, and after it had finished the wind-fish began to drink, and it drank, and it continued to drink, and it took up all the water in the great pool, so that it was badly swollen, and all the people came, and they lacked water. And the rabbit said

to the elephant, « Let us crown the wind-fish that he may become king ». And when he was crowned he said to the elephant, « Elephant, who told you to crown me? » « The rabbit ». The wind-fish then said, « You, elephant, come here. You are king. Why do you not give the people water? » The elephant said, « You are great ». Then the wind-fish went to the bank of the pool, and it vomited upon the earth, and the pool was filled, and all the people drank. And the wind-fish said, « Ostrich, I am going into the water, for I am accustomed to be passed by the people ». And it became a river animal.

L. Oyler.

THE STORY OF KIR

AND THE WHITE SPEAR

BY MAJOR C. H. STIGAND.

N. B. — Kir was the ancestor of the Garjak and Garjok Nuers.

A certain Dinka called Rueng living near Lake No on the Bahr el Ghazal married a wife and she gave birth to a son. At this time a pumpkin plant was growing over the hut and this plant bore a pumpkin on the roof.

One night the child, the son of Rueng, in the house cried and when he cried a child also cried from above, from the roof. The woman told her husband, « Something cried like a child on the roof at night », Rueng said, « All right, I will sleep in the house to-night ».

There was a full moon that night and Rueng slept in the hut and during the night his child cried and when he cried a child also cried from the top of the roof.

Rueng went out and found that the crying came from the pumpkin on the roof. Next day he gathered all the Dinka together and told them of this. They then took down the pumpkin from the roof and split it open and found a child inside and the child had a spear in his hand.

The child was brought up with Rueng's son and he was called Kir. After ten years Kir quarrelled with Rueng's son and struck him and killed him. Rueng wanted to kill Kir, but the brother of Rueng's wife warned Kir and told him to run away.

Kir ran away and came to the Nuers of Bul, a very poor person with nothing but his spear. He grew up amongst Shieng Bul and then they gave him a girl to wife and she gave birth to Jok and Niang. Kir then went to the Lēk and they gave him a girl to wife and she gave birth to Kungok Jak. Kir then went to the Gaweir and they gave him a girl to wife and she gave birth to Matiang [1].

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[1] This account makes these Nuer divisions, Bul, Lēk and Gaweir, much older than the Garjak and Garjok.

The Dinka brother of his foster-mother, who was called Ajing, when he saw that Kir had become a grown man with children, went to join him, Kir took Ajing and put him to live with his son Kungok Jak and Kunjok Jak founded the tribe of Garjak Nuers and Ajing founded one of their clans which is now called Shieng Reng.

Kir told Metiang to stop with Kungok Jak whilst he told Jok and Nyang to stop together in another place and they founded the Garjok Nuers.

Then Kir said, « You Metiang keep the spear on condition that when the Jekaing [1] go to war with another tribe you take this spear and go with them. But if my sons fight between themselves you are to take this spear and place it between them so that they may leave off fighting. If you see the spear is dirty you must take out a big fat ox, bring it to Nyang and let him slay it and then clean the spear. »

The spear was with Bañgăng Koryom of Shieng Thiang of the Garjaks until recently but Bañgăng is now dead. When he died the Garjok said : — « This spear is for all of us and not only for you Garjaks ».

The spear was thus brought into the Garjok country and the keeper of it is Kwĭth son of Bañgăng and he lives with Shieng Loin of the Jekaing.

In the rains the spear stops at Tôpŏt where there is a house for it and in the dry weather Kwĭth takes it to the summer camp at Wĭbel. No one may enter the house in which the spear is kept save Kwĭth or, if he is absent, his mother.

A woman without child may open the door and look in at the spear and she will then give birth [2].

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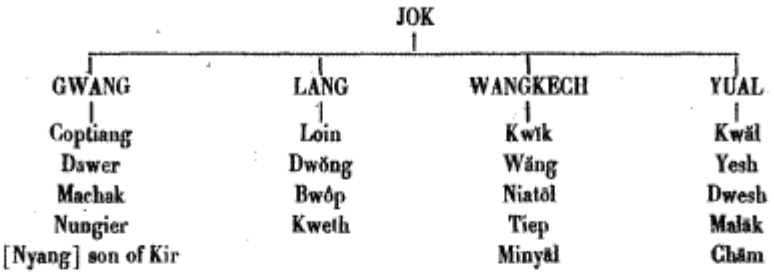
[1] The Jekaing are a division of the Garjok. Garjok is evidently meant here but the Jekaing now look on the spear as more especially belonging to them. They sing : — *Lăm tăng Jekaing diăl* = Invoke the haft, (*e. g.* spear) of all the Jekaing.

[2] This spear has a number of names, amongst others it is called : — *Deng ; Mut Kĭr* = the spear of Kir; *Mut Kwē* = the white, or Shining, spear; and *Wé*.

Sons of Kir. — Kir had four sons as follows :

1. *Jok*, ancestor of all the Garjok, both Jekaing and Gargwang, except Shieng *Nyang* of Gargwang, whose ancestor was *Nyang*.
2. *Kungok Jak*, ancestor of about three fifths of the Garjaks, viz. all but the descendants of *Matiang* and the descendants of the Dinka *Ajing* who founded Shieng *Reng*.
3. *Matiang*, ancestor of the Garjak Shieng *Tiang*.
4. *Nyang*, ancestor of the Gargwang Shieng *Nyang*.

The descendants of Jok who form the present clans of the Garjok (= children of Jok) are as follows :



MIGRATION OF GARJAK AND GARJOK NUERS.

N. B. — At the end of the story of Kir his descendants were living on the banks of the Bahr el Ghazal near Lake No.

About 300 years ago[1] the Garjak and the Garjok were living on the Bahr el Ghazal River, their original home being near Lake No.

At that time a part of them, taking the spear, left their homes and migrated. They first came to Jebel Liri where they fought the people of the hills, then they came to the Shilluk country and fought the Shilluks and came down the Nile until they were opposite Melut.

It was a very low Nile that year and they waded across the Nile and fought the Dinkas on the east bank[2]. Then they took their booty and trekked south-east and came to their present homes on the Sobat and in the Garjak country.

Those of them who stopped in their homes on the Bahr el Ghazal River, their descendants are still living there at Nur Garjok on the north bank and Tiāk on the south bank[3].

C. H. Stigand.

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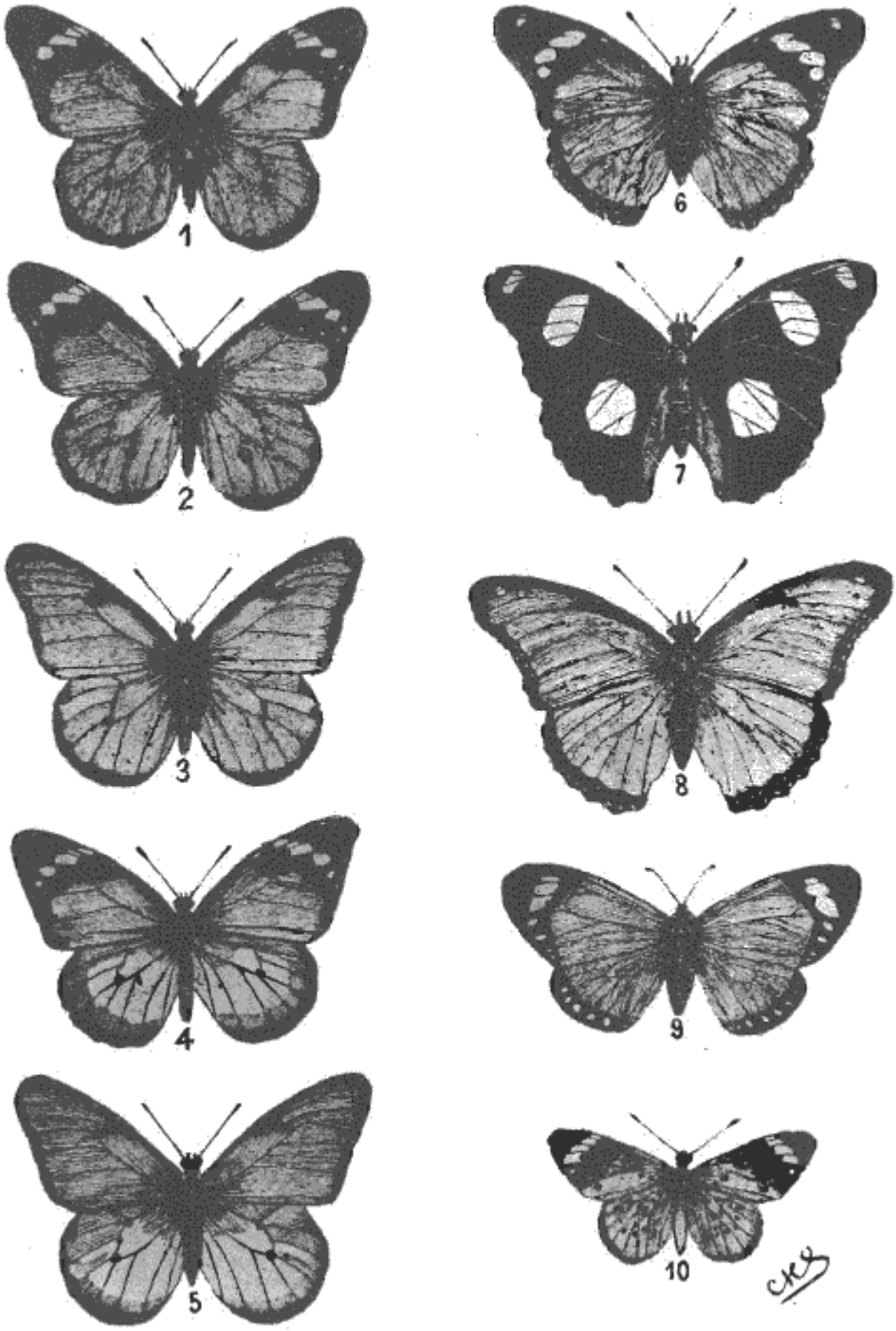
[1] Time roughly calculated from the generations said to have elapsed.

[2] In their own account of this trek they, of course, state that they administered crushing defeats to each one of these peoples.

[3] Those Jekaing who stopped in the Nuba Mountain province near Lake No are called Jekaing Shieng = the Jekaing of the village, or home. Those who migrated and are now on the Sobat are called Jekaing Dŏr = the Jekaing of the bush.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MIMICS
OF THE GENUS LIMNAS

BY C. H. S.

The Genus Limnas, common in Africa, is flattered by having a number of imitators. The butterflies of this group are very tough in texture. It is extremely difficult to kill them by pinching the thorax, whereas most other butterflies, except the charaxes and a few others, are easily killed in this way. When dead, they are not readily attacked by mites and other insects and the male possesses glands on the hind wings which are supposed to be obnoxious to smell or taste.

These characteristics taken together have led to the supposition that they are inedible to the usual enemies of butterflies, a conclusion which is supported by their slow and lazy flight and the fact that they are mimicked by other genera of moths and butterflies. These imitators supposedly enjoy the same immunity from attack.

The illustrations given show the common species Limnas chrysippus; some of its varieties and some of its mimics. The colours of all these are black, white and a bright rufous-brown.

Fig. 1 gives the female of Limnas chrysippus and Fig. 2 the male. It will be noticed that they are exactly alike except that the male has an additional spot on each hind wing. These spots — the lowest and largest of the group of spots — mark the position of the glands mentioned above.

Fig. 3 shows a variety of 1 in which the reddy brown of the wing centre extends almost to the tips of the forewings and obliterates the black and white markings of the former.

Fig. 4 is an albino variety of 1 in which the greater part of the hind wings is white. Fig 5 is a similar albino variety of 3.

Fig. 6 shows a female mimic of the genus Hypolimnas. Although considerable differences of structure can be noticed when comparing it side

by side with Limnas, *e. g.* the body is thicker, the palpi much longer and the cells open, it is practically indistinguishable from 1 when on the wing. It is only after considerable experience that it can be recognised by its stronger flight. It is the females alone of this genus which mimic. Fig. 7 shows the male of 6, which follows the general coloration and markings of its family, thus clearly showing that it is this which is the mimic and Limnas which is mimicked.

Fig. 8 shows another female, a variety of 6 which departs from the type in the same way as 3 departs from 1.

Fig. 9 is a moth of the Genus Aletis which resembles 1 closely in coloration, it has the same reddy brown colour, almost the same black borders, very similar white markings and is, like 1, spotted about the head.

Finally fig. 10, one of the Acræinæ, shows almost identical markings to 1, except that it has more black spots on the brown surface. This is probably also a protected family and the reason for the close resemblance is not apparent.

C. H. S.

REVIEW.

A list of the birds of the Anglo-Egyptian Sudan, based on the collections of Mr. A. L. Butler, Mr. A. Chapman and Capt. H. Leynes, R.N., *and Major Cuthbert Christy,* R. A. M. C. (T. F.). Part I, *Corvidæ-Fringillidæ;* Part II, *Alaudidæ-Hirundinidæ,* by W. L. Sclater, M. B. O. U., and C. Mackworth-Praed, M. B. O. U. (*The Ibis,* 1918, p. 416-476, and p. 602-721).

It is with great pleasure that we note that the authors have undertaken the compilation of a complete list of the birds of the Anglo-Egyptian Sudan. Of late years, due largely to the collection of birds prepared by Mr. A. L. Butler and exhibited in the Sudan Government Museum, considerable interest in the birds of the country has been taken by both residents and visitors, and we have frequently been asked whether any comprehensive work on the subject has been published. In the series of papers under review are given the localities where the various species have been taken, together with a map, a bibliography consisting of a list of all the more important papers published since the year 1828, and also descriptions of a number of new species and subspecies.

It is to be hoped that when the last instalment has appeared the parts will be collected and published in book form.

H. H. K.

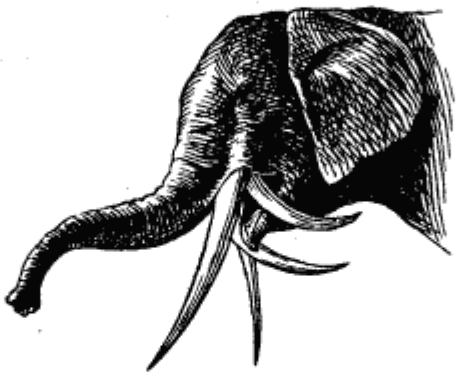
NOTES.

BAHR EL GHAZAL PROVINCE.

An Elephant with four tusks.

فى يوم ١٨ مايو سنة ١٩١٧ انا خرجت للصيد فى بلد الشيخ اكو منجره من مركز يمبيو فى بلد وكيله ماربو قريبا من الحدود ما بين مركزى طمبره ويمبيو

فقابلت مراحًا من الافيال وتبعته لابحث عن فيل فاستمريت فى السير وراءهم الى ان وقفوا فى بركة صغيرة من الماء وصار كل منهم يشرب ويرش نفسه بالطين وانا كنت واقفا وراء شجره على بعد خمسة عشره يارده منهم وبينما انا اراقبهم اذ وقع نظرى على فيل له اربعة اسنان ورسمهم بالتقريب كما هو موضع فى الورقة طيه



كانت السنه الكبرى الشمال احسنهم وكانت متجهه فى الاتجاه العادى اما الصغرى فكانت متجهة الى الوراء وهى بارزة من تحت الكبرى ومستديرة ولا يزيد سمكها عن ٢ ١/٢ بوصه

والسنه اليمنى الكبرى كانت متجهه الى الوراء والصغرى بارزة من تحتها ومتجهه للاتجاه الاعتيادى وهى صغيرة مثل شبيهتها الاخرى

لم كنت اعلم من قبل ان ذلك الفيل ذو قيمه عظمى ولذا لم اجهد نفسى لان اضربه وطالما حدثنى الامباشى والعسكرى الذين كانوا حرسا معى لان اضربه ولكن رفضت ذلك وهذا هو كل ما حصل فى ذلك اليوم

عبد الفراج على

يمبيو فى ١٩١٩/٢/١٧

«On the 18th May 1917 I went out shooting in the District of Sheikh Ako Mangara in the Markaz of Yambio in the village of Wakila Marbo on the borders between Tembura and Yambio Districts.

«I met a herd of elephant which I followed, searching for a good one to shoot. I kept following them until they stopped near a pool of water where they began to drink and throw mud on themselves. I was in hiding behind a tree about 15 yards from them looking at them, when I saw an elephant with four tusks as roughly represented in the attached sketch.

«The left tusk was the bigger and had the usual direction, but the direction of the small tusk was downwards and came out from under the big one. It was round, and its thickness was about 2 1/2 inches.

«The direction of the right tusk was downwards and the small tusk came out from under it in the usual direction, but it was small like the other one.

«I did not know that this elephant was so valuable and for this reason I did not try to shoot it, although the Ombashi and the soldier who were with me told me to shoot it, but I refused. This is all the story.»

Abd el-Farag Ali. M. A.

Yambio, February 17, 1919.

Kordofan Province.

Totemism in the Ḥomr Tribe.

Although it is a common thing for pagan tribes to retain totems after conversion to Islam, there is no need to go back to the pre-Islamic period of Arab history to account for traces of totemism observed among the Ḥomr. Any such are almost certainly due to contact with neighbouring totemistic pagans, — Dinkas, Nuba and others.

This origin is definitely assigned by the Arabs concerned to the second totem here described; and while my informants repudiated the suggestion that the first totem was borrowed, it seems very probable that it did, in fact, come to them through intermarriage with the Dinkas, many of whom have this identical totem. It would be interesting to know whether the Dinkas tell the same or a similar story of how they came by it.

I. — The Origin of the Awlad Jifîr and Jerâfîn Subsections of the Awlad Surur Section of the Ḥomr-Felaita.

The Arabs of these subsections claim that the red snake known as Um Kuru-Kuru is their ancestor, that they never harm it and that its bite is to them innocuous, though deadly poisonous to others. In this last point they differ from some of the Dinkas, who say that Um Kuru-Kuru will not bite them at all, even though they should inadvertantly tread on it. I am not altogether clear, too, whether these Dinkas claim the snake as an ancestor or as the form which their spirits take on after death.

To account for the phenomenon of an ancestral snake begetting human beings, the Awlad Jifîr and Jerâfîn tell the following story, which I give as nearly as possible as I heard it from one of them.

An ancestor of the Awlad Surur was one day driving his cattle to the wadi to graze when he came upon a black snake and a red snake fighting, and the black snake gaining the victory. He decided to save the red snake, so threw a barbed Nyam-Nyam spear at the black; but it chanced to pierce the red one. Then he killed the black snake with a stick, while the red snake ran into its hole, dragging with it the spear stuck in its body.

Now the spear was a borrowed one and its owner demanded its return, refusing first a big spear and then two sheep as compensation. So the Sururi told him to be patient and he would try to recover it.

He went to the hole which the snake had entered and began to dig; and as he dug, the hole became wider and wider and led him far underground till at last he was able to walk upright along a passage. This passage brought him to a cave, where he found men, women and children living. He saw his spear leaning against the wall of the cave and a wounded man lying on the ground having his wound dressed with lard. Saying «Peace be upon you!», he sat down.

Then the wounded man knew him and whispered to his father, who said to the Arab, «What do you seek in this place?». So the Arab told his story of the snakes and said that he had come seeking the lost spear. Then the father said, «This is my son, whom you wounded, and that, which you killed, was my slave. What further do you seek?» When the Arab heard that speech he was afraid and held his peace. Then the father said, «Fear not. My son has told me what befell and that but for you the slave had killed him. You shall have your spear and a gift besides.»

The Arab remaining silent, an old woman who sat by him and was the aunt of the wounded man spoke to him and said, «Do not take their property, for it will not remain with you, but ask for one of their girls as a wife». The Arab did so and was given one of the girls in marriage.

Now her mother said to him, «When you approach her house, always call out and speak and never enter unexpected». So the Arab took the girl away and built her a house and gave her a female slave; and always when he approached the house he announced his coming. Thus she remained with him and bore him a son and a daughter.

But it happened one day that he forgot the warning of his mother-in-law and, entering his wife's house unannounced, he found it empty. Looking about, he saw a snake curled round the rim of a burma of water, for the coolness of it. Startled at his entry, it glided out of the door. Then he remembered his mistake and knew that this was his wife and ran after her with her children, hoping that at the sight of them she would again become a woman; but it did not avail and she disappeared into the grass and never returned.

These children of hers are the ancestors of the Awlad Jifîr and the Jerâfîn.

II. — Totem of the Descendants of Shedda Jebrîl, of the Awlad Abu Ḥilal Subsection of the Jubârât Section of the Ḥomr-Felaita.

Nine generations, it is said, separate Shedda Jebrîl from his present descendants. He lived and died in Darfur, at Kuru, where the Ḥomr were then settled, and he married a woman of the Takárma section of the Gur'ân tribe.

The story goes that an ancestor of the Takárma, lost in the wadi as a child, was suckled by a giraffe and grew up to manhood among the herd. One day this herd was hunted by some of the Takárma. When the horsemen drew near to the giraffe they were astonished to see one of them made to kneel by a youth, who mounted it and led the herd and outstripped the pursuers; and this happened as often as the hunters came within galloping distance.

Thwarted in this way, the party decided on a stratagem, so they went to a clump of big trees where the giraffe were wont to shelter at noon and, high up a tall tree, they hid a woman with a pot of lard. Then they went away to a long distance.

When the giraffe came to their customary shade, the woman poured the lard from the pot all over the quarters of one of them. Now a smearing with lard, combined with a hot sun, takes all the strength out of the muscles, so

when the hunters renewed the chase in the afternoon they easily overtook this giraffe.

Seeing its plight, the foster-son remained with it. He told his story to the hunting-party and warned them for the future neither to kill giraffe nor eat its flesh nor take any share in its price, saying that disregard of this injunction would bring punishment both in this world and the world to come.

Since that day the Takárma section of the Gur'ân have regarded the giraffe as their brother and have refrained from killing it or eating its flesh or sharing in its price; and Shedda Jebrfl, taking this totem from his wife, passed it on to his descendants in the Ḥomr.

One of these, I was told, was rash enough to eat some giraffe meat last year. He suffered extreme pains and was only saved from death by the offering of numerous sacrifices.

R. Davies.

Red Sea Province.

Dangers of pearl diving.

The risk run by pearl divers from sharks and other habitants of tropical seas are generally much exaggerated in popular accounts so possibly a plain statement may be of interest. During my twelve years at Dongonab there has been no serious accident among my divers, the only attack upon a human being having been made upon a little girl who was bathing and who lost her hand.

Sharks. — Although a complete list of the species of shark captured in Dongonab Bay would contain a fair number of names, only two species are common and they are but rarely seen. These are the common blunt nosed Carcharias and the Hammer head. Should one be seen of course no one goes into the water but it will be attacked by fish spears from the canoes. As these are merely unbarbed pieces of bar iron, the fish may be pierced again and again with little harm resulting. The last shark I saw was harried by a crowd of canoes until he was driven ashore. As is well known sharks are accompanied by sucker fish and pilot fish, the former clinging to the body of the shark by the curious sucker which is placed on the top of the head and are of very much the same colour as the shark, the latter swimming actively in the shark's vicinity and are coloured a deep bright blue, the colour of the sea,

probably rendering them invisible from above when in deep water. I was interested to find that the splashing of the men and struggles of the shark had not divided the members of this strange community but that one of the Sueker fish and the pilot fish had followed their great partner even through the shallows and on to the rocks.

The men remarked «now we have killed the husband we shall have to look out for the wife, which will certainly be about». Sure enough I saw her a few days later but did not succeed in becoming better acquainted.

This is almost the only occasion upon which my men have lost an hour or two from their work. The smaller sharks, it is curious to note, are known here as in British seas as dog-fish «*Kelb el Bahr*». They are regarded as objects best avoided or to be attacked and killed. It was probably one of these dog-fish that made the attack on the girl referred to above.

Rays. — Sting Rays or «devil fish» are commoner than sharks, but though the barbed spines at the base of the whip like tail are large enough to go right through a man's foot or calf and the wound so made would probably be fatally poisoned, I have never heard of an accident. These animals are protected by warning coloration most species being black, or black and white, one is yellow brown with bright blue spots. They are therefore recognised as soon as seen and left immune from attack even by human foes unless armed with a 10 foot spear.

The means provided by «Nature» for the safety of the fish thus ensure that of his neighbours. In spite of size and formidable armament these beasts are perfectly harmless, living on shell fish, including pearl oysters.

Teleosts. — The large mackerels known to us as Baracontas are said to be dangerous. One of my men has a deformed little toe which he says was nearly taken off by one of these fish.

Another fish that may do damage is the strange *Hemignathus*, a smallish fish of the herring tribe which has a habit of springing blindly from the water in shoals and is probably a relic of the first stage in the evolution of the flying fish. The lower jaw is prolonged into a spike and this may be driven into the flesh of a man wading on the reefs or even sitting in a canoe. The wound would almost certainly be poisoned.

Besides the spiny bladder fish (*Tetraodon*) seen in all Cairo shops there are many others dangerous to handle, but these can hardly be classed as within our subject as they never attack but avoid notice by being inconspicuously coloured.

Invertebrates. — Most popular accounts give the «giant clam» (*Tridacua*) as a horrifying danger. This large bivalve shellfish is firmly fixed to the bottom by a curiously elastic gelatinous byssus or anchoring rope. The shells open an inch or two but should anything touch the flesh of the animal between them they close instantly and with great force. Should then a diver put his hand between one of these creature's shells he would be held as in a vice until he drowned unless others came to his assistance.

Truly a hair-raising possibility to think of, but I believe as imaginary a danger as Victor Hugo's «*Poulpe*». The flesh between the shells is brilliantly, often beautifully, coloured and so conspicuous that no man could be caught in this way but by incredible carelessness.

A similar fate did however befall certain mice in my store. Seeing pearl oysters gaping shells they started to nibble the flesh with the result that the oyster closed its shells upon their necks, Professor Herdman records the same thing of a small bird in Ceylon.

Starfish. — Are extraordinarily rare in the Red Sea, the only fairly common species attempting to make up for this by its extraordinary structure. The disc is broad and carries twelve short rays; the upper surface is covered with spines which may be an inch long. The beast is an inconspicuous dull green colour, the spines brownish, and might be touched accidentally. The divers regard it as extremely poisonous.

The Sea Urchin. — *Diadema* consists of a hard globular body covered with very slender spines up to 6 inches long. The lightest contact causes these to pierce the skin and they are too fragile to be withdrawn. The whole body and spines are jet black and conspicuous enough in the open, but the beast has a habit of sheltering under the edges of stones and so is frequently a cause or discomfort to divers. The worst damage I have seen amounted to a hand or foot too sore for use for a day or two.

There is thus very little danger from animate foes in the Red Sea and no material for sensationalism. In my experience the divers suffer more from snakes and scorpions while ashore than from all the denizens of the sea. No one even looks round for sharks before diving in and children are allowed in and about the sea whenever and wherever they please. Things may be different in other seas, or even in other parts of the Red Sea, but I have never come across any reliable proof of it, and write only of the place I know.

Cyril Crossland.

SUDAN NOTES AND RECORDS

Volume II. N° 4.

DISCOVERY OF THE TOMBS OF THE EGYPTIAN XXV^TH DYNASTY AT EL-KURRUW IN DONGOLA PROVINCE

BY PROF. G. A. REISNER.

In a previous article [1], the list of the earliest kings of Ethiopia was set forth somewhat as follows :

1. Kashta.....	Governor of Ethiopia.....	to about 750 B. C.
	King of Kush and Thebes...	about 750-740 B. C.
2. Piankhy I..	King of Kush and Thebes...	— 740-720 B. C.
	King of Kush and Egypt...	— 720-710 B. C.
3. Shabaka....	— — ...	— 710-700 B. C.
4. Shabataka..	— — ...	— 700-688 B. C.
5. Tirhaqa....	— — ...	— 688-663 B. C.
6. Tanutaman .	— — ...	— 663-655 B. C.
	King of Kush.....	— 655-653 B. C.
7. Piankhy II..	—	— 653-633 B. C.
8. Atlanersa...	—	— 633-623 B. C.

This list includes the XXV^th Egyptian dynasty. In 1917, the Harvard-Boston Expedition found the pyramid of Tirhaqa at Nuri on the « southern » outskirts of Napata. Last February, at el-Kurruw on the « northern » outskirts of Napata, we succeeded in identifying four very small pyramids as

[1] *Sudan Notes and Records*, II, p. 44.

the burial places of Piankhy, Shabaka, Shabataka, and Tanutaman [1]. Thus the tombs of the four kings of Ethiopia and Egypt who were known as the XXV^th^ Egyptian dynasty and that of their great ancestor, Piankhy, the conqueror of Egypt, have now been found within an eight-mile radius of Gebel Barkal, the religious center of Napata. It has been assumed that Shabaka and Shabataka lived in Egypt and were buried there; but it is now clear that the home and the chief seat of this strong family was at el-Kurruw. Here for generations before Piankhy the family was consolidating its power over Ethiopia; and from this remote spot, they conquered and ruled an empire whose fame spread through the whole of the ancient world. From el-Kurruw couriers running in the name of the king of Ethiopia went forth to the capitals of Western Asia. At Nineveh, in the royal archives of Assyria, an impression on clay of the royal seal of Shabaka was found years ago, which was probably part of a letter from Shabaka to Sargon, king of Assyria. Possibly the counterpart of that letter was brought to Napata and may even now lie buried in one of the ruined buildings of that capital.

Previous to the excavation of the royal cemetery at el-Kurruw, I admitted two kings named Piankhy while some historians placed two Kashta's in the list and as many as four Piankhy's. This confusion has been cleared up at el-Kurruw; and I now admit only one Kashta and one Piankhy. Some progress has also been made towards the history of the obscure period between the last of the Egyptian viceroys and the reign of Kashta. The chief advance has been the revelation of the Libyan origin of the first royal family of Ethiopia. As these conclusions rest mainly on archæological deductions, it may be of interest to explain the series of facts which lead up to them.

The royal cemetery at el-Kurruw presents the main features of that at Nuri, the tombs of the stairway-pyramid type, the orientation towards the «west» (the left bank), and the separation of the tombs of the queens

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[1] Nuri Pyr. XX, formerly identified by me as the tomb of Tanutaman on the basis of an inscribed fragment of a quartzite vase, must now be assigned to Atlanersa. The vase from which the fragment came may have been taken over by Atlanersa from the property of Tanutaman.

from those of the kings. But there are great differences. The cemetery at Nuri was founded by Tirhaqa, whose tomb stands on the most desirable, or primary, building site, the highest part of the «eastern» arm of a horseshoe-shaped ridge. The tombs of the succeeding kings follow the top of the ridge around to the end of the «western» arm where the tomb of Nastasan, the last king, takes the lowest and worst site of all. The queens were buried on each side of the pyramid of Tirhaqa and behind it. At el-Kurruw, however, the main field bearing the tombs of the four kings is on a sandstone plateau between two wadys while the fields «north» and «south» of these two wadys contain the tombs of the queens. At Nuri the primary site was occupied by the pyramid of King Tirhaqa, the founder of the cemetery, but at el-Kurruw the primary, or founder's, site was taken by a small private grave of the tumulus-type. Furthermore, the next fifteen places in point of desirability were filled with a succession of fifteen tombs increasing in size and excellence of construction, and then came the four royal tombs in the worst four sites in the cemetery, the last burials in a cemetery which had been in continuous use for some generations before the death of Piankhy.

The main field at el-Kurruw, lying between the two wadys, rises gently towards the desert (the «east») for about 280 meters where it is terminated by two cross drainage channels. The extreme «eastern» end rises in a small hillock, the highest point in the field, the primary building site. This hillock bears on its very summit a circular tumulus (Ku tum. 1) of small rough rubble-work. The burial pit, covered by the tumulus, was a rectangular shaft (3 m. 20 cent. × 1 m. 70 cent., and 2 m. 50 cent. deep) orientated «north-south», with a step on the «western» side and a burial chamber on the «eastern» side at the bottom. The chamber had been blocked up with a crude-brick wall. The burial, judging from Ku tum. 2, lay on the right side with the knees slightly bent, the head «north» and the face «west». Around this tumulus, but lower down the slope of the hillock, there were three other similar graves. Still lower down towards the «west», stood an improved tumulus grave (Ku XIX) like the higher graves in all essentials but with a casing of well-built grey sandstone around the rubble tumulus. Certain accessory parts, a crude-brick chapel on the «western» side and a horseshoe-shaped enclosing wall of grey

sandstone, were here observable for the first time. On a side spur of the plateau, directly «south» of Ku XIX, stood a second cased-tumulus (Ku tum. 6) exactly like Ku XIX.

Beginning in front of Ku XIX, a row of eight stone mastabas ran right across the plateau from the «South» Wady to the «North» Wady, Ku XIV, XIII, XI, X, IX, XXIII, VIII, and VII. In front of the space between VIII and VII, there was a ninth mastaba, Ku XXI, and in front of the «southern» part of VIII, there was a tenth mastaba, Ku XX, a very small one clearly subsidiary to VIII. The earliest of these mastabas, Ku XIV and XIII, were built one to the «south» and one to the «north» of the entrance to the horseshoe-shaped enclosure of the cased-tumulus, Ku XIX, so as to leave that entrance free towards the «west». The enclosing wall of Ku XIII was actually built against the enclosing wall of Ku XIX. It was thus clear that the mastabas Ku XIV and XIII were later in date than the cased-tumulus Ku XIX but built while the offerings to the dead in XIX were still kept up. Another proof of the intimate connection between these two mastabas and the older tumuli was the fact that Ku XIV appeared to have been planned as a cased tumulus and later converted into a mastaba. The rubble tumulus could be clearly discerned inside the masonry of the mastaba. With this exception, all the mastabas as far as Ku IX were of the same type and had burial pits just like those of the tumuli with the same orientation. The superstructure was a practically square block of masonry with nearly vertical sides rising to a height of 1 m. 20 cent. or more, but the form of the top could not be ascertained. On the «western» side was a masonry chapel and around the whole a rectangular enclosing wall about 0 m. 80 cent. high with a rounded top. By position, the next two mastabas after IX were Ku XXIII and XXI, and these two, although like the earlier mastabas in all else, had a simple open pit for the burial place (orientated «north-south», as before). The last mastabas were clearly VIII, VII and XX in this order. The two larger mastabas, VIII and VII, were similar in plan to the older mastabas and had open pits like Ku XXIII and XXI, but differed in two particulars. In the first place, the mastabas were built of smaller stones while their chapels and enclosing walls had been rebuilt in heavy masonry after the type of that used in the tomb of Shabataka. In the second place, the burial pits were here orientated «east-west», the

orientation exhibited by all the royal tombs of Ethiopia from this period onwards.

The next tombs in point of type, and no doubt in time also, were those of the royal ladies of the reign of Piankhy dated by inscriptions and objects found in them. They were not in the main field but one in the «northern» field (Ku XXII) and five in the «southern» field (Ku 51-55). The superstructures of these six tombs had been entirely destroyed, but the burial places were like those of VIII and VII. I mention these tombs here because the pits were roofed each with a corbel-vault of masonry, and I infer that all the open pits (Ku XXIII, XXI, VIII and VII) were roofed in the same manner.

In the main field, the next tomb after the mastabas was that of Piankhy. It was situated about ten metres in front of the row of mastabas, lower down the slope to the «west» and before the only space left in the row, which was between Ku X and XI. Piankhy's tomb, Ku XVII, was of the same type as the pit-tombs with corbel-vault but had one new feature necessitated by the great increase in size and depth. The pit was 5 m. 50 cent. × 3 m. 50 cent. and 5 m. 50 cent. deep while the largest of the earlier pits (Ku VIII) was 3 m. 50 cent. × 2 m. 50 cent. and 3 metres deep. The corbel was of much larger blocks of stone and finely constructed. In the case of the earlier pit-tombs, the corbel must have been built *after* the burial because the pit had no entrance. In the Piankhy tomb, the depth of the pit and the size of the stones in the corbel made this procedure dangerous to the safety of the mummy and the offerings. I have little doubt that accidents had already happened in closing some of the earlier tombs. To obviate this danger, a small rude stairway was cut in the rock to the «west» and opened into the «western» end of the pit through a rock-cut doorway. Thus for purely practical reasons, the pit-tomb was converted into a stairway pit-tomb; and this, the tomb of Piankhy, was the first of the long series of royal stairway-tombs constructed in Ethiopia. It could not be determined from the remains whether the superstructure had been a mastaba like the previous tombs or a pyramid like the succeeding royal tombs. In any case the square superstructure was directly over the corbel-roofed pit while the abutting chapel on the «western» side could only have been built *after the burial*, on the debris

which filled the stairway. The foundation of the chapel was thus a very weak feature and must have settled after the first heavy rain causing a complete or a partial collapse of the walls.

The tomb of Shabaka was placed about 20 metres to the «south» of the Piankhy tomb, and in front of mastaba Ku XIV, the least important and probably the oldest in the row. This tomb presented a distinct advance over the Piankhy tomb but was clearly based on that tomb. The burial chamber was no longer a pit-chamber but a room of similar form hollowed in the solid rock with a rock-cut roof of the form of the corbel-vault of Piankhy. The stairway, much better cut and deeper, descended as before to the door of the chamber. But the weakness caused by founding the chapel on the filling of the stairway was avoided by a device which was to affect the whole future course of the development of the royal Ethiopian tomb. The stairway was not left open its whole length up to the doorway of the burial chamber, but the last six steps (about 4 m. 25 cent.) descended through a sloping rock-cut tunnel *without* door-jambs at the entrance. The chapel was built over this tunnel and had thus a secure rock foundation. The square superstructure, here clearly a pyramid, was still built directly over the burial chamber and just covered the length of the chamber.

The site on the «north» of Piankhy's tomb which corresponded in position to the pyramid of Shabaka, was directly in front of the more recent and more important mastabas of the row. Whether because of his respect for these mastabas or because of the bad state of the rock, Shabataka selected a place behind mastaba Ku VIII. The fact that the reconstruction of Ku VIII appears to have been carried out by the masons of Shabataka indicates that VIII was the tomb of some person held in high reverence by Shabataka. The tomb of Shabataka shows a further advance in that the stairway stops at the beginning of the tunnel which has been converted into a corridor with horizontal roof and flat floor. At the top, the stairway descends from the «south» for 9 steps before turning at right angles towards the «east», but this was to avoid encroaching on the «eastern» side of the enclosure of VIII. A more striking feature is that the burial chamber is again corbel-roofed like the tomb of Piankhy but much larger (over 8 metres × over 5 metres and nearly 6 metres deep). This reversion

appears to have been due to the discovery of fissures in the bed of rock which made a rock-cut roof unsafe.

Next in date came the pyramid Nuri I, the tomb of Tirhaqa, the successor of Shabataka. Tirhaqa was a son of Piankhy (Nitocris Stela) by a princess named Aqlaqa whose parentage is unknown. Although she was a member of the royal family (king's sister or king's cousin), she may have belonged to a branch with estates at Nuri, — a circumstance which might have determined Tirhaqa's choice of site. The motives of the removal to Nuri may have sprung from a mixture of personal vanity and family enmities, but one thing is quite clear, namely, that there was no room in the main field at el-Kurruw for a pyramid of the size of Nuri I (about 52 metres square). This ostentatious tomb had an elaborate system of chambers and corridors under-ground which make it appear at first sight quite different from the older royal tombs, but a closer examination reveals the fact that the *nucleus plan* presents only a slight advance over the tomb of Shabataka. The stairway and the large rectangular burial chamber (here divided into three aisles by rock pillars) are there, but the horizontal corridor-tunnel has been converted into a small anteroom with rabbetted door-jambs. Moreover, the two queens' tombs, Nuri XXXV (Aqlaqa?) and XXXVI (Itakhibaskan) which were certainly constructed in Tirhaqa's lifetime, present this two-room nucleus plan devoid of all complications. The characteristic feature of this early two-room stairway tomb is the presence of three or four steps leading down from the anteroom to the burial chamber.

Tanutaman, who followed Tirhaqa, returned to el-Kurruw. In that now crowded field, he selected a site close against the «southern» side of the pyramid of his father, Shabaka; and by building a smaller pyramid managed to squeeze it in between the Shabaka pyramid and the «southern» wady. There was room for so small a pyramid between the tombs of Piankhy and Shabaka, but probably some reluctance was still felt at building in front of the important old mastabas, Ku XI and XIII. The tomb of Tirhaqa was a replica of the nucleus plan of Tirhaqa as carried out in the oldest two tombs of queens at Nuri, stairway, small anteroom, three steps and large rectangular burial chamber. Previous to the time of Tanutaman, as proved by the shawwabtis, two other tombs of this type had been constructed for the queens Khenensaiuwt and Nenpery in the «northern» field

at el-Kurruw. And from now on this two-roomed type of stairway pyramid became traditional for the tombs of queens. It was also used later, as the irreducible minimum, for kings who received for one reason or other a poorer form of burial.

The successor of Tanutaman, Atlanersa (Nuri XX), had a very small tomb of this two-room type, but the anteroom and the burial chamber were on the same level. The slight change in form was in the case of his tomb due no doubt to poverty, but it was copied in the queens' tombs constructed after his death.

After Atlanersa, came Senkamanseken (Nuri III), who was a rich and powerful king and a great builder in the temples at Gebel Barkal. His love of ostentation was manifest in all the features of his tomb. He was the only king except Tirhaqa to have stone shawwabtis made for himself, and he was the only one without exception who used the double uræus on his shawwabtis. His pyramid was much the largest of all those before his time except that of Tirhaqa, and the size he set, about 28 metres square, was followed by all the greater kings among his successors until an accident to the pyramid of Astabarqaman reduced the traditional size to about 26 m. 60 cent. It is not surprising therefore that he introduced the first enlargement of the old two-room plan underground. Unlike Tirhaqa who enlarged the burial chamber by the use of pillars, Senkamanseken inserted a third room between the anteroom and the burial chamber. This room was extremely wide in proportion to its length along the axis of the tomb, and with the burial chamber itself now presented a ground plan similar to that of the offering chapel of the rock-cut Egyptian tomb. The walls were used to inscribe the so-called «Negative Confession» from *The Book of the Dead*. In the effort to keep the pyramid over the burial chamber, the pyramid was set further back towards the «east» leaving a space between the front of the chapel and the «eastern» end of the stairway. This three-room type of stairway-pyramid was adopted by the successors of Senkamanseken and became traditional for kings of longer reign. With slight modifications, it continued in use as late as the first century B. C. (in the Barkal pyramids), and I anticipate that it is the type which will be found in the later pyramids at Meroë.

Thus the logical development of the traditional three-room stairway-

pyramid can be traced from the old tumulus grave at el-Kurruw through the cased-tumulus, the early mastaba, the pit-tomb mastaba, the stairway pit-tomb of Piankhy, the one-room stairway-pyramid of Shabaka and Shabataka, and the two-room stairway-pyramid of Tirhaqa, Tanutaman, and Atlanersa, to the tomb of Senkamanseken, the first of the traditional type. The change in orientation from «north-south» to «east-west» which took place in the last of the pit-tomb mastabas was probably due to Egyptian influence. The other changes were based on an increasing ostentation due to increasing power and were determined almost entirely by practical considerations.

When the circumstances outlined above are taken into consideration together with the series of objects found in the tombs, it is clear that el-Kurruw was a family cemetery founded by the man buried in Ku tum. 1 on the top of the hillock, and that Piankhy, Shabaka, Shabataka, and Tanutaman were the last of the men of that family to be buried on the site. I call these sixteen earlier tombs therefore «the tombs of the ancestors of Piankhy».

Not a single name of any of these ancestors was recovered during the excavations. Nevertheless, it is possible to determine with reasonable certainty the name of one of the ancestors, the racial origin of the family, the character of their power, and the manner in which the family fortunes developed.

First of all it is to be noted that no other graves contemporary with the tumuli or the mastabas were found among the tombs of the queens in the «northern» or in the «southern» fields nor indeed within a radius of five miles. Thus the separation of the tombs of the females from those of the males appears to date from the time of Piankhy. Female bones were actually found in one of the mastabas (XI) although probably intrusive from X. It must be concluded that the tombs of the ancestors include the women as well as the men. Thus the 16 graves represent less than 16 generations. On archæological grounds I divide the group with considerable confidence into 6 generations, of which the last was represented by Mastabas VIII, VII and XX. No. VIII as the most important and the earliest of the group, I select as the chief of that generation and assign No. VII to his principal wife. Now the predecessor of Piankhy as king of Ethiopia was Kashta, the father of Piankhy. It is thus reasonably certain that Ku VIII is

the tomb of Kashta and that Ku VII is the tomb of his chief wife Pebathma, the mother of Queen Peksater, and perhaps of Piankhy himself and of his brother Shabaka.

Allowing about 30 years for each generation, the 6 generations of ancestors would cover a period of about 180 years. If only five generations be reckoned, the minimum possibility, then the period would be about 150 years. Taking 740 B. C. as the beginning of the reign of Piankhy, these two periods would give a date between 920 B. C. and 890 B. C. for the youth of the man buried in Ku tum. 1, — a date falling within the reigns of Sheshanq I, Osorkon I and Taklat I, the earliest of the Libyan kings of Egypt.

The other chief facts are as follows :

1° The tumuli, Ku 1, 5, 2, and XIX, contained flint and chalcedony arrow-heads of well-known Libyan types, see Oric Bates, *The Eastern Libyans*, pp. 145-146.

2° The tumuli contained a great abundance of gold. In spite of grievous plundering, we found in Ku tum. 1 gold beads of a weight of 38 English sovereigns which had been *dropped by the thieves*. There was also much gold in two of the others including a solid gold figure 3 cent. high and a large gold nugget inscribed on one side with a magical text in Egyptian hieroglyphics.

3° The fragments of objects found in the tumuli and the mastabas included pieces of very fine alabaster vases and decorated faience vessels of *Egyptian* manufacture.

4° One of the tombs of the queens of Piankhy contained a stela in the name of a Queen Tabiry, who is there called «the foremost great queen of His Majesty, Piankhy, *endowed with life*», «the daughter of (the Princess) Alara, the daughter of (King) Kashta», and «the great chieftaness of the Temehuw (the southern Libyans)».

5° During the Tenth and Eleventh Centuries B. C., there was an extensive movement of the Libyan tribes into the Nile Valley. They secured large properties in the Delta and Middle Egypt and established a number of local dynasties nominally tributary to the king of Egypt. The chief of one

of these Libyan tribes, a certain Buyuwawa, settled at Heracleopolis and about 945 B. C. the head of the family founded by Buyuwawa, a chief named Sheshanq, obtained the throne of the Two Lands. This was Sheshanq I the founder of the XXIInd dynasty. For about 200 years, the Libyans continued to rule over Egypt, but towards the last with declining power. The kingdom had split up into nearly independent little principalities, when Kashta came into the control of Thebes and secured the appointment of his daughter, Amenirdis I, to be heir and successor of Shepenwepet I, the daughter of Osorkon III, and holding the office of high-priestess of Amon of Karnak. Piankhy, the son of Kashta, conquered Lower Egypt, and the throne passed to the ruling family of Ethiopia.

From these facts I reconstruct the history of the family buried at el-Kurruw. While the northern Libyans were entering the Delta, or soon thereafter, the southern Libyans, the Temehuw, pushed into the Nile Valley in Ethiopia coming no doubt over the old road of the oases. This road had been in use from the time of the Old Empire or before and is still a practical road used within the last few years by Arab raiders attacking Dongola Province. During the reign of Sheshanq I, or possibly a little later, a Libyan chief, the man buried in Ku tum. 1, established himself on an estate at el-Kurruw near Napata. He must have enjoyed control of considerable resources as his grave showed an abundance both of gold and of the merchandise of Egypt. The chief resources of Ethiopia, naturally poor in agricultural and grazing lands, consisted then as always of the income arising out of the control of the gold mines and the trade routes between Egypt and the south. In all probability this first chief of the el-Kurruw family seized at once on the powers of the old Egyptian viceroy and became like all the other Libyan chiefs in the Nile Valley nominally tributary to the Libyan king of Egypt. If not, the assumption of vice-regal powers was not delayed beyond the third generation. The development of the tombs shows that the greatest increase in power came in the first three generations and then in the sixth and succeeding generations. From the third to the fifth generations no great advance was made in the mastabas. The family seem to have obtained the domination of Ethiopia and to be pausing before the advance into Egypt. In the chapel of Ku IX, a single stone with part of a relief from

the «eastern» end of the «southern» wall was found. This fragment of relief showed the upper part of the face and head of a man wearing a war-helmet of un-Egyptian form. This helmet, manifestly of metal, has a loop at the top of the front (not a uræus), a ribbon hanging down behind, and a projection on the top perhaps for carrying a plume. Whatever title the chiefs of these mastabas may have taken, it is probable that this helmet was part of the insignia of their position as *de facto* rulers of Ethiopia.

It was without doubt Kashta (Ku VIII?) who began the advance into Egypt. In the eyes of the next generation he was the great man of the family. He bore the title of «king» and in one inscription found on Elephantine he was given a throne name as well (probably *Wesermaatra*). His supremacy was established as far as Thebes where he obtained the adoption of his daughter, Amenirdis I, by the daughter of Osorkon III (Saise), the high-priestess of Amon-Ra. It is still unclear whether Kashta secured his hold on Upper Egypt by force of arms or by alliance and intermarriage with the ruling family. The chronology of the Egyptian XXIInd and XXIIIrd dynasties is still in some confusion, and it is now quite clear that the time ordinarily allowed to these two Libyan dynasties is too long. Kashta was contemporary with Osorkon III or Taklat III (or with both). At Napata we have found only one name connected with the XXIIIrd dynasty and that is the General Pashedenbast, the son of Sheshanq IV (son of Pamai). Pashedenbast was a contemporary of Pedibast I the predecessor of Osorkon III and belonged therefore to the generation before Kashta. A fragment of an alabaster jar with his name was found at Nuri and creates a suspicion that he became related by marriage to the Libyan family of el-Kurruw. It is thus quite possible that the Ethiopian claim to Thebes may have been based on this or some similar intermarriage.

Whatever may have been the character of Kashta's acquisition of Upper Egypt, his son Piankhy took Lower Egypt by conquest; and the inheritance of the family of the Libyan chief Buyuwawa passed to the family descended from the Libyan chief of el-Kurruw. Ethiopia, long since thoroughly Egyptianized, became the dominant province of Egypt, and Napata became the capital of the kings of Ethiopia and Egypt.

The Egyptian XXVth or Ethiopian, dynasty was reported by Manetho, according to Africanus and Eusebius, as consisting of Shabaka, his son

Shabataka, and Tirhaqa. Modern writers of the history of Egypt have included Tanutaman, also a son of Shabaka but not Piankhy or Kashta. In fact so little was really known about these two kings that some authors made out two Kashta's and some as many as four Piankhy's. Two Piankhy's seemed certain as there were two throne names attached to the name Piankhy, (I) Piankhy — Wesermaatra and (II) Piankhy — Seneferra. Until our excavations at el-Kurruw had been completed, I myself included these two in my list, placing Piankhy I (— Wesermaatra) as the conqueror of Egypt between Kashta and Shabaka, and Piankhy II (— Seneferra) between Tanutaman and Atlanersa. Since the work at el-Kurruw, it is practically certain that all the royal tombs of Ethiopia have now been excavated. The series of tomb types, shawwabtis, and other objects are continuous and uninterrupted in their development; and there is no known possibility of finding another royal tomb between that of Kashta and the unbroken succession which begins at Nuri with the tomb of Senkamanseken. Under these circumstances, even a second Piankhy seems to be excluded. I have therefore come to the conclusion that Piankhy had two throne names in spite of the uniformity of the previous Egyptian practice. This conclusion is supported by two facts, one known for a long time, and the other recently discovered at el-Kurruw. On a stone found at Athribis, the throne-name of Shabaka, *Neferkara*, occurs in alternation with another name, *Wuahibra*. In a necklace found in a horse grave (see below) at el-Kurruw, the throne-name of Shabataka, *Dedkara*, occurs in alternation with the name *Menkheperra*. In the latter case, it is well-nigh impossible to escape the conclusion that *Dedkara* and *Menkheperra* are both throne names of Shabataka. Thus all three kings appear to have had two throne names. It may be that one of these was the throne name for Egypt and the other that for Ethiopia, but it may have arisen from ignorance on Piankhy's part of the formal character of the Egyptian titulary. Kashta and Piankhy were still limited by the ideas of the provincial family from which they came, and Tirhaqa was the first who lived any length of time in Egypt as indeed he was the first to grasp the possibilities of ostentation opened by the resources of the family dominions. It is not surprising therefore that Kashta left only one record of his throne-name (*Maatra*, probably intended for *Wesermaatra*) and that Piankhy having used two different

throne-names gives his Horus-name now as *Seheteptauwief*, now as *Katauwief*, now as *Kanekht-khaemwase*, and once perhaps as *Hetepemnutef*. Proud and boastful as his Conquest Stela shows him to have been, he would have been quite capable of persisting in a violation of the tradition even if any of the learned scribes had ventured to point out to him his mistake; and it may well be doubted if there was ever an Egyptian scribe bold enough to point out such an error to a king like Piankhy.

Manetho gives Bochchoris (= Bekenrenef) as the only king of the XXIVth dynasty and adds that Bochchoris was taken prisoner and burned alive by Shabaka. Modern historians are inclined to include in the XXIVth dynasty a king Tefnekht who was overcome by Piankhy and other kings whom Manetho places in the XXVIth dynasty. It is generally agreed that the Manethonian XXVIth dynasty was the continuation of his XXIVth and that the XXVth or Ethiopian dynasty was contemporary with the XXIVth. Taking however the *de facto* domination of Egypt as a basis, the XXIVth dynasty had no existence. Kashta and Piankhy succeeded directly to the decaying power of the XXIIIrd, or second Libyan, dynasty. Their successors are admitted to have been the real rulers of Egypt down to the defeat of Tanutaman by the Assyrians and indeed until the rise to power of Psammetik I, the founder of the XXVIth dynasty. I would therefore include both Kashta and Piankhy in the Egyptian XXVth dynasty as follows :

1. Kashta	About	750-744 B. C.
2. Piankhy, son of Kashta	—	744-710 B. C.
3. Shabaka, son of Kashta	—	710-700 B. C.
4. Shabataka, son (?) of Shabaka	—	700-688 B. C.
5. Tirhaqa, son of Piankhy	—	688-663 B. C.
6. Tanutaman, son of Shabaka	—	663-655 B. C.

In Ethiopia, Tanutaman continued to reign for perhaps two or three years longer, and was succeeded by Atlanersa, probably a son of Tirhaqa. Then followed Senkamanseken, a son or brother of Atlanersa, and the rest of the kings of Ethiopia as given in my previous list.

At el-Kurruw, the tombs of fourteen royal ladies of the time of Piankhy and later were excavated. The names of five of these were identified by inscriptions and of one other with considerable confidence by inference. The names of two of these six were previously known as were the names

of two others who were probably buried at el-Kurruw but not identified. The chronological arrangement of the actual tombs with their burials was not difficult owing to the establishment of the series of tomb-types and shawwabti-types. There is little doubt as to when each queen was buried, but in most cases in the absence of inscriptions the relationship of the queen to the reigning king was obscure. A king buried all the royal ladies who died in his reign whether his mother, the wives of his predecessors, or his own wives. One is reduced to the weighing of probabilities. In view of this difficulty the following list, which includes the early tombs at Nuri, can only be regarded as provisional (the sign + denotes a name not found in the tomb in question):

TOMB.	NAME OF QUEEN.	DATE, BURIAL.	RELATIONSHIP.
1. Ku VII	+ (Pebathma?)	Piankhy	Queen of Kashta.
2. Ku XX		Piankhy	Related to Kashta.
3. Ku XXII	+ (That?)	Piankhy	Queen of Kashta(?).
4. Ku 55	+ (Kenensat?)	Piankhy	Queen of Piankhy.
5. Ku 54	+ (Peksater?)	Piankhy	Queen of Piankhy, daughter of Kashta.
6. Ku 53	Tabiry	Piankhy	Queen of Piankhy, granddaughter of Kashta.
7. Ku 52	Kashtaneferuwka	Shabaka	Queen of Piankhy, descendant of Kashta.
8. Ku 51		Shabaka	Queen of Piankhy(?).
9. Thebes (?)	+ Amenirdis I.	Shabaka	Queen of Piankhy and of Shabaka, daughter of Kashta.
10. Ku 62		Shabaka	Queen of Shabaka (mother?).
11. Ku 71		Shabaka	Queen of Shabaka.
12. Ku 72		Shabataka	Queen of Shabaka(?).
13. Nuri XXXV	+ (Aqlaqa?)	Tirhaqa	Queen of Piankhy, mother of Tirhaqa.
14. Ku IV	Khenensaiuwt	Tirhaqa	Queen of Shabaka(?), a king's daughter, born of That (see No. 3, above).
15. Ku III	Nenpery	Tirhaqa	Queen of Shabataka(?).
16. Nuri XXXVI	Itakhibaskau	Tirhaqa	Queen of Tirhaqa.

TOMB.	NAME OF QUEEN.	DATE, BURIAL.	RELATIONSHIP.
17. Nuri 4		Tanutaman	Harcem of Tirhaqa.
18. Nuri 10		Tanutaman	» » »
19. Nuri 7		Tanutaman	» » »
20. Ku VI	+ (Pek(?)ankhary?)	Tanutaman	Queen of Tanutaman.
21. Ku V	Qalhata	Tanutaman	Mother of Tanutaman (?).
22. Ku 61		Atlanersa	Queen of Tanutaman.
23. Nuri LX		Atlanersa	Related to Atlanersa.
24. Nuri LIII	Irtiuwruw	Atlanersa	Queen of Atlanersa.
25. Nuri 11		Senkamanseken	Hareem of.....?
26. Nuri 8		Senkamanseken	» » »
27. Nuri 1		Senkamanseken	» » »
28. Nuri 3		Senkamanseken	» » »
29. Nuri XXI	+ (Amandikehet?)	Senkamanseken	Queen of Tirhaqa, mother of Senkamanseken (?).
30. Nuri XLI		Senkamanseken	Queen of Senkamanseken.
31. Nuri XXII	+ (Amanmalenea?)	Anlaman	Queen of Senkamanseken, mother of Anlaman.

And then follow the queens buried at Nuri.

It is noteworthy that the tombs of the queens are generally placed in family groups. Thus the group Ku 51-55 appears to contain ladies descended from Kashta; the group Ku III-VI and possibly XXII, princesses of the blood royal from the family of Shabaka; and the group «north» of pyramid of Tirhaqa at Nuri, the queens descended from Amandikehet (?). So also the small tombs Nuri 1-12 all close together seem to be the graves of minor ladies of the hareem. The two adjacent tombs Ku 62 and 61 and the more distant pair, Ku 71 and 72, seem to have belonged in each case to two related women (mother and daughter?).

Of considerable interest but of less historical importance was the discovery of a cemetery of horse-graves, — the first which has ever been found in the Nile Valley. The site was on the «southern» bank of the «South» Wady, about 120 metres in front of the tombs of the Piankhy queens (Ku 51-55). The graves were in four rows which ran parallel to the wady, — the row nearest the wady with four graves, the second and third rows with eight each, and the fourth again with four. The graves in each row were side by side about equally spaced and orientated «north-south», at right angles

to the line of the row. The second row was dated by an inscribed amulet to Shabaka and the third by a large number of similar amulets to Shabataka. Thus the first row is certainly to be dated to Piankhy and the fourth to Tanutaman. All the graves had been plundered, most of them grievously so. But enough was preserved to show that each horse was buried upright with his head towards the «south». Four nearly complete skeletons (excepting the head) were found and the horse was clearly of a short, rather small breed, not unlike the Arab. As far as is known, horses in that period were always driven in a chariot, never ridden. The trappings found in the graves include a plume carrier of gilded silver from the top of the bridle, a silver head-band, four strings of very large bronze balls, and a large number of strings of beads and amulets. All these things were found in the head end of the grave, having fallen down from the head or neck of the horse. The types of necklaces and of amulets varied from row to row, but the horses of each king appear to have had a nearly identical outfit. The string of twelve very heavy bronze balls strung at intervals of a few centimeters on a thick twisted cord was found only in the Shabataka graves. It appears to have been fastened to the bridle and to have hung down the front of the neck passing between the forelegs like a martingale. Several of the necklaces were recovered in the original order. One of these consisted of alternate blue and yellow faience cartouches, some of which bore one throne-name of Shabataka (*Dedkara*) and some the other throne-name (*Menkheperra*). In these deep narrow graves there was no room for a chariot; nor was any trace of a chariot found in any of the royal tombs.

The regular spacing of the graves of the horses, the division into rows, the chronological order of the rows, and the uniformity of the graves in each row, justify the conclusion that these horses were sacrificed at the funerals of the kings in order that the spirits of the horses might accompany the spirits of the kings into the other world. The basic idea was wide-spread, but this particular expression of it has not heretofore been observed in the Nile Valley. The sacrifice of men and animals at funerals is now well-established as an ancient Ethiopian custom by our excavations at Kerma. But that was a thousand years before the beginning of the Ethiopian monarchy, and in all the royal tombs of Napata, no survival of the custom was detected. Thus to find animals sacrificed in this manner

at el-Kurruw and above all, horses, comes as a surprise. Piankhy undoubtedly instituted the custom, and that is particularly fitting, for Piankhy was a great connoisseur of horses. In his account of the siege of the Egyptian city of Eshmun, he tells of his anger at finding the horses of Namlat, king of Eshmun, starved thin as a result of the siege, an anger that came near costing Namlat his life. He pictures horses on the famous *Conquest Stela* and even on the walls of the great wall which he built in the Temple of Amon at Gebel Barkal. It is, I consider, an interesting revelation of the character of Piankhy, his pride and his mental boldness, that to please himself he should have instituted a new funeral custom unsanctioned by previous usage.

At el-Kurruw the tombs have all been left open and may be visited, — the tombs of the ancestors of Piankhy, of Piankhy himself, of Shabaka, Shabataka, and Tanutaman, and of the queens and the horses. Two of the tombs, those of Tanutaman and of Queen Qalhata, have the paintings on the walls fresh and well-preserved. These are, I believe, the only painted tombs south of Halfa, and the Governor, Col. H. W. Jackson Pasha, has taken effective measures for their preservation by placing stout iron doors with locks in the entrances. The keys and permission to visit the tombs may be obtained by applying to him at Merawe.

G. A. Reisner.

DINKA ANIMAL STORIES

(BOR DIALECT)

BY REV. ARCHIBALD SHAW.

Story-telling is common among the Dinkas as with other African tribes. The stories are generally told by an adult to the children as they sit round the fireside in the evenings, and certain individuals may be famed as specially good *raconteurs*. They are not so well known by the riverine Dinkas, for whom the mosquito leaves little domestic peace in the evening.

It has not been possible to trace the authorship of any of those given here. Animal stories, unlike native songs, are not generally improvised or in vogue for a limited time only. When questioned as to authorship a Dinka will say that they have been handed down from his ancestors, and the same story, or parts of it, may be current in other sections of the widely spread Dinka tribe. Some of them will be recognised as being in use with variations over a still wider area, and by tribes speaking different languages. Among the Bor Dinkas the same general sequence, and often an almost exact verbal form, is retained.

The stories given here have been collected from different individuals, and their form has been put to the test of approval by reading classes in Malek Boys' School.

The English translation aims only at being as literal as possible.

AKOKOL (1-6) FAIRY STORIES.

I

KUOI KENE ADUKUAU (*a*).

THE HYENA AND THE FOX.

Ake cat etok, goki a lo mai ne ree. Ku noŋ aiŋ man,

They went about together, and used to go fishing. And the hyena had

ku cin awan nan. Goki rec be. Na yi
a mother, but the fox was without a mother. They brought in fish. When

ci rec be, ke nan e añu ṭal rec. Go awan ke
they had brought in fish, the hyena's mother boiled them. Now the fox

kol nim yetok. Ye loi ñinḍia acin kol tok.
took them all for himself. He does this every day never missing a day.

Qon k'añu ṫweñ, go yepiou ta, Ye baño loi?
Once the hyena became impatient, and pondered in his heart, What shall

Ku c'awan lo kor ne rec. Go jam, Ye an b'arik cir
I do? And the fox had gone to seek fish. Then he said, I will decorate a

ci tik. Go loi, dom arik, ku tau luoñ ekou.
lizard like a woman. This he did, seizing a lizard, and putting an anklet

Ku tau ne got lil cien. Qon ṭe ke awan
round its back. And he put it at the back inside the hut. In the evening

ke buo, bi ku jiam e jamden eḍia. Go añu jam, Ye madañ,
the fox came, and said his usual say. Then the hyena said, Wait,

duone jam aret, tiùdu ato got. Go jam, Ye ne an
do not talk much, your wife is in the hut. Then (the fox) said, What was

yeño luel eḍia? Ku mim. Go añu jam, Ye rec abi twak.
my usual say? And he fell silent. Then the hyena said, The fish are going

Na ci rec twak ke añu ler rec got,
to be boiled. When the fish were boiled, the hyena took them into the hut,

yin ke tiñ d'awan, ku ler ku cuet ke. Ku ber ben
to give them to the fox's wife, and took them and ate them. And he came

ber kok bi kor, bi ku jiam, Ye tik aken gwa ḳwaṭ.
again to get some more, coming and saying. The wife has not yet had

Go jam, Ye lare kok. Go ke lar, ku
enough. Then (the fox) said, Take some more. So he took them, and

ber ke lo cuet. Ku ye arik ja bi arik kat,
again went and ate them. And he kept touching the lizard that it might

b'awan luoṅ piṅ. Na re ke ṭiec aṅu,
run, that the fox might hear the anklet. After a time (the fox) asked the

Ye yeṅo loi qot? Go aṅu jam, Ye an muk
hyena, What are you doing in the hut? Then the hyena said, I am holding

mac ben piñ ṅem. Go gam. Na re ke aṅu lo biyi,
a torch that she may see. And he believed. After a time the hyena went

ku jiam, Ye an lo kor ne nin, lor qot. Go awan gam,
outside, and said, I am going to seek sleep, go into the hut. And the fox

Ye kapiaṭ. Go toṅke kwañ, ku co ke qot,
answered, Good. Then he picked up his spears, and pushed them

Ye tiṅe, gam toṅ. Go piñ lo diu.
into the hut (saying), Wife, take the spears. And there was silence.

Go ber jam, Ye gam toṅ. Go piñ lo diu. Go jam,
Then he said again, Take the spears. And there was silence. Then he

Ye ca lo eno? Go piñ lo diu. Go lo qot,
said, Where have you gone? And there was silence. Then he went

ler ku koñ mac, ku mer en qotic. Go
into the hut, went and lit a torch, and lighted up the hut with it. And

cien tiṅ yo. Go qok, ku yup arikic ne tim,
there was no wife found. Then he was angry, and struck the lizard with

ku jiam, Ye yeṅo ḍom aṅu a? Ku ler biyi,
a stick, and said, Why is the hyena deceiving me? And he went outside,

ye ler kor e miet, ke cin cam. Go ḍiau ku ket,
went to seek food, and there was nothing to eat. Then he wept and sang,

Ci kuoi a ḍom ke man, The hyena and his mother have deceived me,
Adiondien ci wai, My mince so tasty,
Cwacie ci wai-wai-wai! My soup so tasty, so tasty!

Go ñir ţiec, eke tek ḍoli, Ye yeṅo, Awan,
And some maidens asked, as they passed along the path, Why, Fox,

ye ḍiau? Go jam, Ye an ci ḍiau, kaya luel, Ya ñir
do you weep? Then he said, I am not weeping, I was saying, Maidens

lo wuti, luaṭka yuin de bildie.
going to the kraals, take with you the rope of my black and white cow.

II

KUOI KENE ADUKUAU (b).
THE HYENA AND THE FOX.

Ake noṅ qoken. Goki a lo biok netok.
They used to have cattle. Now they used to herd them together.

Ku tu weṅ de kuoi ne cia juec, ku tu weṅ d'awan cia li.
And the hyena's cow had much milk, and the fox's cow little milk.

Qon aci lo biok, go awan kuoi yok, Ye nem
Once when they had gone herding, the fox said to the hyena, Look after

qok, an buo. Ler ku we aḍuom. Na ci ye we,
the cattle, I am coming (back). He went and dug a hole. When he had

ke jal puol. Qon ke yok kuoi, Ye doṅa be,
dug it, he left it. Once (again) he said to the hyena, Stay at home,

ku an bi lo biok. Go qok lo biok, ku le ke bei.
and I will go and herd. Then he herded the cattle, and brought them

Qon ke kuoi ber lo qok, go doṅ be awan.
back. Once again the hyena went with the cattle, and the fox stayed at

Na ye ṅem kuoi ne ci qet,
home. When he saw that the hyena had arrived (at the pasture),

go tek ten, ler ku do weṅ de kuoi,
then he passed along at the side, went and turned the hyena's cow

ku ṭel ror temac, ler ku tem ror.
aside, and dragged it far into the forest, went and cut its throat.

Ku tau nom pe ke yet. Ku jol weṅ yaṅ,
And he put the head and neck aside. And then he skinned the cow,

ku tir riṅ ne tim ṉim. Ku jot nom,
and put the meat in strips on the trees. And he lifted the head,

ler ku tau aḍuomic, ku co tuṅ to biyi. Ku jol
went and put it into the hole, and made the horns be outside. And then

nuo, ku gom, ku jol ḍu be.
he filled in the earth, and rammed it, and then returned home.

Na re ke lo ḍu, bi ku yok kuoi, Ye qok eko?
After a time he returned, came and asked the hyena, Where are the

Go kuoi jam, Ye qok eki. Go jam, Ye
cattle? And the hyena said, The cattle are here. And he said, Good;

kapiaṭ; ku ñuc piñ ke kuoi. Na re ke jam, Ye ce!
and sat down with the hyena. After a time he said, Dear me!

ye weṅdu ko? Go kuoi jam, Ye kato. Go jam,
where is your cow? And the hyena said, It is there. And he said,

Ye kaliu, aken ṅem, yin ci weṅ co mar.
It is not, I have not seen it, You have caused your cow to get lost.

Go kuoi ro jol, ku le weṅ kor, ke ci yok.
Then the hyena got up, and went to seek the cow, and did not find it.

Go lo ḍu. Go jam, Ye yin kuc kor,
Then he returned. And (the fox) said, You do not know how to seek,

ye bar lo, bu lo kor. Ku yok, Ye tek ten, ku aṅ
come let us go, that we may seek it. And he said, You go yonder, and

bi tek ene. Na re ke lo ku kuoi, Ye kuoi,
I will go here. After a time he went and called the hyena, Hyena,

bar, weṅ aca yo, alie piñ. *Bar*
come, I have found the cow, it is being swallowed by the ground. Come

mitku, dai kat. Go kuoi ben ke riṅ, bi ku jiam,
let us pull it, run quickly. Then the hyena came running, came and said,

Ye dom tuṅ tok, ku an bi naṅ tuṅ tok. Ku jol jiam,
You take one horn, and I will have the other horn. And then he said,

Ye mitku. Goki mit. Ku jiam, Ye mit aret. Na re ke kuoi
Let us pull. And they pulled. And he said, Pull hard. After a time

mit nom be. Go ye, Ce! yin ci weṅ
the hyena pulled the head out. Then (the fox said), Dear me! you have

co tam, weṅ e tem piñ.
made the cow break in two, the cow has broken in two in the ground.

Ya baño loi? Ye kewen ca luel eke, Ya wecku.
What shall you do? This is why I said just now, Let us dig it out.

Go jam, U kabu mit. Jol loi emane. Yena
But you said, We will pull it out. You have done it now (?). Give me

nom ba lo cuet. Ku ler be, ku le ko ke
the head that I may go and eat it. And he took it home, and went and

kuoi yok, Ye wenduon e weṅ co lie piñ.
told the hyena's people, Your son has caused the cow to be swallowed

Duoka ber co buo be.
by the ground. Do not let him come home again.

III

KUOI KENE ADUKUAU (*c*).

THE HYENA AND THE FOX.

Goki keñ, goki laṅ yo. Go kuoi jam,
They travelled, and they found «lang» fruit. Then the hyena said,

Ye ciemku ne laṅe. *Go awan jam,* *Ye kacu cam,*
Let us eat of this «lang» fruit. But the fox said, We will not eat it,

ko dit aci e cam e laṅ ke ke keñ. *Ku mit*
grownups do not eat «lang» fruit when they are travelling. And he

yuiṭ be, *ku moi ṉial.* *Ku leki ḍol jielki.*
pulled out an arrow, and shot it into the air. And they went on along

Na re ke awan jam, *Ye kuoi, an ci yuiṭ ruoi tewen.*
the path. After a time the fox said, Hyena, I have forgotten the

Go ye, *Kapiaṭ, die ye.*
arrow in that place just now. And (the hyena said), Right, fetch it.

Go lo beṅ, *bi ku ciem e laṅ.* *Ku jol kuoi cuop*
Then he went, came and ate of the «lang» fruit. And then he followed

ḍol.
the hyena along the path.

Wen eke ber ṭiet yo. *Go kuoi jam,*
Again they once found some shell spoons. And the hyena said,

Ye kwañku ṭiet. *Go gam,* *Ye kapiaṭ.* *Goki ke kuañ*
Let us pick up the shells. And he agreed, Good. So they picked

Ku lom kene, *ku tau gokic.* *Ku loñki ḍol,*
them up. And he took one, and put it into his quiver. And they set

ku to kene n'ecin. *Na re ke yok kuoi,*
out on the path, and another one was in his hand. After a time he said

Ye yeṅo ye wo ṭiet kwañ ke wo keñ? *Ye pan*
to the hyena, Why do we pick up shells when we are travelling? At this

le wo ṭine *cene cuin bi be kene ṭiet?*
homestead to which we are travelling will not the porridge be served

Cuatukwe we. *Wen eke lo be.*
with shells? Let us throw them away. Then they went to the village.

Go cuin tau doṅ pan e keñ ke ṭin.
And porridge was put in the mortar at the homestead to which they

Go lo awan enoṅ ko ke bai, ku ñaṅ
travelled. Then the fox went to the people of the homestead, and left

kuoi luek, ler ku yok koc,
the hyena behind in the cattle hut, went and said to the people,

Ye nala ke we duoka cuin bi kene ṭiet. Ku le ḍu.
When it is ready do not serve the porridge with shells. And he

Na wen ci cuin twak, ke jot e.
went back. And when the porridge had boiled, it was carried in.

Go jam y'awan, Ye ce! yeṅo yoṅ koc wo? Ye ke cuin
Then said the fox, Dear me! why do people trouble us? They have

be ke cin ṭiet. Ye ticku goki da. Goki
served porridge without shells. Let us then feel in the quivers. And

ke tici. Go ke de kuoi yic cien ṭial; ku
they felt in them. And that of the hyena was without a shell; but

to kede. Go kuoi yok, Ye cop ṭialdu tewen.
his was there. Then he said to the hyena, Run after your shell at

Go kuoi lo di ṭialde. Go ñuaṅ
that place just now. And the hyena went to fetch his shell. Then he

lok be be ne cuin nom, ku tau ten, ku ciem
took off the porridge-skin in his absence, and put it aside, and ate

cuin. Na wen ci cuin cam, ke boṭ bia ṭi,
the porridge. Then when he had eaten the porridge, he left a small portion

ku liap ke liet. Ku ken nom ñuaṅ,
over, and mixed it with sand. And he placed the porridge-skin on it,

ku le tac. Wen ke kuoi buo, go jam, Ye cuin biadu eke,
and went and lay down. When the hyena came, he said, Here is your

cam. Go kuoi ye ciem cuin,
portion of the porridge, eat it. And as the hyena ate the porridge,

ke cuin ḍal e. Go jam, Ye cuine añonic liet, Awan.
it was too hard for him. And he said, This porridge has sand in it, Fox.

Ago rec. Go ben y'awan, ku bi ñuañ be,
And he refused it. Then came the fox, and took off the porridge-skin,

ku ciem. Ku jal kuoi ḍiac ke cok.
and ate it. And the hyena continued to go hungry.

IV

AKON KENE AWAN.

THE ELEPHANT AND THE FOX.

Qon ke awan lo kwañ e ṭou ke akon.
Once the fox went gathering up «heglik» fruit with the elephant.

Go ṭou lo bet, ku doṅ awan piñ kwañ ṭuo.
Now he shook the tree, and the fox stayed below to gather up the «heglik».

Ku lom ñit, ku kwañ ke n'akum d'akonic,
And he took the green fruit, and gathered them into the elephant's

ku kwañ ayom n'akumdeic. Go man
basket, and gathered the yellow fruit into his own basket. Now the

akon jam, Ye maṇdie, yeṅo ye ṭouku ya ñit,
elephant's mother said, My child, why are your «heglik» always

ku ye ṭou ke awan y'ayom? Go akon jam,
green, and the fox's heglik always yellow? And the elephant said,

Ye mordie, an elo ṉial la ṭou bet, ku kwañ ke.
My mother, I go up to shake the heglik, and he gathers them up.

Ela ke la yo eke ci ṭioṅ ṉim. Go man jam,
Afterwards I go and find them filled to the top. Then his mother said,

Ye mañdie, nala ke wal ke piñ. *Go akon*
My child, when it is done turn them out on to the ground. And the

jam, *Ye kapiaṭ.* *Qon eke ber lo kwañ e ṭou.*
elephant said, Good. Once again they went gathering up heglik.

Ku yiṭ ṉial y'akon, *ku doṅ awan piñ kwañ ṭou.*
And up climbed the elephant, and the fox stayed below to gather up the

Na re ke yiṭ be ṉial, *bi ku jiam,*
heglik. After a time he climbed down from above, came and said.

Ye Awan, man e ñankai, *walku ṭoukwa piñ*
Fox, child of my sister, let us turn our heglik out on the ground.

Go awan jam, *Ye akol e cuol, Nordie, ek'acu ber wal piñ.*
Then the fox said, It is late, Uncle, so we will not turn them out again

Go akon akum d'awan wal piñ.
on the ground. But the elephant turned out the fox's basket on the

go ṅem ne y'ayom. *Ku ye ber wel piñ y'akon,*
ground, and saw that they were yellow. And again he turned out (that of)

go ke yo ye ñiṭ. *Go ka ke awan juoakumdeic,*
the elephant, and he found them to be green. Then he added those of

ku jot awan, *ler ku cok nom*
the fox to his own basket, and picked up the fox, took him and pushed

ne kokic. *Ku bi ku jot ṭouke,* *ku*
his head into a tree-hollow. And came and picked up his heglik, and

ler be. *Go man awan akon ṭiec,* *Ye mandie*
took them home. Then the fox's mother asked the elephant, Where is

ko? *Go ye,* *Kabuo eten.* *Ku jal awan ḏiau.*
my child? And he (replied), He is coming here. And the fox cried.

Go man luop, *go lo yo ne kokic.*
Then his mother tracked him by ear, and went and found him in the tree-

Go miat be, ku jelki.
hollow. And she pulled him out, and they went off.

Qon ke awan bɛr lo enoṅ akon, Ye bar,
Once again the fox went to the elephant, (and said), Come,

lo yapku. Go akon jam, Ye ke ya ḍiac toṅ.
let us go hunting. And the elephant said, (I thought) that there was

Go ye, Nordie, toṅ e ṭok Ku c'aḍuom dit
still ill feeling. But he (said), Uncle, the quarrel is over. And he had dug

we, ku kuñic mac, ku kum nom. Goki lo. Na re ke
a big hole, and lit a fire in it and covered it over. So they went. After a

lo ku kai aḍuom nom, ku col akon, Ye Nordie,
time he went and stood on the hole, and called the elephant, Uncle,

kay'etene, e te yaya. Go akon kai,
stamp here, it is a place I cannot manage. Then the elephant stamped,

go loñ ṭin. Go ye dom awan ke wec, ku ber ye
and fell in. And as he was about to seize the fox he missed, and as he

dom ke wec, jal ḍiau, ku ñop.
was again about to seize him he missed, then he cried, and was burnt

Na c'akon ñop, ke awan buo, ku lut akonic,
up. When the elephant had burnt, then the fox came, and wriggled

le piet be be, ku ler panden.
into the elephant, went and brought out the fat, and took it to his

Ku mañ,
homestead. And he sang,

Ye Riardien ci ŋom Awan! My 'Riar' that is tied up at Awan!
Yen e ko dït ka ŋm koki He pushes grownups' heads into tree-hollows.

«Riar» is a black cow with white mark along the head and back.

V

ALIK KE MAN TI.

THE BATS AND THE LITTLE CHILD.

Koken akeci lo pur. Go col,
Her people had gone to hoe. And (one of them) called to her,

Ya bei piu. Go ye le piu gem wari, go herac
Bring water. And as she went to dip water from the pool, she found

yo wari. Go yok yela, Ye piu ke no?
a snake in the pool. And it spoke to her thus, What is the water for?

Go ye, Kayen ke kokwa. Go ye dom,
And she (said), I am giving it to my people. As it was about to seize her,

ke jam, Ye an bi lo ben ala. Wen ke lo ben wen cen piu
she said, I will come back later on. And she came back when she had

gen koken. Ku tit kerac got.
given the water to her people. And the snake waited for her in a hut.

Go ben, ku ye ler got, ke ñem kerac.
Then she came, and as she was entering the hut, she saw the snake.

Go kerac loqou n'ecok, katki. Ana yi katki, ke yok
Then the snake started after her, and they ran. As they ran, she

loc. Go loc jam, Ye kace, tita, aba kai nom.
found an oribi. And the oribi said, Stay, wait for me, I will

Go ben. Ana ye get, go loc ye
stamp on its head. Then it came. As it was approaching, and the oribi

kai nom, ke dur cam. Go ber lo,
about to stamp on its head, it nearly ate him. Then she went on again,

ler ţiañ yo. Go ţiañ jam, Ye kace, yin ba koñ.
went and found a tiang. And the tiang said, Stay, I will help you.

Go ye bi, ke ṭiaṅ jam, Ye lor, kaca ḍal.
And as it was coming, the tiang said, Go on, it has been too much for me.

Go riṅ. Ana ye ber ye ler, ke yok añar. Go añar
Then she ran. As she was again going on, she found a buffalo. And the

luel, Ye kace, yin ba koñ, kaba no. Ana ye bi,
buffalo said, Stay, I will help you, I will kill it. As it was coming,

go añar ye ṭaric piñ, ke dur cam.
and the buffalo about to transfix it to the ground, it nearly ate him.

Go jam, Ye lor, kaca ḍal. Go ber lo,
And he said, Go on, it has been too much for me. Then she went on

ke ber amom yo. Go amom jam,
again, and again found a roan antelope. And the roan antelope said,

Ye ṭit an. Go koc. Na wen ci koc, ke buo. Go
Wait for me. So she stopped. When she had stopped, it came. And

amom ye ṭaric piñ, ke der
as the roan antelope was about to transfix it to the ground, it nearly

amom cam. Go amom jam, Ye lor, aca ḍal.
ate the roan antelope. And the roan antelope said, Go on, it has been

Na ye ber ye ɋet dor, ke ber
too much for me. As she was again getting a little further on, she again

kor lo yo. Go kor jam, Ye kace, ṭit an, an bi dal ner,
found a lion. And the lion said, Stay, wait for me, I will twist out

ban e bio nom. Na wen ke buo, go
a clump of grass, that I may throw it at its head. When it came, the

kor dal ner, ku ye cuat n'eñin,
lion twisted out a clump of grass, and as he was about to throw it in

go lo ke riṅ ṭin. Go man ṭi yok,
its face, then it came running thither. And he said to the little child,

Ye lor ku lo, kaḍala. Go ber lo ke kat. Go akon
Go on, go on, it is too much for me. Then she again fled on. And she

yo. Go ye akon, Ye na bi, ek'aba duoñ tim.
found an elephant. And the elephant (said), If it comes, I will break off

Ana ye bi, ke ye yup e tim,
a timber for it. As it was coming, and he was about to beat it with a

go ye duor cam, go puol. Go jam, Ye lor ku
timber, it nearly ate him, and he let it alone. And he said, Go on, go

lo, aca ḍal. Go jal lo, ko yok alik
on, it has been to much for me. Then she went on, and found some

ne yep doṅ. Go ye tek ten, go alik
bats cutting a corn-mortar. And as she was about to pass by, the bats

col, Ya bar. Go ben, ku kac. Ku ṭiec, Ye ye
called, Come. Then she came, and stopped. And (a bat) asked, What

maṉ kor e ṅo? Go ye, Kanoṅ kerañ dit copa.
does the child want? And she (said) There is a big snake chasing me.

Go yok, Ye rere etene. Go kerac ben ke kat, ku ṭiec alik,
And he said, Remain here. Then the snake came running, and asked the

Ye cin maṉdien ci ben ene? Go alik mim.
bats, Is there not a child of mine that has come here? And the bats said

Go ber ben teṭio, ber alik ṭiec. Go alik
nothing. Again it came nearer, and again it asked the bats. And the

keṭok der. Go ben. Ana ye qet, ke alik buo,
bats shut their mouths. Then it came. As it was approaching, a bat came,

ku kwañ kaco, kep kou. Go jel meṭ niar.
and picked up an axe, chopped it through. Then the child swooned.

Na wen ci niar, go alik kuotic, ku
When she had swooned, then the bats placed her limbs together, and

tau ene, ku jelki doṅ yep ṭolki. Na
put her near, and went on and finished cutting the corn-mortar. When

wen ci doṅ ṭol, ke jal lo be kene meṭ. Ku kor
the corn-mortar was finished, they went home with the child. And the

meṭ ne koken. Goki luel, Ya we bu yen ɣok.
child was sought by her people. Then they said, We will give you cattle.

Goki jam, Yi kapiaṭ. Qon ke ɣok jal yo, ku yinike
And they said, Good. When they went and found cattle, and gave

alik, go wen d'alik jam, Ye an ci kor e ɣok, ek'aba
them to the bats, the son of the bats said, I do not want cattle, I will

ṭiak. Go un jam, Ye Oo, kapiaṭ. Go ɣok yo,
marry her. Then her father said, Oh, good. Then he found cattle,

eke ye ɣo ke ṭiek, jal ke yen ko ke ña.
that is marriage-cattle, went and gave them to the girl's people.

VI

LAI KENE ÑA.

THE BEASTS AND THE GIRL.

Maṇ cit an. Go ro jot, ku le biok ne ɣok.
(There was) a boy like me. And he rose, and went to herd the cattle.

Go kei lo ṅwañ, ku le ke be. Go ñankene go ṅem, go
And he dug tubers, and took them home. Now his sister saw him, and

ke ṭiec. Ye ke yoke eno? Go maṇe jam. Ye kabei
asked about them. Where are they found? And the brother said, They are

ke roki. Go ñankene jam, Ye an bi lo roki mia wo yi.
brought from the jungle. Then his sister said, I will go to the jungle with

Go maṇe jai, Ye ke wer e lai,
you in the morning. But her brother refused, It is a pool of the Beasts,

yen eke an ke bei ṯin. Goki nin. Ku na ye piñ ye run,
that is where I brought them from. And they slept. And as the dawn was

ke maṉe loñ qok. ku le ke biok Go
breaking, her brother loosed the cattle, and went herding them. Then

ñankene ro jot, ku kwañ cok. Go ye maṉe ye liec ekou,
his sister rose, and followed him. And whenever her brother looked back,

ke ñankene ṯian, ñuc piñ. Ku na ci maṉe qet roki,
his sister hid, sitting down. And when her brother had reached the jungle,

go qok puol, ku ler wari, le kei ṅwañ. Go ñan-
he left the cattle, and went to the pool, went digging tubers. And his

kene ben, ku yo maṉe wari. Go maṉe jam,
sister came, and found her brother in the pool. Then her brother said,

Ye ñankai, ye ke wer e lai. Go jam, Ye kapiaṯ. Goki ke
My sister, it is a pool of the Beasts. And she said, Good. Then they

ṅwañ etok. Ku na wen ke maṉe buo be n'agor nom,
dug them together. And when at length her brother came out on to the bank,

ku jiam, Ye ñankai, bar be, akol e cuol, go ñankene jam, Ye maṉkai,
and said, My sister, come out, it is late, then his sister said, My brother,

an ṅwañ kei de wudie. Go maṉe jam, Ye bar be.
I am digging a tuber for my father. And her brother said, Come out.

Go jam, Ye an ṅwañ kei de modie. Go maṉe jam,
But she said, I am digging a tuber for my mother. And her brother said,

Ye bar be. Go jam, Ye an ṅwañ kei de nordie. Go maṉe
Come out. But she said, I am digging a tuber for my uncle. And her

jam, Ye bar be. Go jam, Ye an ṅwañ kei de maṉkai.
brother said, Come out. But she said, I am digging a tuber for my bro-

Go maṉe jam, Ye bar be, lai abuo. Go cie gam.
ther. And her brother said, Come out, the Beasts are coming. But she did

Go mane ñañ wari, ku kwet qok,
not obey. Then her brother left her in the pool, and drove the cattle,

ler ke bei. Go loc jal ben, ku tiec, Ye yeṅo ŋwañe
took them home. Then the Oribi came, and asked her, Why are you

wer e lai? Go jam, Ye an ñanken e Canber.
digging in a pool of the Beasts? And she said, I am the sister of Chanber.

Go jam, Ye yeṅo cin buo be? Go jam, Ye na camka qa?
And he said, Why do you not come out? And she said, What about your

Go loc jam, Ye yin cu cam. Go jam; Ye
eating me? And the Oribi said, We will not eat you. And she said, You

tietka lec, ca ye cam e koc? Go loc jam, Ye yin ñan
have red teeth, do you not eat people? Then the Oribi said, You are the

tin edia ye koc lat eke. Go loc du, Ye duol bi we ye
little girl who abuses people. And again the Oribi said, A company that

luel abuo cien eten. Go kwac
will speak to you about it (the pool) is coming along behind. Then the

ben, ku tiec, Ye yeṅo ŋwañe wer e lai?
Leopard came, and asked her, Why are you digging in a pool of the

Go jam, Ye an e ñanken e Canber, Go jam, Ye bar be.
Beasts? And she said, I am the sister of Chanber. And he said, Come out.

Go jam, Ye na camka qa? Go jam, Ye jalku yi
And she said, What about your eating me? And he said, Why are we

cam ŋo, ka met? Go jam, Ye tietka lec, ca ye
going to eat you, you a child? And she said, You have red teeth, do you

cam e koc? Go jam, Ye yin ñan tin edia ye koc lat eke,
not eat people? Then he said, You are the little girl who abuses people,

Ye duol bi we ye luel abuo cien eten. Ku
A company that will speak to you about it is coming along behind. And

ñucki wer nom. Go ţiaṅ ben, ku jiam, Ye yeṅo ṅwañe
they sat beside the pool Then the Tiang came, and said, Why are you

wer e laid? Go jam, Ye an e ñanken e Canber.
digging in a pool of the Beasts? And she said, I am the sister of Chanber.

Go ye, Bar be. Go ye, Na camka qa?
And he (said), Come out. And she (said), What about your eating me?

Go jam, Ye yin cu cam. Go jam, Ye ţieţka lec, ca
And he said, We will not eat you, And she said, You have red teeth, do

ye cam e koc? Go akon ben, ku ţiec, Ye yeṅo ṅwañe
you not eat people? Then the Elephant came, and asked her, Why are you

wer e lai? Go jam, Ye an e ñanken e Canber.
digging in a pool of the Beasts? And she said, I am the sister of Chanber.

Go ye, Bar be. Go jam, Ye na camka qa? Go
And he (said), Come out. And she said, What about your eating me? And

ye Yin cu cam. Go jam, Ye ţieţka lec, ca ye
he (said), We will not eat you. And she said, You have red teeth, do you

cam e koc? Go lei eben gwer wer nom ku diet. Go
not eat people? And every Beast and Bird assembled beside the pool. And

piñ cuol. Go akon koc ţiec Ye yeña bi ran tit?
it grew dark. Then the Elephant asked them, Who will wait for the Hu-

Go kor yok, Ye tit ran, Go kor jam, Ye an
man? And he told the lion, Wait for the Human. But the lion said, I am a

ạnin. Go ţiaṅ yok, Ye Ţiaṅ, tit ran. Go
heavy sleeper. Then he told the Tiang, Tiang, wait for the Human. But

ţiaṅ jam, Ye ạn anin. Go amom yok,
the Tiang said, I am a heavy sleeper. Then he told the Roan Antelope,

Ye tit ran Go amom jam, Ye an ạnin.
Wait for the Human. But the Roan Antelope said, I am a heavy sleeper.

Go kwac yok, Ye tit ran. Go kwac jam,
Then he told the Leopard, Wait for the Human. But the Leopard said,

Ye an ạnin. Go loc yok, Ye tit ran. Go loc
I am a heavy sleeper. Then he told the Oribi, Wait for the Human, But the

jam, Ye an ạnin, Go awan yok, Ye tit ran.
Oribi said, I am a heavy sleeper. Then he told the Fox, Wait for the

Go awan jam, Ye an ạnin. Go magwar yok,
Human. But the Fox said, I am a heavy sleeper. Then he told the Zebra,

Ye tit ran. Go magwar jam, Ye an ạnin. Go
Wait for the Human. But the Zebra said, I am a heavy sleeper. Then

ḍel ber ṭiec, Ye Ḍel, tit ran. Go ḍel
again he asked the Marabout, Marabout, wait for the Human. But the

jam, Ye an ạnin. Go gak yok, Ye Gak, tit
Marabout said, I am a heavy sleeper. Then he told the Crow, Crow, wait

ran. Go gak jam, Ye an ạnin. Go auwau jal
for the Human, But the Crow said, I am a heavy sleeper. Then he asked

ṭiec, Ye Auwau, tit ran. Go auwau jam, Ye kapiaṭ, aba tit.
the Ibis, Ibis, wait for the Human. And the Ibis said, Good, I will wait

Go lai keḍia goki jal nin, tacki. Ku to auwau ne
for her. Then all the Beasts went to sleep, lying down. And the Ibis was

tim nom, ye jal ḍiau ṇial. Go koc keḍia goki nin aret,
on a tree always crying out up there. Now everybody slept very soundly,

go auwau go rue nin. Go awan puoc, ku ler wari,
and the Ibis slept right through. Then the Fox awoke, and went to the

ku yok ña, Ye bar be. Ler biyi agor nom. Ku wet,
pool, and said to the girl, Come out. She got out on to the bank. And he

Ye na yok lai dit, ek'akaye ke, ku na ye lai ṭi,
instructed her, When you find big Beasts, step on them, and when they

eke du'kei. Go ñan ṭi gam,
are little Beasts, do not step on them. And the little girl agreed,

Ye kapiaṭ. Go ñan ṭi lar biyi, ku ler panden gokou,
Good. Then he took the little girl outside, and took her to her home-

ku pec un e ña, Ye jo ro, ye an
stead in the night, and wakened the girl's father (saying), Get up, I have

ci mandu bei. Go un puoc, ku bi ku ṭiec, Ye yin ña
brought your child. Then her father awoke, and came and asked, Who are

bi mandie? Go jam, Ye an, Awan, eka. Go un jam,
you who bring my child? And he said, It is I, the Fox. Then her father

Ye kapiaṭ, yin ci kepiaṭ loi. Ku lo un e ña luek,
said, Good, you have done a good thing. And the girl's father went into

ku bi ñoñ dit e ṭo ci cwai, ku yin awan. Go
the cattle-hut, and brought a big fat sheep and gave it to the Fox. Then

awan kede ṭel, ku ler roki ke ye, ku ler ku
the Fox led off his property, and went into the jungle with it, and went

tem ror, ku cuet. Ku bi piat be, ku ler ne layi,
and cut its throat, and ate it. And he brought out the fat, and went to the

ku roṭ anu le ne kol, bu ṭiañ eya.
Beasts, and smeared the Hyena on its teeth with the fat, and the Tiang

Ku ler ku tac y'awan, nin ke etok. Na ye
also. And the Fox went and lay down, sleeping together with them. And as

piñ ye run, yi koc yi puocki, eke ñem ña eliu vari.
the day was dawning, and people were waking up, they saw the girl was

Goki auwau ṭiec, Ye Auwau, to ran eno? Go
not in the pool. Then they asked the Ibis, Ibis, where is the Human? And

jam, Ye ee! An ci bi niu. Go awan jam, Ye yeña cam
he said, Dear me! I have been asleep. Then the Fox said, Who has eaten

ran? Go akon jam, Ye kakuoi, Go jam, Ye
the Human? And the Elephant said, I do not know. Then he said, Let

dolku wodia, ku bu lec car. Go koc yi dolki kedia, k'anu non
us all grin, and examine teeth. And as everybody was grinning, the Hyena

le kol ku tiañ eya. Go akon jam, Ye
had fat on his teeth, and the Tiang also. Then the Elephant said, What

loika de? Go jam, Ye kakuoi, Ninar. Go awan luel, Ye
is to be done? And he said, I do not know, Uncle. Then the Fox said, Do

luoika luoiduon. Go jam, Y'Añu, yin eke cam ran. Go
what you will. And he said, Hyena, It is you who ate the Human. But

añu jam, Ye kacie qa. Go jam, Ye ke luet, ka we we-
the Hyena said, It was not I. And (the Fox) said, It is a lie, it was you

rou we Tiañ. Go akon go yuit tau mac, ku
and the Tiang together. Then the Elephant put an arrow into the fire, and

co deb tok, ku bi be ne macic, ku yok añu,
made the point burn, and brought it out of the fire, and told the Hyena,

Ye bar ba yi bi un ñin. Go añu jam, Ye cor ñwen not.
Come that I may pierce your eye. But the Hyena said, Lameness is better

Go um kul, ku pel ñin. (Yen
than blindness. Then he pierced him in the thigh, and left his eye. (That

eka jol en diac ke ye nol awala.) Ku yup tiañ nom.
is why it is still lame to this day.) And he beat the Tiang on the head.

(Yen eka jol en diac ke yenom cil cien.)
(That is why its head still grows, backwards, i. e. its horns are beat backwards).

The concluding explanations, given in brackets, are not part of the original tale, but a concession to the obtuseness of an English bearer.

A. Shaw.

«KARĀMA»

BY W. R. G. BOND.

Readers of accounts, in the *Sudan Notes and Records* or elsewhere, of savage tribes or savage customs, can usually scent ahead the trail of blood across the page.

Whatever the occasion that is being described, the reader feels sure that before the tale is done, some wretched goat or other animal is «for it», usually under circumstances, the mere record of which produces a feeling of nausea. And yet, when one meets individuals of the tribe, they are often cheery, kindly, and human enough. The writer has known a native turn his head away while a wounded gazelle was being put out of its pain, and a native woman burst into tears when an accident to a camel necessitated its being shot.

Why then is every milestone of native life spluttered with the blood of a publicly butchered animal?

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The people of the Northern Sudan are by no means vegetarians, they like a meat diet regularly if not daily. In the bigger towns a profusion of butchers have sprung up, in whom a well developed desire for profit and a disinclination for steady labour seem to supply the necessary qualifications for their trade.

The vast majority of the people, however, do not live in towns, and among them animals are slaughtered for food by the householder, on the occasion of a birth in the family, a circumcision, or a wedding, on the arrival of an honoured guest, on the anniversaries of holy days, on the building of a house, or on the inauguration of any enterprise.

But in every case there should be a gathering of the neighbours, and the meat is free to all comers to enjoy.

A man, who killed a beast to indulge his own private hunger for meat, would be thought a curmudgeon, and be looked at askance in much the

same way as a man would be in England, who had the reputation of drinking in private; in fact the ceremonial of eating meat in the Sudan has much in common with that of drinking alcohol in England.

The idea of the sale of meat, excepting in the big towns, is still foreign to all but the most sophisticated, and many Europeans have been put aback by the calm refusal of an Arab to sell them for meat an animal from his numerous flocks, on any consideration whatever. If remonstrated with, the Arab may reply « You are a Government Official, and as such I am in your hands. If you wish to take one or all of my herds, I will not resist, but if you ask me if I will sell you an animal for meat, my reply is that I will not ».

Should the official dismount at the Arabs encampment, one of the said animals will in a few minutes be hanging on the nearest tree, being cut up for meat, and the host would be shocked beyond measure at the offer of money for it.

The killing of an animal is a ceremony and to be treated as such, and not as a mere matter of barter or trade.

This is perhaps because the animals themselves form the standard of wealth or coin of the realm; the people in the world are few who realize that money itself is only a matter for barter of fluctuating value as against commodities, and who would not be puzzled if a stranger remarked to them « I wish to buy five sovereigns from you, what will you take for them? ». As a matter of fact this is what every advertiser does, and we are apt to resent his blatant insistence, much as the Arab sometimes resents the attempt to part him from his sheep.

It may of course be urged that the practice of ceremonial slaughter is definitely laid down by the Mohammedan and other religions, but there can be little doubt that in this, as in many other matters, religion has only regulated and codified previous custom. One likes to think that the great founders of religions were partly guided by sympathy with the victim in directing that if an animal is to die for food, it should at least be killed in the most instantaneous and humane way known to the times.

The Sudan, or at any rate the northern half, affords few if any instances of elaborate ceremonies in connection with the dairy or the cornbin such as are found in many other countries, but the slaughter of an animal is

never without its ritual formality. This may be because the natives are still largely in the pastoral stage of civilization, and are only on the threshold of the agricultural phase; but there is a fundamental difference between meat and grain, which has been overlooked by students of the origins of sacrifice and similar rites.

The consumption of milk or corn is a spending of income, the slaughter of an animal is a draft on capital. From a store of grain a few handfuls may be withdrawn without much apparent diminution of the supply, and the deficit may be made good at harvest time by the addition of new grain, which mingles with the old.

An animal, on the other hand, once dead is dead for ever, and no other animal has quite the same individuality, or can ever exactly fill its place.

It may be suggested that the three fundamental facts, in which the ritual of slaughter has its earliest origins, are as follows :

1. That a living animal is indivisible : before the smallest piece of meat can be used the whole animal must be dead. You can draw two handfuls of corn from your supply everyday of the year and only use up a few bushels but to draw two handfuls of meat daily would in a year exhaust a herd of 365 head, and the total meat killed would amount to tons.

2. That an animal provides, as a rule, too much meat for an individual and his immediate household dependants.

3. That meat decays rapidly, and must be used at once, it cannot be stored unchanged for future use.

It follows from these simple physical facts, that, if there is to be no waste, it is necessary to call in the neighbours whenever an animal is to be killed and, conversely, if there is no gathering there should be not meat.

The killing of an animal is an affair in which all the neighbours are interested, and the natural gatherings of friends and relations at the crises of a man's life are naturally made excuses for butchering an animal.

In the intervals a man must go meatless, or himself visit a neighbour, who, owing to some domestic ceremony, is taking his turn at killing an animal for the general enjoyment of himself and his friends.

One may imagine that reputations for hospitality, which are so highly

valued among the Arabs, are more readily built up by a punctual discharge of this duty of taking one's turn at providing one's neighbours with meat, than by altruistic generosity to casual strangers.

At any rate it would seem that the killing of an animal, almost always becomes associated in a man's mind with the reunion of friends and relations in celebration of some occasion, usually happy, for such occasions are those which are naturally made an excuse for killing an animal, and hence perhaps arises the idea that any gathering is incomplete without some animal being killed.

One may perhaps get nearest to the Arab train of thought by picturing the case of the English country gentleman of the old school, whose grandfather has laid down a small but choice bin of Port.

The parallel is fairly close in many points.

The Port has a certain sentimental family value, it was laid down, perhaps, when the present squire was born, and by maturing in the family cellar has acquired a certain character which is exactly shared by no other Port in the world.

Once a bottle is opened, it can never be replaced by anything exactly the same; a new supply may be laid in, but that particular bin is by one bottle nearer the end of the supply.

It must not be wasted in everyday use, or by selfish and solitary indulgence.

On just such an occasion as would prompt the Arab to kill one of his animals, we can hear the squire whisper to the family butler. « It's Chrismas » or « Mr. George has got a fortnight's leave from Flanders and will be home tonight », or « It is not every day an heir is born to the old place », or « Sir John is dining tonight, he always says there's nothing quite like our 47 ».

One has only to think of a War profiteer driving up in a motor and blustering « I hear you have some old Port, I will buy a dozen, name your own price » to get a very fair idea of the feelings of an Arab who does not want to sell a sheep to a stranger. The corn supply of the Arab is more like a cask of beer from which a jug can be drawn whenever required and which when finished can be replaced with a very similar brew, little excuse save hunger in one case or thirst in the other is needed to justify its consumption.

Let us push our fancy further.

We can imagine our squire as he sips his Port saying «Ah I wish my old grandfather were alive now, he'd know how to deal with these rascals who put barbed wire in their fences» or perhaps his hand shaking as he puts down his glass and turns his face from the light, «The last bottle I opened was the night poor Will left for France, oh God, if we could have him back here now».

But Will will never come back and the tragedy of civilization is that those present know it, and know that there is no room for doubt or question or for any comforting ray of hope.

Not so primitive man, for with him it is about equal odds, which of two absent members of the family circle may be back the first, the one who left on a journey three months ago, or the one they buried in three pieces after the last intertribal discussion about boundaries.

So that in a primitive community, where no one, if he could help it, would be absent from a social gathering and so lose his share in the meat, it would seem quite natural to set aside a part of the feast for a relation, who was absent from the party for the first time for many years for the very good reason that he was dead, but whose familiar appearance and characteristic gestures remain a vivid picture in the minds of all present.

One is sorely tempted to follow this too easy line of speculation. The share of the feast set aside at a family gathering for the dead relation — for dead ancestors — for the spirits of dead ancestors — for the spirit of the tribe — for the tribal god, who is supposed imperceptibly to take part in the feasts of the tribe as a pledge of communion with them and sympathetic interest in their future welfare. At least it seems probable that some such association of ideas in the long past gave rise to the feeling that the killing of an animal was not merely a necessary stage in getting meat to eat, but had a certain occult significance which demanded a due observance of ceremony.

The ordinary meal is a very different affair : the food is monotonous and often insipid and badly cooked; it is usually eaten without dallying and as there are no courses there are no intervals for pleasant social intercourse.

It is a business to be got through merely to appease hunger, and native custom excuses a man who is eating from the usual displays of formal politeness, not, it may be presumed, because he is enjoying himself, but because he is engaged on a rather boring business, and the sooner he has got it over and done with the better, and the less chance that others will eat his share while his attention is wandering.

No doubt the dulness of ordinary meals enhances the interest of social occasions when meat is on the board.

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So far we have discussed why every occasion of importance is made the excuse for killing an animal for the general enjoyment of the guests. But why is the animal always killed in the most public way and often in a manner characterised by the most revolting details?

Human beings seem to enjoy having their feelings harrowed and their emotions stirred even unpleasantly, and the more monotonous their every day life, the more they crave excitement.

To realize this, one has only to think of the crowds which in any part of the world would crush to see a public hanging, and yet of which not one single member would enjoy any pleasure in the actual scene : or to think again of the delight of children in making their flesh creep by listening to ghost stories in the dark.

The fact seems to be that it is pleasurable to have the emotions stirred as a whole, ever though the particular emotion excited at the moment is painful.

The feeling of exhilaration lasts after the unpleasant stimulus has passed, and it seems that the human mind can turn the emotions almost at will into any desired channel, whatever the exciting cause may be.

The young fox-hunter with his cheeks smeared with the blood of the first cub at whose breaking up he has assisted, or the boy who has just kissed the dripping knife-blade and sworn « never to kill or cause to be killed any hawk » rides home in a joyous glow of satisfaction that he can now consider himself admitted to the glorious brotherhood of sportsmen; he does not think of the messy details of the time-honoured ceremony of

initiation, which is perhaps little less disgusting than many a savage ceremony and perhaps as old, for as cattle tending is older than agriculture so is hunting older than both.

It seems that it is this ability to turn emotions excited in one way into quite other channels, that explains the long observed connection between cruelty and lust and even religion.

In no other way can one account for sensitive persons surrounding themselves with horribly realistic representations of the most haunting tragedy in the world's history, and dwelling only on the comfort and hope thereby symbolized, while blinding their eyes to the physical pain and mental anguish actually portrayed.

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Blood is of a startling colour ant spurts rhythmically from a severed artery, it is instinctively associated with fear and pain. The spectator at its shedding is sickened and disgusted by the sight, but he is stirred, and the excitement remains after the scene which caused it has closed; he is to use a common expression «taken out of himself» and can fling himself with enhanced zest into the mood of the moment.

Hence the eventual pleasure derived indirectly from the killing or even torturing of an animal to death, and hence the wide use of such incidents among savages whenever there are emotions religious or otherwise that need exciting or stimulating.

Here also, perhaps, we have an explanation of the ceremonial use of many things calculated to produce in the first instance disgust, such as the slavering of others with saliva, or the pelting of friends with dung, instances of which have been quoted in *Sudan Notes and Records*.

The underlying idea of these customs may be this : Excite emotion of some kind or another, whether pleasant or the reverse and the emotion once raised may be guided with tact and management into any desired channel.

Some of the priestly castes seem not to have been slow in appreciating this characteristic of human nature and to have turned it to their own sincere if sometimes misguided uses.

Human beliefs are rarely clearly thought out or logical, nor can they be traced as a rule to a single underlying idea.

In the offering of an animal to a guest there may be the feeling that by sharing a common meat, host and guest become «one flesh» and are bound to each other in ties of mutual interest. Each has gained an ally in a harsh and hostile world, though in some cases it would seem that the bargain does not hold after the meat may reasonably be considered to have had sufficient time to be digested; three days is considered in most parts of the Sudan to be a reasonable time for a visit, and should an honoured guest prolong his stay beyond this, he has outstayed his welcome and is looked upon as a cadger.

And lastly there is a dramatic finality about death, even the death of a sheep.

If a contract of marriage, an oath of peace with surcease from long and costly struggle, or a pledge of eternal friendship is to be ratified, there is always a desire that a fixed and irrevocable sign may be set, as a symbol, that the glamour may not pass, nor estrangement creep in, and that there shall be no fading of the high hopes and warm sentiments that have been formed. Other races may find this symbol in the breaking of a glass which can never again be pieced together, or the blowing out of a candle, whose flame disappears into the unknown and cannot be recalled, but the Arab and with him many a pastoral tribe puts an animal to death, for death is as definite and irrevocable in this visible world as anything we know.

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The question that was raised early in this paper has not been answered, but perhaps out of the tangle of ideas which is characteristic of all savage and most human reasonings we may deduce :

Firstly, that an animal is slaughtered at every gathering, because originally it was only at such gatherings that man could kill an animal without waste; for the guests would eat what he could not eat himself, and be morally bound to give him of their surplus, when it was their turn to kill.

Secondly, that the utmost play is made with the actual death of the

animal, and unpleasant details are often added, in order to produce emotion which can be guided later into pleasurable channels.

The killing of an animal provides food for the guests and indirectly produces a genial mood, more rapidly, more dramatically, and perhaps more economically, than the issue of unlimited beer; not that the latter should be therefore despised or neglected nor should the exhilarating effect of beating a drum be omitted if the maximum of happiness is to be obtained.

W. R. G. Bond.

THE MAḤAS OF 'EILAFŪN

BY H. C. JACKSON.

'Eilafūn, also spelt عيلفونج, which is situated some twenty miles south-east of Khartoum on the east bank of the Nile, is chiefly of interest as having been the centre of the activities of one of the best-known religious notables of the Sudan, Sheikh Idrīs wad Moḥammed el Arbāb. At the present moment the village consists of about four hundred well-built mud houses and compounds, dominated by five Qubbas (or domed graves of holy men), and contains a population of some sixteen hundred inhabitants.

It was founded somewhere about the year 1500 A. D. by Moḥammed el Arbāb. At this time there, was no one living there but the piety of his son, Sheikh Idrīs, attracted many of the Maḥas tribe from Dóngola and elsewhere in the Northern Sudan until the village has assumed its present proportions and is to be counted as one of the largest in the Blue Nile Province.

Each of the chief descendants of Moḥammed el Arbāb was buried in the Qubbas referred to above, the most important being El Nagama Ḥamad, Sheikh Idrīs, Medawi Abu Shánab, Barakat el Múṭrafi, Barakat Abu Shára, 'Abd el Kāfi and 'Araki el Sheikh Idrīs.

The majority of the villagers belong to the Maḥas tribe (which is better known in the Northern Sudan), and only eight subsections (the Bellalab, Hussībab, Negamab, Daḥalab, Ṣubāḥab, Kaafab, Barakab and Idrisab) have descendants in the Blue Nile Province. These all live near 'Eilafūn, either on the east or the west bank of the Nile, but are closely related to other members of the tribe in Geili and Khartoum North districts, e. g. at Wawissi, Islang and Gereif.

None of these subsections is of any particular importance though the Daḥalab is of some little interest as it affords one of those comparatively rare instances of a section of a tribe being named after a woman, the wife of Fadlallah wad Kharāsh. She was the daughter of a slave of Sheikh Idrīs by a concubine and was herself united in somewhat indiscriminate wedlock

to Fadlallah. She was noted for her brains and eloquence — two characteristics that do not unfortunately always go together — and on her death her descendants were named after her.

With the exception of the celebrated Sheikh Idrīs (of whom mention will be made later), few members of the tribe have left any mark upon the history of their times, the tribe being of a much more peaceful disposition than their fireeating neighbours, the Baṭaḥin, Shukria and even the Messéllemi. Sheikh el Migābeli, who lived to the age of 95, was a well-known man in his day, though for what reason — except that of longevity (for which it is hardly fair to assign him all the credit) — has not been divulged, and Sheikh Raḥma of the Daḥalab subsection achieved a certain amount of distinction in the time of the Fungs. He was the ruler of the Gezīra and kept a firm hold on the tribesmen beneath his sway. Death was the penalty for disobedience to his orders or even for delay in executing them. His position was recognised by the Fungs for whom he collected ʿushūr (or one tenth of the crop), a fixed number of tobs of dammur (native cloth) and a specified number of horses which were sent to Sennar. There would appear to have been far more horses in the Gezīra and its immediate neighbourhood a few hundred years ago than there are to-day, and one of the reasons assigned for the insurrection of the Arabs (which led to the overthrow of the Christian kingdom towards the close of the xvth century) was the excessive tax levied on horses and camels.

Sheikh Raḥma gained a great reputation for bravery and always led his followers in action. His chief seats were at Qalang, el Hag Walad Naml, ʿAzāzi and El ʿEreiga. He joined in the general rising that led to the Fungs being superseded by the Hamegs and helped to defeat Sheikh el Amīn Musmār at Hillalia in the year 1784. Some twenty years later he fought against Sheikh Kamtūr (who was the head of the district known as the River's Mouth, Khashm el Baḥr, and was one of the few sheikhs who remained loyal to the Fung kings in their declining days). His bravery earned for him the title of Arbāb, Chief or Protector of his people.

The present head of the tribe is Moḥammed ʿAbd el Qādir, who has been ʿOmda since the coming of the Government. His grandfather, ʿAbderaḥman Moḥammed, was wakīl nāzir of the country between ʿEilafūn and Abu Ḥarāz and his father ʿAbd el Qādir was head of a district that reached

from ʿEilafūn to Wad el ʿAbbās, in Sennar Province. He died in the year 1881.

When the Mahdi rose against the Turkish Government, the family remained loyal to Gordon, who was a friend of many of its members. The proximity of the tribe, however, to the famous Sheikh el ʿEbeid family, who had their main residence at Um Dibbān and were fanatical adherents to the Mahdi's cause, led to several conflicts. On March 16th 1884 the El ʿEbeid family, under the leadership of Sheikh el ʿEbeid himself and fiki Medawi, and supported by the Ḥelawin tribe under Moḥammed wad el Baṣīr, defeated Gordon's troops owing to the treachery of the commanding officers Ḥasan Pasha and Said Pasha Ḥasein, who were subsequently court-martialled and shot. On August 30th, however, of the same year Moḥammed ʿAli Pasha had his revenge by defeating Sheikh el ʿEbeid at Gereif and Ḥalfaya, capturing much dura and cattle. The success of the Government troops was shortlived as on October 4th the Pasha again attacked Sheikh el ʿEbeid, and after a successful fight attempted to follow up the rebels to Um Dibbān, only to fall into an ambuscade and perish with 800 of his troops.

A certain amount of friction still exists between these two families and is accentuated by the fact that they belong to different religious denominations (the Sheikh el ʿEbeid family being adherents of the Geilānīa ṭarīqa while the ʿEilafūn people are followers of the Morghanīa sect). These differences of opinion find an obvious outlet in disputes over land, the Maḥas tribe claiming the land near which they have been settled for some four centuries while the Messéllemi, being a new tribe with rapidly increasing numbers, find the land on which they have only begun to settle during the past thirty years or so insufficient for their needs.

The real importance of ʿEilafūn, which is the Mecca of many devout visitors to the tombs of the holy men buried there, is due to the piety of a man called Sheikh Idrīs wad Moḥammed el Arbāb who was born there in the year 913 A. H. (corresponding to A. D. 1508) and died at the ripe age of 147 Moḥammedan years in the year 1651 A. D.

This priest, or Wàli as he is often called, studied under Sheikh el Bandāri, a wellknown holy man who is buried at Ḥalfaya, and a very high opinion was formed by the teacher of his pupil's future. He completed his

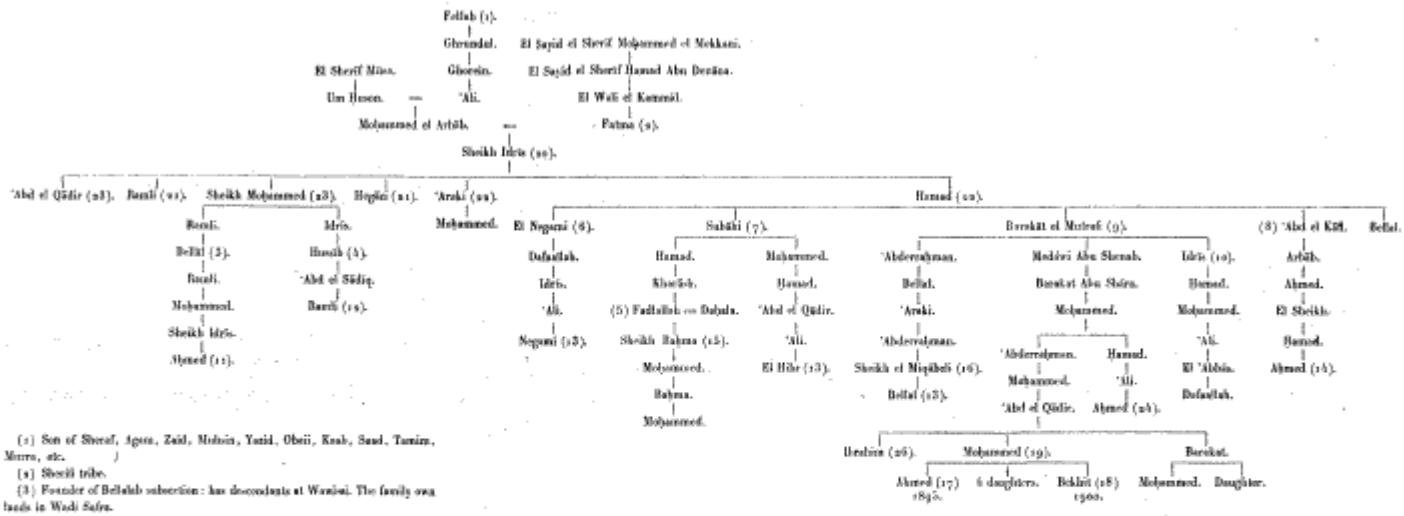
education under Sheikh Ḥamad wad Zarūg who credited him with a knowledge of many things hidden from man. He was supposed to have been endowed with a gift of tongues and could converse with strangers in their own language.

On one occasion he accompanied a well-known priest, Sheikh Bān Nagā, on a visit to the Fung King Amāra Abu Sakakīn, who flourished from about A. D. 1555 to 1565. The King's mother happened to be ill and although Sheikh Bān Nagā recited some words of the Koran over the lady she failed to respond to this efficacious treatment. The king accordingly sent for Sheikh Idrīs and said to him «once you were a soldier of man but now you are a soldier of God : I swear that unless you heal my mother I will make you once again a soldier of man». This somewhat high-handed action on the part of his majesty did not daunt Sheikh Idrīs who repeated some chapters of the Koran, whereupon the king's mother recovered. The King was so much impressed by the powers of Sheikh Idrīs that he questioned Sheikh Bān Nagā about him, and when Bān Nagā foretold a brilliant future for him, the king made a personal friend of the worthy saint and received him as a frequent visitor at his court.

In fact Sheikh Idrīs paid no less than seventy one calls on the Fung kings during his lifetime, and Amāra Abu Sakakīn was so pleased with his ability that he offered him the half of his kingdom. Instead of accepting this munificent gift, Sheikh Idrīs made four sanctuaries in his village to which those who were disaffected towards the king or were being pursued by the authorities for some crime or other might flee for refuge. Representatives of law and order to-day will feel thankful that this custom no longer holds good.

The priest also used his influence in more legitimate ways by interceding on behalf of prisoners, many of whom had to thank the worthy priest either for release or amelioration of their lot while in gaol.

Sheikh Idrīs, like so many other priests in the Sudan to-day, was credited with the powers of a rainmaker, though in his particular case his reputation seems to have rested on rather flimsy foundations. He owned a slave called «Maṭar» (rain) and when Sheikh Idrīs shouted out «Ya Maṭar! Ya Maṭar!» rain was supposed to fall until Sheikh Idrīs remarked that he was only summoning his slave, whereupon the rains ceased.



(1) Son of Sherif, Aguru, Zaid, Midwin, Yazid, Obeii, Kaab, Saad, Tamim, Murra, etc.

(2) Sherîfi tribe.

(3) Founder of Bellalab subsection: has descendants at Wawisai. The family own lands in Wadi Safra.

(5) Gave his name to Hasallab subsection: has descendants at Wawisai and Isingg.

(5) Married a well-known woman Dahala, after whom this subsection is called Dahalab (sometimes referred to as Salâkab).

(6) Gave his name to the Negumab subsection living at 'Eilafûn.

(7) Descendants in Gereif, Zebeiba (Dahasîn) Breiga (? Mauga?) Naba.

(8) Gave his name to Kasfab subsection: has descendants at 'Eilafûn and El Gos.

(9) — — Barakab, the most important of the subsections. Has descendants at Alti, Um Maghat, Shigla, Beshagara East: had 10 sons in all. He followed the Tariqa of el Imam 'Ali Ibn Abu Tâlib.

(10) Has descendants at Debeiba 'Eisellat, called Idrisab.

(11) Lives at Wawisai but has recently come to 'Eilafûn to marry.

(12) Born in 1868: has some young children.

(13) Lives at 'Eilafûn.

(14) Sheikh of El Gos.

(15) Well-known warrior in time of the Fungs.

(16) — man, lived to the age of 95.

(17) Married to Asha bint Hamad wad 'Araki of 'Eilafûn.

(18) — to a cousin of Mohammed 'Abd el Qâdir.

(19) Omda of 'Eilafûn.

(20) His descendants are often referred to as Kharsabab, a khashm beit of the Mahas.

(21) Left daughters only who have married into the Shenâbla tribe.

(22) Sons of the same mother who lived at 'Eilafûn: 'Araki was the eldest son and had the nickname of Tayyar. He died before his father and is buried at 'Eilafûn.

(23) Sons of the same mother at Wawisai.

(24) Khalifa of Sheikh Idris' tomb.

(25) Genealogical table is given in Zahaqir Dafaallah.

(26) No children.

His comprehensive knowledge of all things in Heaven and earth, his powers to foretell the future, his knowledge of the history of olden times (acquired without the trouble of learning it from books), made even the wisest men of the times appear as little children and gained for him many jealous enemies. The suspicious natives of the country somewhat illogically came to the conclusion that such omniscience could only be counterbalanced by a life of secret crime. These rumours were so widely spread that Sheikh Idrīs complained to a well-known religious sheikh, Moḥammed wad ʿIsa Sowār el Dahab who comforted him with the following poem :

By God if the angel Gabriel had been among the people,
He would not have escaped the slander of man.
These people said far more than this of God's own self,
As is recorded in the Koran.
They said that He had a son and a wife :
It is a lie, it is a lie.
If such words they speak of God,
What will they say of man?

At this time local prelates were engaged in a fierce controversy as to whether the drinking of coffee and the smoking of tobacco were forbidden by the Prophet, a subject that naturally lent itself to considerable divergence of opinion seeing that tobacco was apparently unknown to the Arabs in the days of Moḥammed. Sheikh Idrīs was on the side of the prohibitionists but, as other well known dignitaries differed from him, the matter was referred to Sheikh ʿAgīb. When the case came up before him Sherīf ʿAbd el Wahhāb, who was one of Idrīs' bitterest opponents, declared that smoking was lawful and quoted as an example the conduct of the celebrated Cādi Deshein, who smoked until the day of his death. This argument did not appeal to Sheikh Idrīs who despatched Sheikh Dafaallah to the grave of the Cādi in order to make further enquiries. The Cādi answered from his grave that the smoking of tobacco was unlawful and he asked God's pardon for having indulged in the practice during his lifetime. This somewhat unfair reply of Deshein, who had had his smoke, was rightly regarded as carrying no legal weight but the reputation of Idris increased in consequence of his having obtained an answer from the dead.

Idrīs then sent a deputation, consisting of his pupils Ḥamad wad Abu

'Aqrab, Fiki Aḥmed wad Abu Ḥalīma and fiki 'Ali wad Abu Nāfla, to Sheikh 'Ali el Aghūri in Cairo that a final decision might be obtained. On arrival the deputation met with the usual fate of such bodies of men and was informed that the sheikh was too busy to attend to them. Ḥamad, accordingly, waylaid him as he was going to the Mosque in order to recite the Friday prayers, and gave him Idrīs' letter. This epistle was unfavourably received, Sheikh 'Ali el Aghūri saying that Idrīs was in the wrong. After a discussion, in which Sheikh el Laqāni took part, it was decided that the matter should be left in the hands of God who would set his curse upon him who was in the wrong. On the following Friday 'Ali el Aghūri was struck with blindness under the following circumstances.

A certain Meghrebi came to el Aghūri and told him that he had pronounced the triple divorce upon his wife but had changed his mind and wished to marry her again: her parents however refused to sanction this illegal proceeding unless el Aghūri gave his consent to it. The Meghrebi offered el Aghūri 1000 dinars for a favourable reply, but was informed that it was not lawful for him to marry the woman unless she was first married to another man and by him willingly divorced. The disconsolate widower thereupon stabbed the sheikh who became blind in consequence. El Aghūri was so overcome by this occurrence that he sent a message to Idrīs saying that he was in the right and that smoking was forbidden by the Prophet. He also gave him certain presents which are said to be still in the possession of the Khalīfa of Idrīs' tomb at 'Eilafūn.

The cynic can hardly avoid the conclusion that Sheikh Idrīs was extraordinarily fortunate in his dealings with God and man.

Sheikh Idrīs is said to have been the first religious leader to introduce into the Sudan hospitality on a large scale. He was the recipient of numberless presents which he at once gave away to the poor who came to visit him. Sixty platters of food in the morning and sixty in the evening were thus said to have been distributed daily among his clients. On only one occasion did he keep a present that he had received. The mother of Bedawi Abu Deleig made a vow that she would consecrate to God a son if he was born her, and would also give to Idrīs an ox and ten silver rings. The ox was not forthcoming but the woman presented the sheikh with the rings which he kept as a special mark of favour towards her.

Some of his benefactions were rather embarrassing to the recipients. During a year of famine one of his pupils, Sālim el Fazāri, was instructed to bring some food for the sheikh's visitors, but a prolonged search only discovered a solitary lamb belonging to some poor woman who objected to parting with it. Finally, when Sālim shewed every intention of taking the lamb by force, the woman gave way saying that might and right seemed to be synonymous terms. This episode was reported to Idrīs who took the matter very much to heart. Next morning some more visitors arrived with sixteen bulls loaded with dukhn : these the unselfish sheikh gave to the woman. Then came a man with a bag of silver rings and these too were given to the owner of the lamb. At last a Maḥasi appeared with a horse which was also handed to her. The lady, however, declined the gift as she could not ride it herself and had no else to do so. The holy sheikh would brook no refusal and the woman was forced to accept it. She at once gave it away to the sheikh's son, but Idrīs heard of it and insisted on the hapless woman taking away the horse which she reluctantly did.

Similarly when an old woman complained that she could no longer bear children, the worthy priest said that he would make her young again. This he did so effectively that shortly afterwards the lady gave birth to seven children at one time, the people now known as Awlād Daūd being descended from the rejuvenated multiplier.

Many of the acts of the holy man were concerned, as they are to-day in the Sudan, with the question of births. For instance, he advised the famous Sheikh Dafaallah el ʿAraki, who was in charge of the ʿEilafūn Mosque until the death of Sheikh Idrīs, to marry Um Ḥasōn bint el Haj Salāma, saying that a son Dafaallah would be the result of the union. When Dafaallah was born at Abu Ḥarāz, no one cared to suckle him until the arrival of Idrīs who was still at ʿEilafūn, some ninety miles distant. Finally Sheikh Idrīs arrived and put his thumb in the baby's mouth, whereupon a milk-like substance was seen to exude from the thumb : unfortunately a drop fell on the thigh of a female slave who was in attendance and she collapsed in a prolonged faint.

At his birth Idrīs was found to be clad in a firka (or old cloth) which grew with him and was put in the fire when it required cleaning. Just before the death of Idrīs, at the age of 147, Sheikh Ḥasan wad Ḥasūna asked

permission to wash the body of the saint after death in order that the firka might be kept and put on each succeeding Khalifa of Idrīs, who would thus inherit the sanctity of Idrīs himself. The sons refused Sheikh Ḥasan permission and, when they entered the death chamber in order to wash the body, Sheikh Barakat el Mútrafi came and took the firka away. When the sons enquired later of Sheikh Barakat about the firka he denied all knowledge of it, but Sheikh Ḥasan, who was gifted with greater powers of penetration, said that the Prophet Khidr had assumed the form of Sheikh Barakat and claimed the firka which belonged to him.

On another occasion a human hand with fingers extended was seen floating down the Nile. Asked what this portent might signify, Idrīs opened his hand and, spreading out his fingers, said «if five persons agree and are not divided, like the fingers of my hand, they will live long: furthermore if only two persons agree they will live long». At this point the hand, having served its purpose, disappeared.

Occasionally Sheikh Idrīs indulged in a little practical joking, as for instance, when he told a fisherman to go out and hunt a crocodile in a place indicated to him which the fisherman did only to have his boat upset by the crocodile. The wretched man was thus compelled to swim to land and on reaching the bank safely he at once went off to recount the episode to Idrīs who burst out laughing. Whereupon the fisherman remarked: «I don't believe it was a crocodile at all but yourself».

Many other marvels are related of Sheikh Idrīs and the curious reader is referred to the *Ṭabaqāt Ḍaifallah* for them. Impossible as they are of reasoned acceptance they are no more weird than such little flights of fancy as the adventures of the prophet Jonah. These stories are firmly believed by the less enlightened and as such cannot be entirely disregarded. The real importance of Sheikh Idrīs however lies in the fact that he was one of the representatives of Islam who helped to introduce into the Sudan the teachings of the Prophet Mohammed about the time that the Christian kingdom of Soba was tottering to its downfall. And it was, amongst other contributory causes, rumours of such miracles as these which were credited to Sheikh Idrīs that attracted other Moḥammedans into the Sudan and ended by establishing Islam as the religion of this vast country.

H. C. Jackson.

INLAND WATER NAVIGATION
OF THE SUDAN

BY C. H. PAGE.

Although the Anglo Egyptian Sudan is divided by the main Nile into two almost equal parts by its passage through the entire length of the Country, in an almost direct line from south to north and is intersected by numerous tributaries, it is singularly deficient in natural navigable waterways and is almost entirely devoid of them in those parts of the country which now do and are likely in the near future, to export produce in any quantities.

For instance, between Khartoum and the mouth of the Sobat, a distance of about 530 miles, there is not even a single stream running into the Nile on either bank. On the right bank there is the very fertile Gezira which will, it is expected, soon be under cultivation, and on the left are the gum gardens of Kordofan as well as the grain country of that Province and the Nuba Mountains without a waterway of any description connecting with the Nile. The nearest tributary to Khartoum on the left bank is Khor Lolle, nearly opposite the mouth of the Sobat; this is also the nearest stream to the sea which joins the Nile on this bank and it is many miles distant.

These navigable waterways that do exist are, unfortunately, in their natural condition, not suited for the carriage of large quantities of grain and other low valued products of the country as cheaply as one would wish, or as is desirable, in the development of a new country.

There are at the present time some 3000 miles of river on which steamers run at some period of each year.

1.	Khartoum-Rejaf, via the Gebel and the Zeraf	1.100 miles.
2.	Lake No to Meshra el Rek and Wau	165
3.	Taufikia to Gambela	350
4.	The Pibor and Akobo Rivers	182
5.	Khartoum-Roseires	402

6.	The Rahad	165 miles.
7.	The Dinder	75
8.	Khartoum-Berber	225
9.	The Athara to Goz Regeb	159
10.	Kereima-Kerma	209
11.	Halfa-Shellal	210

Of the above the only sections of the river on which navigation may be considered permanently possible are :

1.	Khartoum-Rejaf	1.100 miles.
2.	Lake No to Meshra el Rek	165
8.	Wad Hamed to Athara	133
10.	Kereima to Dongola	175
11.	Halfa to Shellal	210

From Khartoum to Halfa, a distance of about 950 miles, there are only approximately 500 miles navigable during the dry season. The cost of increasing the lengths of navigable reaches on this part of the river would be prohibitive and, fortunately, there is no apparent necessity as the produce, with the exception of live stock, from the Middle and Southern Sudan is and, will, doubtless, continue to be exported via Port-Sudan.

The obstacles to cheap water transport in the Sudan are :

a) *Shallow water.* — Nowhere in the country can boats exceeding three feet draft be used excepting for short periods during the floods, and even with this shallow draft numerous delays occur.

b) *Shortness of flood period.* — As the rivers on which most of the traffic is carried out are only navigable for four to five months annually, during the floods, a large fleet is necessary during those months but is largely idle, and an unnecessary expense, during the greater part of the year.

c) *Absence of cheap fuel.* — The wood fuel which has been used hitherto cannot be considered cheap. The steamers are necessarily small and the distances between fuel supplies, in parts of the country, are very great; consequently great quantities have to be carried and a large percentage of cargo space sacrificed to it. Time lost in wooding is a very serious item and the cost of repairs and upkeep, directly traceable to the use of such fuel, is also very considerable. Coal would be a more satisfactory fuel, but

as none exists in the country, its use on the long distance voyages would be too costly. I am of the opinion that the proper solution is to be found in internal combustion engines for propulsion and that they will eventually replace steam, and it is quite possible that local products may be found for supplying the necessary gas.

d) *The Nature of the Traffic.* — As is only to be expected in the development of a Country such as the Sudan, which has been very largely depopulated by misrule, the consignments of native produce are small, the distances are short and the cargo which is carried is practically all in one direction only. Large consignments going long distances are very few. The traffic between Khartoum and Gambela is the one exception, it being an ideal one, that is : full cargoes in both directions for the full distance.

e) Sailing traffic is not possible to any great extent. The prevailing wind, generally from north to south, is not very favourable.

On very few rivers is towing from the banks possible when the wind is unfavourable and the boats are not designed to sail against the wind, neither are they sufficiently well built to do so especially when fully loaded.

1. Khartoum-Rejaf, via the Gebel or the Zebaf : 1100 miles. — No very serious difficulties are found on this reach. There are several rocks which are all well known and most of which are marked. The channel at Abu Zeid and at Azalet is very shallow during the dry season and as they have rocky bottoms navigation through them requires considerable care. In 1899 a portage was established round these shallows as the water was too low to allow the passage of the steamers. South of Taufikia the river is generally of good depth and comparatively straight as far as Kenisa, but movements of sudd have occasionally blocked the channel, though of recent years there has been no serious interference with the traffic.

South of Kenisa the channel for some miles is very narrow and extremely tortuous with a rapid current which makes navigation, especially down stream, very trying. Even with the greatest navigating skill it is impossible to avoid colliding with the banks. On this part steamers which are powerful when going astern, are necessary to negotiate the acute bends. I am of the opinion that these bends are becoming more acute and difficult owing to the erosive action of the wash from the sternwheels.

When nearing Rejaf the channel narrows rapidly until the most dangerous part of the river is reached. This is known as the «Rejaf Rocks». The steamers approaching this passage from the South have to make a very sharp, almost right angle turn into the very narrow channel between the rocks, the current being unusually rapid. There is always considerable risk in negotiating this passage.

As the river south of these rocks to Rejaf is shallow and rocky and as it is not navigable for any useful distance beyond, any station to deal with large quantities of exports from this country should be made down stream of these rocks and thus obviate the risk of damage in passing them.

The Zeraf route to Mongalla is from 80 to 100 miles shorter than the White Nile via Tonga, and as there is nothing on that part of the Gebel which would be cut out by using the Zeraf, whilst there is a developing trade on the latter river, it would be very advantageous to have this river improved to enable it to be used at all times. This would only necessitate dredging and banking to prevent influx of floating sudd.

The proposed dam across the river at Gebel Auli should assist navigation at the northern end of the White Nile, but it is doubtful whether it will do so at the time when most required, viz. just before the new flood arrives.

Fortunately the White Nile and its tributaries for many miles from their confluences are very flat, and great improvement is possible on these rivers by simple dredging. In dredging channels for sternwheelers it is advisable to deposit the soil as far as possible from the channel as the wash from the sternwheels is liable to cause the silt to flow back again into the channel.

2. Lake No to Meshra el Rek and Wau : 165 miles. — *The Bahr el Ghazal.* There is little or no trade on this river, but Meshra, which is on the extreme end of a backwater of Lake Ambadi, is the port for Wau and the interior of the Province, during the dry weather when the Jur is closed. Steamers can usually get to Meshra at all seasons, but in exceptionally dry seasons they cannot get far past the open waters of the Lake or 20 to 30 miles distant.

Sudd blocks formed from sudd which has floated out of the Narrows have, at times, caused very serious trouble in this river, but these distur-

bances have recently been less troublesome, due very largely to the disappearance of the «corners» in the channel.

This river has greatly improved since there has been a regular service of steamers over it, the action of the wash having knocked off the «corners» and made the channel much wider; it is now possible for the largest steamers with as many as six barges to navigate it freely, whereas a few years ago it was difficult for small steamers to do so with a single barge in tow. It will no doubt be found that this improvement has been gained at the expense of the depth of the channel.

No immediate improvement is required to enable any steamer, now using the White Nile, to get as far as Lake Ambadi at all seasons, but the Jur, which joins the Ghazal in the Lake, is only navigable for a very short period in each year. This river on its passage through the swamp, known as the «Narrows», is very shallow and is frequently closed by movements of large blocks of Sudd, or floating grass.

There is very little current in the 60 miles of channel through the swamp, even in the flood. The movements of floating grass are generally caused by the wind.

Dredging and banking the channel as far as the open water would not be difficult and would enable the steamers to get very much nearer to Wau at all seasons and to sail there direct for a very much longer period during the flood. If a receiving station was made at which goods could be stored until the river was favourable for transport, a very much more satisfactory service could be worked.

The open part of the Jur, that is from about the Ghabat el Warrana to Wau, has a steep slope, especially near Wau and consequently becomes almost dry for some months in each year. This is very unfortunate as there ought to be a very flourishing export trade from this vast country, but the only possible commercial transport route between Khartoum and the interior of the Bahr el Ghazal Province and all that vast country to the west and south, is thus closed in the dry season, and trade between the interior and the river is not possible when the river is in flood as the rains are then on and the country is generally under water.

Hitherto the export, with the exception of small quantities of timber for Government use, has been only a negligeable quantity.

Before the resources of this Province can be properly developed it will be necessary to provide a cheap transport route which will no doubt be found by canalizing the Jur. It runs through well defined banks, is not very wide, and is capable of improvement at no great expense, especially as material can be found on the banks.

There are several other rivers in this region, but with the exception of the Arab their outlets are unknown. Some years ago the Arab was opened up and cleared of sudd and other obstruction for some miles, but, unfortunately this work was not followed up and consequently the obstructions formed again. To what extent navigation is possible on this river it therefore not yet known.

In 1910, in a report I made on the Transport work on the Jur I suggested a connection might be found between the Jur and the Lol near Loing, and in the following year Walsh made an unsuccessful attempt to get through, followed in 1913 by a much more successful attempt by Mr. Lubbock. If a navigable passage could be found connecting these two rivers, a much larger field could be opened up; it is even possible that the Lol may provide a better channel for traffic with the interior than the Jur. The outlet of the Lol is doubtless, somewhere in the swamp near the mouth of the Arab or it might possibly be found to connect with the Arab a short way from its junction with the Ghazal.

3. Taufikia to Gambela : 350 miles. — *The Sobat and Baro.* These rivers are generally navigable as far as Gambela from about the middle of June to early in November and for a very much longer period as far as Nasser.

The Baro, which runs through Gambela and joins the Sobat near the frontier, has a very steep slope, the level of the river varies rapidly and falls immediately the rains stop, and quickly becomes too low to float any useful craft.

It is very unfortunate that this should be so as the trade with Gambela is the most extensive of any south of Khartoum, and there is no doubt that if permanent communication were possible the already prosperous trade with this part of Abyssinia would very greatly and immediately increase.

This transport trade is an ideal one having full cargoes on all steamers

in both directions and for the whole distance, it could be made more satisfactory by using craft specially designed to suit the local conditions.

These rivers could be improved by building a series of locks and weirs, but the greater part of the rivers which require this treatment are in Abyssinia. I think there is always a small current past Gambela which might be sufficient to compensate any loss by evaporation or other leakage and thus make permanent navigation possible. Building material would also be found near the river.

4. The Pibor and Akobo : 189 miles. — The Akobo joins the former at Akobo and runs to the Sobat near Nasser. These rivers have so far been used only by Army steamers for the purpose of administration and patrol duties. There is no trade of any description. These rivers run through very flat valleys for some very considerable distance up from the Sobat and can be easily improved by dredging when it becomes necessary.

Khor Filus runs into the Sobat, about 15 miles up from Taufikia. At the northern end this is a very fine deep and wide river, but when I went up was so blocked with sudd that we could not get through; however, owing to the very high flood, we were able to leave the channel and steam round the blocks. We eventually got about 20 miles up. Whether there is any possibility of trade developing as a result of opening up this Khor I cannot say, but it would probably be an advantage to have it cleared for administrative reasons, a not very difficult undertaking.

On the White Nile and its tributaries there is an entire absence of any form of local sailing craft. There are a few built in and trading from Khartoum. Dug-out canoes are numerous and also some built of ambach. Occasionally north of Taufikia a small boat built of planks tied together by raw hide thongs and made water tight by mud caulking, is seen.

5. Khartoum-Roseires : 402 miles. — This reach is only navigable from about the end of June to the beginning of November as far as Roseires. A very considerable amount of grain is brought down by both steamers and sailing craft, but as the railway runs through the grain producing part of the country and parallel to the river, it is not to be expected that very much produce for direct export would be water-borne for the short distance from north of Sennar to Khartoum for transhipping to the railway there.

The proposed dam across the river at Sennar should greatly improve the river upstream of that town, but apparently little water-borne traffic is expected on that reach as no provision for passing vessels through the dam is contemplated. Another effect this dam may have on the Blue Nile will be to shorten the navigable period down stream of it.

The Rahad. — Is navigable for a few months during the flood only. In the summer of 1917 I went as far as Simsima in a twin screw tug drawing 6′ 6″ of water, and it would have been possible to have gone much further. During the last few years there has been some traffic on this river as far as Hawata, but obstructions, mostly large trees, in the river have prevented the steamers from using it as much as was desired. Steps have since been taken to remove these obstructions and navigation has been rendered much easier.

The Rahad flows through a very rich valley, and although it is at present almost devoid of a fixed population, it will, without doubt, become a great grain and oil seed producing district and will require some cheap means of transport such as can be provided by canalizing the river. The river is rather narrow and of unusually constant width and depth. It would be quite a simple engineering feat to canalize it. If this were done, the fixed population on its banks would quickly increase as in addition to improving the navigation it would give them the water for domestic use, the lack of which now prevents permanent settlement, and also extra water for irrigation.

Parts of this river dry up into pools in the summer and of course it is to be expected that even if weirs and dams are built, the depth of water may not be sufficient to prevent this happening, but the period during which it would be possible to reach the grain producing centres would be very much extended and it is always possible that storage basins may be found farther up the river to further augment the supply.

There are no sailing or other native boats of any description on this river only a few rafts, made of gourds and bamboes with straw spread over the top, on which everything from goats to camels are crossed.

7. The Dinder. — This river is navigable for some distance from its junction with the Blue Nile. There has not, hitherto, been any trading

steamer traffic on this river, but steamers do occasionally go up on inspection duty, etc. The produce grown in this valley is not ready for export until the river has fallen, and it is therefore taken to the Blue Nile by animal transport.

8. KHARTOUM-BERBER : 225 MILES. — This reach is only open during the flood and is afterwards reduced to Wad-Hamed–Atbara. Since the Railway reached Khartoum it has been used very little for merchant traffic, but Province and other departmental steamers use it constantly.

9. THE ATBARA. — This river has been used occasionally by steamers going as far as Goz Regeb, but it is a difficult river to navigate. As the steamers cannot get through the Atbara bridge, they must pass under before the water rises too high and must remain on the wrong side until it falls again, a period usually twice a long as the river is navigable for any useful distance. This and the shortage of suitable craft has prevented any attempt at a regular service on this river. There is no immediate prospect of any imports or exports to, or from the regions on the banks of the Atbara which would justify any improvement works on this river.

10. KERRIMA-KERMA : 209 MILES. — This reach is served by stern-wheelers and nuggers, the latter being mostly private owned. It is a difficult and expensive one to run. The river, for a great part of the year, is very shallow and in several places the bed is very rocky, especially at the north end. In some seasons the steamers cannot go further down stream than Dongola, thus reducing the distance from Kerrima to 175 miles.

During the low season of 1897 a battalion of Egyptian troops cleared the river bed in the shallow water near the north end of Argo Island and removed an immense quantity of large rubble and loose stones, enabling the large fleet of steamers and sailing craft, then on that reach working in connection with the reconquest of the Sudan, to sail to railhead then at Kerma, without delay or damage.

Since that time minor improvements have been made by blasting, dredging and removing rocks.

There is a total absence of growing timber on this reach, it having all been felled without, unfortunately, any steps having been taken to replant;

therefore the steamers now have to consume very expensive imported coal.

The output of the province is so small that any extensive improvement of the channel of this reach would not be justified. Economy should be looked for in some cheaper form of propulsive power.

The produce to be exported from this province has to be taken upstream to the railhead now at Kereima which is now the only outlet from the province.

Sailing craft cannot be used very economically on this reach. The prevailing wind is from the north. There is a very wide sweep in the river between Kereima and Korti, which for a long distance runs south. The loaded boats going upstream cannot sail against both wind and current and therefore have to be towed by manual labour, a very slow, laborious and costly procedure, which would be prohibitive if cash wages were paid to the crews, or if time was any object. The boats generally have to return downstream empty.

11. Halfa-Shellal : 210 miles. — The connection between the Sudan and Egypt is over a stretch of about 210 miles or river between Halfa and Shellal. Navigation over this reach, with the exception of a short period during the flood, is limited to vessels having a maximum of 3 feet draft of water and even with this shallow depth only comparatively small steamers are, at times, able to get through the narrow and tortuous channels between the sand banks.

At times of very low water barges and gyassas have been sunk at the worst places to cause the current to scour out the channels, but this is, of course, only a very temporary measure. No steps have been taken of recent years to make any permanent improvement.

In the northern part of the reach there are the remains of some very heavy stone groins which were built well out into the river, many ages ago. I am unable to say whether they were built to improve the channel or to cause a deposit of silt on the banks below them, but I have no doubt they effected both these objects.

It is not to be expected that any expensive works to improve this channel will now be undertaken. The railway will, no doubt, be extended from

Halfa to Shellal in the near future and the expense and loss of time now incurred in transhipping goods, etc., at Halfa and Shellal would easily cover the difference in freights between water and rail transport over so short a distance.

The mail and passenger services on this reach, as well as part of the cattle and goods traffic, are served by the sternwheelers belonging to the Government. There are several private companies running various craft including auxiliary steam sailing barges. Some of these sail from Alexandria and Cairo. Egyptian gyassas and locally built nuggers are also used, but not to any great extent. These latter are very like those built in the Dongola and Khartoum Provinces, but have less beam, a greater moulded depth, a harder bilge, higher stem and are rigged with lateen-sails, they are not nearly such good sailers as those of the south.

A large number of quarter decked sailing boats of a new design from the native craft have been put on this reach during the last few years. They are of great beam and are rigged with a very large balanced lug sail. They are fast and safe sailers, are built very cheaply and as they carry a large cargo on a shallow draft they are rapidly casting the old native design of craft. They are usually used for local passengers and freights, but occasionally make long distance journeys. I was very gratified to find these boats were copied from one I had designed and built at Assuan in 1903. The builder of these boats, who had worked on my boat, informed me he had built over one hundred of these boats and could have doubled that number had building material been available.

Some of the steamers which have been used on the transport services since the re-conquest of the Sudan have had most interesting histories. On the Halfa-Shellal reach there are still working, the *Ibis*, *Toski*, *Tanjore*, *Semneh* and *Ambigol* all of which are relics of the 1884-1885 relief of Khartoum expedition. After the expedition the two former were used for some years by Messrs. Thos Cook to carry the mails between rail head in Upper Egypt and Assuan. They were returned to the Egyptian Army during the expeditions for the re-conquest of the Sudan. The *Horus* was one of three high speed screw boats built for the Mail service on the Suez Canal. I altered her, reduced her draft from seven feet to three and a half feet by lengthening and widening her hull but retained the same propeller, at

Shellal in 1902-1903. She has done most useful work, but still has too much draft to be always employed at low river.

On the Dongola reach are the. *Waterlily* and *Alexandra*. The former is the last of some small sternwheel dispatch boats used in the relief, the others being destroyed to prevent them being used by the Dervishes, on the return. The latter was a Red Cross Hospital boat used in the same operations and named after Queen Alexandra who was patron of the fund.

The *Tahra* was the Governors steamer in the Berber Province for many years. She was a small paddle steamer which was sunk by shell fire at the Battle of Hafir in the Dongola province in 1896. I was unable to trace her builders name, she was taken to Khartoum via Suakin and Berber in pieces, and erected there, in pre Dervish days. I was informed there were eight of these craft sent out at the same time but was only able to trace one other which was found, a wreck, near the Mogran at Khartoum. The *Bordein* and *Safieh* were recaptured from the Dervishes, the former at Khartoum the latter some distance up the White Nile. They were paddle steamers about 150 feet long, both very old, and were well known in connection with the Gordon relief expedition. They carried four lbs of steam in their boilers. The former was engined by Penns of Greenwich whilst the latter had oscillating engines but there was, unfortunately, no date to show when they were built. They did an extraordinary amount of good work, even if not economical, for us after the reconquest.

The *Taufikia* and *No. 8*, much smaller paddle boats, were also recaptured at Omdurman. Both had square boilers and oscillating engines working at just above atmospheric pressure. The former did a lot of transport work for a few years before being broken up, the later was converted into the Governor General's yacht and renamed the *Elfin*. She has been rebuilt several times also lengthened and fitted with new machinery, of the original there is now very little left but the shape and, perhaps, the stem post.

The four small gunboats *Abuklea*, *Metemma*, *Tamai*, and *Hafir* are all from the 1884 fleet, all have seen considerable service, especially during the Wad el Negumi days at Toski. The last, originally the *Teb*, was wrecked in 1896 at Abu Fatma immediately after passing up through the cataract on the way to Hafir; she was raised and repaired only to capsize in the

following year when being hauled up the Kirbekan Cataract. She was again raised and with a change of name secured change of luck.

The three large sternwheel gunboats, *Zafir*, *Nasir*, and *Fateh* were built at Kosha in 1896. These in their original state were very powerfully armed, but after the battle of Omdurman part of the armament was removed and they became almost purely transports in which capacity they have been, in my opinion, the most successful boats ever put on the Nile.

The *Dal*, *Amka*, *Amara*, *Akasha*, *Kaibar* and *Hannek* were all from the 1884 fleet and like all of them excepting the *Abuklea*, *Metemma* and *Waterlily* were built by John Elder and Co. They were sternwheelers of 90 feet length and 20 feet beam. They have really been wonderful boats and still retain their original machinery with only a few minor exceptions. They have been constantly at work since 1895. The *Kaibar* alone in 23 months ending December 1917 did over 50,000 miles without a break.

The *Vankerchoven*, now lying in the dockyard at Khartoum North, is another very notable boat; we took her over from the Belgians with the Lado Enclave. She is a paddle steamer by Cockerills of Seraing, and was carried in very small pieces across Africa from the west coast and erected on the Nile. She is a very fine example of what can be done in building in sections of very small maximum weights.

The native sailing boats of the Sudan are all of the nugger type generally built as near as possible to the place where the timber from which they are to built is growing.

They are very interesting craft, are built in all sizes up to about 50 tons capacity. The hull is built of rough hewn timber, the planking being in pieces of about 8 feet long and fifteen inches wide cut to the exact necessary shape by frame saws.

There is a thick but very shallow keel, no framework, the planking must be thick as it is nailed together by spikes through the edges. There is a deck at each end, the beams of which serve to strengthen the hull; in fact they are the only supports it has. There is no deck over the centre part which is left open for the stowage of cargo. There is no attempt at finishing the planking which is never touched by the adze after it has been put in place. These boats are never painted. They are caulked from the inside. The rudders are immense, being from 1/3 to 1/2 the length of boat.

The beam is very great, but the lines and displacement curve are extremely good. The mast is generally stepped nearly in the middle of the length. All are rigged with a lateen-sail with the exception of those in the Dongola Province which are the most interesting and have a square sail and a roller boom.

These Dongola boats are rigged with a square sail set in about the same position on the mast as a balanced lug. The gaff or yard is fixed at a definite height on the mast. The throat end of the boom rests on the deck close to the mast; it has crossed bars fitted in the end for rolling it by. The sail can be reefed up to its utmost limit, the boom rolling close up to the yard. As the end of the boom rests on the deck the peak rises higher as the sail is reefed thus retaining the height of peak which is so necessary in boats sailing between high banks. The main sheet is made fast to the yard and passed down to the deck aft in front of the sail, the riggers of these craft have not yet learnt the use of a claw ring by which to make fast the main sheet to the roller boom.

These boats are extraordinary good sailers and if built and finished on the same lines by a technical builder, but with slightly more keel and with up to date finish of hull and rigging, they would prove most useful craft as they would be able to sail into the wind far better than the Egyptian Gyassa. I think a modified type of «Medway Sprit sail barge» would suit the local conditions of the Sudan admirably.

Rafts made of Dura straw are largely used in the Northern Sudan and are most useful where the atmosphere is sufficiently dry to absorb the moisture from the straw quickly. Further south rafts of ambach are very extensively used, but as they also absorb the moisture, they must be dried frequently but not so often as those of straw.

Dug out canoes are very largely used on the White Nile and its tributaries. They are of the roughest build and owing to the scarcity of good suitable timber are frequently seen made up of two or three lengths. The only straight ones to be seen are those from the Malakal district made from Doleib Palm trunks.

C. H. Page.

REVIEW.

Les Kuku, by Joseph Van den Plas (published by Dewit, 53, rue Royale, Brussels, 1910).

The object of this note is to draw attention to a study of one of the tribes in the old Lado Enclave, which was written by a distinguished Belgian official stationed there in the years 1907 and 1908. The study is the sixth of a Series of Ethnographical Monographs edited by Cyr. van Overbergh and intended to embrace most of the peoples of Central Africa, especially those of the Belgian Congo. These monographs are all arranged on a similar plan : the subject is divided into seven broad sections : A. General Geographical and Ethnographical Information; B. Material Culture including as subsections Physical Culture, Food, Clothing, Dwellings, Occupations, Trades and Crafts; C. Family life with subsections on Birth, Education, Marriage, Family, Death; D. Religion; E. Intellectual Activities, including Arts, Sciences, Intellectual faculties; F. Social Life with subsections on Property, Economics, Law, Social Organisation, Political Organisation and Foreign relations; G. Anthropological Characters : these sections and subsections are divided again into about 200 numbered paragraphs which are based upon a series of questions drawn up by M. Halkin.

In the work before us the execution of this comprehensive plan appears to deserve high praise. M. Van den Plas has laid an excellent foundation for further study not only of the Kuku but of their neighbours, the Kakwa, the Nieffu and the Fajelu, and his work should be in the hands of all who have any dealings with these tribes.

On the material side, Section B, the most interesting paragraphs are those concerned with the primitive iron mining and iron working which is found among the Kuku. The social, political, and religious details described in subsequent sections suggest further questions. The most important personage is the Rainmaker, who is at once the ruler, the supreme judge and the Commander-in-chief : his office descends in the male line. Beside him there are the Magicians or Sorcerers, whose functions also descend in the male line. A third privileged class consists of the land-owners whose rights again are hereditary, who apparently have to pay tribute to the Rainmaker but also

receive a sort of rent from him and from the other members of their respective clans in consideration of the use of the soil. Capt. Grove, in the last number of this Journal (page 172), mentions the existence of a somewhat similar class among the Acholi and suggests that the Acholi land-owner is a survival from earlier occupants of the country. In the religious sphere there is an otiose high God and a simple cult of the Dead. The Kuku are exogamous and do not circumcise.

J. W. C.

NOTES.

Bahr el Ghazal Province.

Extract from the Bahr el Ghazal Province Diary for May 1919.

After many years immunity cannibalism suddenly evinced itself in the Jur country in the vicinity of Gnopp.

The culprit by name Angubi disappeared with a girl whom he took off into the forest and ate. This he confessed to have done in company with other Jurs.

Unfortunately the man died the same day as he was captured, otherwise he might have disclosed the names and whereabouts of the rest of the Ghoulish supper party.

The Jurs have asked to be allowed to burn his remains or they state that he will assume the shape of a lion or some carnivorous beast and waylay them at night.

Nuba Mountains Province.

Method of exterminating White Ants.

On the Talodi-Kadugli road in February, I stopped for two days, to build a causeway, at a place called Fak el-Khalla. While waiting for green pigeon under a sycamore in the afternoon, an old Nubawi arrived with two gourds about the size of a football, suspended from a stick. Being in need of honey I asked him if he was honey hunting, but to my surprise he stated he was ant-hunting as his house was badly infested with White Ants. I asked him where the ants were to be found and he pointed to a mound, with some bushes growing over it. He said he had noticed them the previous day while passing and stopped their runs. I went over to the mound with him and he opened up two small holes and the ants began to appear. He then inserted the openings in the gourds into the holes and the ants crawled in, the attraction being scraps of meat and a rag soaked in Samn with which the inside of the gourds

was also smeared. He picked them up every few minutes to see if they were filling and in doing so, got several ants on his hands and feet, and in pulling them off blood appeared in every case. In about half an hour both the gourds contained an almost solid moving mass of ants. He then covered up the orifices with dung.

I then asked him about the method of introducing them into the house, he told me he would either put the opening in the gourd over an ant run and leave it, or, failing that, just leave the gourds on the floor of the house over night and they would find a place for themselves by morning. He told me they were an infallible remedy against snakes, scorpions, etc. I pointed out that, from the way they bite, they would be rather unpleasant house companions, but he assured me that a little live charcoal sprinkled about their run would drive them away.

The local name of the ant is *Um-Russas*, they are like the sugar ant but are smaller and lighter in build and of a darker colour, and move along in a solid mass, resembling a rope. They are usually found where water is near the surface.

It appeared to me that it might be a good thing to introduce them into gardens that are badly attacked by white ants.

C. B. Franklin.

CORRESPONDENCE.

Four-tusked Elephants.

What Abd el Farrag Ali M. A. 1st. Bullock Bahr el Ghazal relates about the four-tusked elephant, I find quite correct.

Also I had the fortune of seeing a nice specimen in July 1916 in the region where the Kor Mungu joins the Beki. I was just hunting elephants and not presuming that among the numerous herd would be the four-tusked specimen, I shot and killed a common one. At the firing of the gun (a quite unusual event) the whole herd sent forth strong and continuous sounds, and in a few instants they gathered together in a compact group to flee. Only then the natives that were with me, showed me the four-tusked specimen. All the other were quickly gathered around it and so the whole herd fled. The four-tusked specimen could be very well distinguished by its notable dimensions, that exceed those of others. The two bigger tusks were the biggest I have ever seen; the other two had the thickness of an arm and were about 60 cent. long. I followed the herd the whole day long, but in vain, they never stopped again.

Among the Azande's nearly every year is seen a four-tusked specimen and they give it the name *Shamba*.

But the curious animal is only found either in a numerous herd, or at least surrounded by some, which by instinct seek to protect or defend it, as several times I was told by others and could verify myself in the case stated above.

F. G. Bertola,
Superior
of the Italian Catholic Mission
at Mupoi.

Desiccation?

A correspondent refers in your April number to a statement by Capt. Willis «that there is little doubt that the country flanking the Nile in the Dongola reach has been gradually drying up in the last few centuries».

When trekking some years ago from the Wadi Mugaddam to the Shabluka I came across a Wadi containing what appeared to be the petrified trunks of

trees of a diameter of from twelve to eighteen inches. At the present time there is not a vestige of a tree to be seen in this part of the world.

At the same time I would suggest that the disappearance of trees in many parts of the Sudan may be due in no small degree to the increasing population. I am told that within the last twenty years there were trees of considerable size in the Wadi Addara, some ten miles west of Omdurman, though nearly all of these have since been cut down in order to supply fuel to the three towns.

The process of deforestation can be seen à merveille at the present time in the Blue Nile Province. Many names such as Khor el Sunut in Monagil district commemorate a state of affairs very different from that prevailing to-day. One of the results of this denuding of the forests is seen in the gradual driving of game to the south.

Bruce saw many antelopes near Wad Medani towards the end of the xviiith century, though none are found near there now. Only three miles away from the same place is the village of Geziret el Fil (Elephant Island), where elephants were found two hundred years ago. I believe that now there are none in the Gezira until the neighbourhood of Saoleil is reached.

H. C. J.

Arabic Proverbs.

In Mr. Jackson's article on *Sudan Proverbs* (pp. 108-109) of the April number it is stated under Proverb no. 11 that some uncertainty prevails as to the meaning and spelling of the word *naqar*.

In Amharic, which is a cognate language to Arabic, the verb means "to dip, moisten", and is used e. g. of dipping a rope or clothes in water. It is spelt with the *k* and not with the *q* which supports Mrs. Singer's spelling.

So the Arabic proverb may be translated: "Constant moistening breaks the stone".

C. H. W.

Census Superstitions.

In a note under this heading (vol. II, no. 2) Mr. W. I. Cheesman refers incidentally to Sudan superstitions connected with shorn hair and nails and

suggests that Delilah's power over Samson is in some way connected with sympathatic magic worked by the former with his hair.

The story of Samson and Delilah is treated by Sir J. Fraser in his recent work *Folk lore in the Old Testament* (vol. II, p. 480 seq.).

The writer gives a number of instances of beliefs in various countries that strength is connected with the hair.

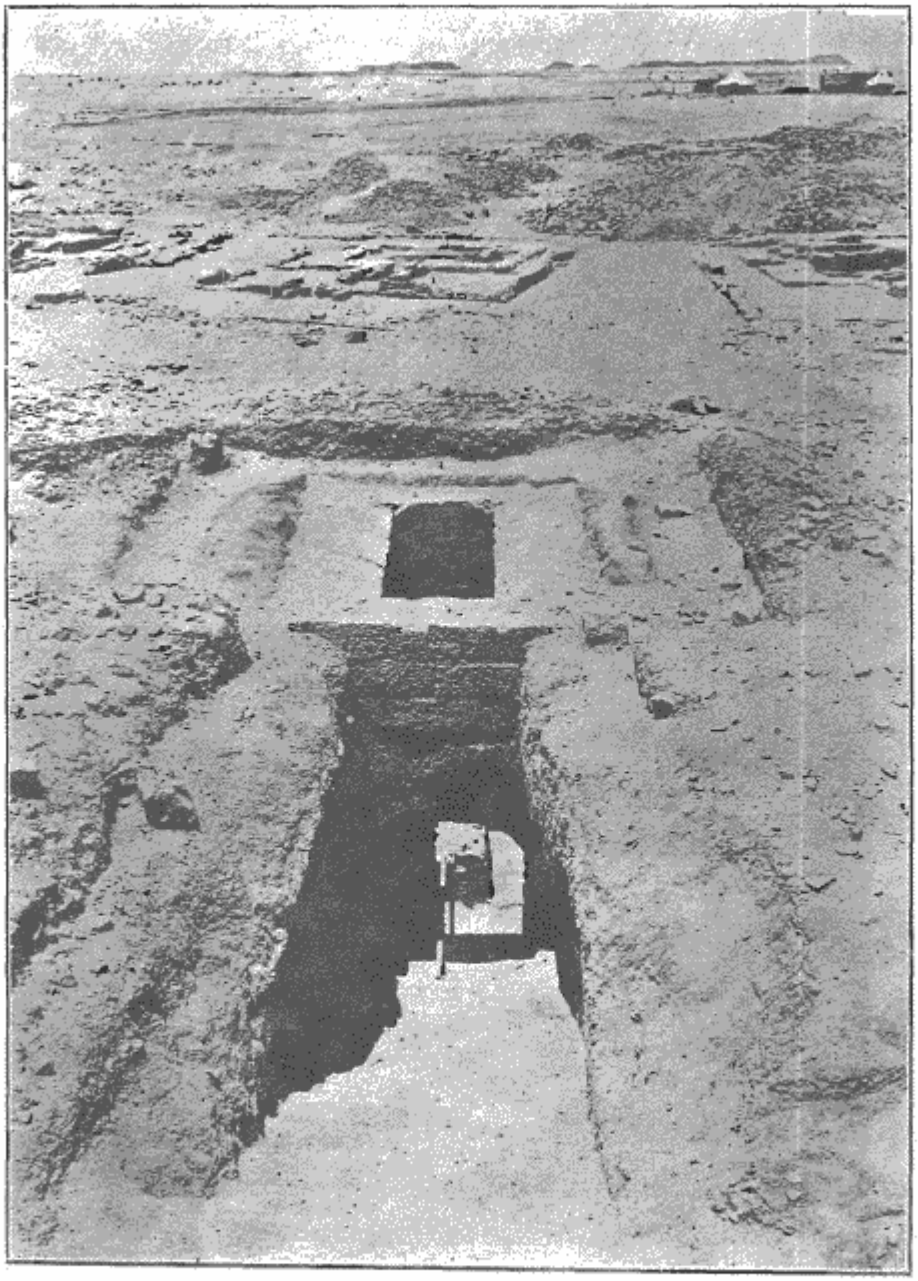
Examples are the natives of Amboyna and Ceram (East Indies); of Nias in Sumatra; Nisus King of Megara — with a single purple or golden hair — the powers of Indian and Mexican witches dependent upon their hair.

Frazer developes the idea in quite a different direction from that of magical rites performed with hair or nail clippings viz : that of bizarre fate or conditions in the life of «unusual» persons — Samson's strength was in his unshorn hair. Lord Soulis in the Scotch ballad could only be killed with molten lead — the soul of Koshchei the Deathless was in an egg the destruction of which ended his life — the Serbian Warlocks strength was in a bird. In every case the secret is wormed out of the protagonist by guile with fatal results. The lore-type appears to be that of mystery rather than of magic.

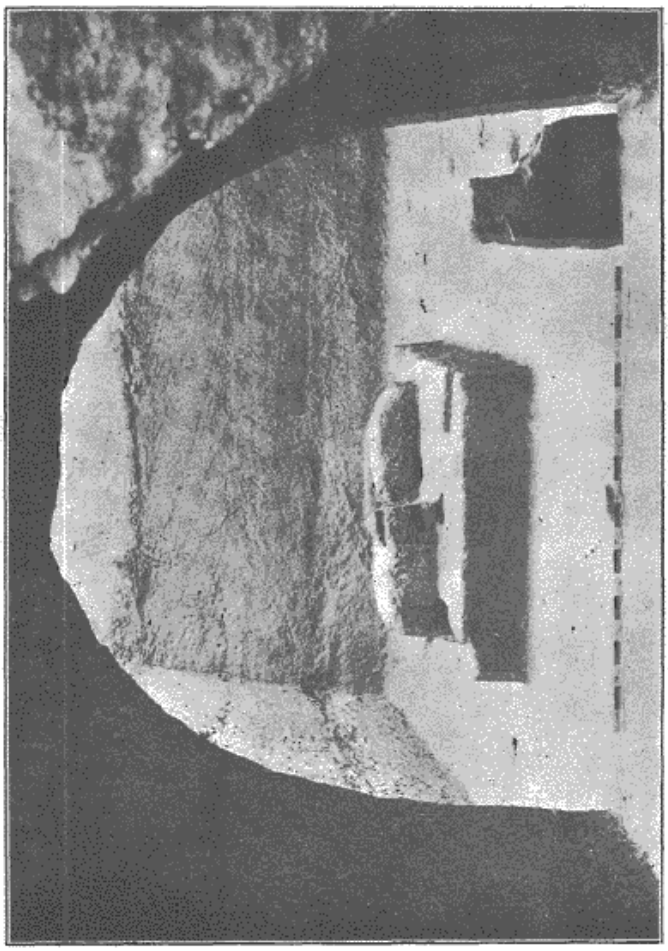
E. S. Thomas.

ERRATUM.

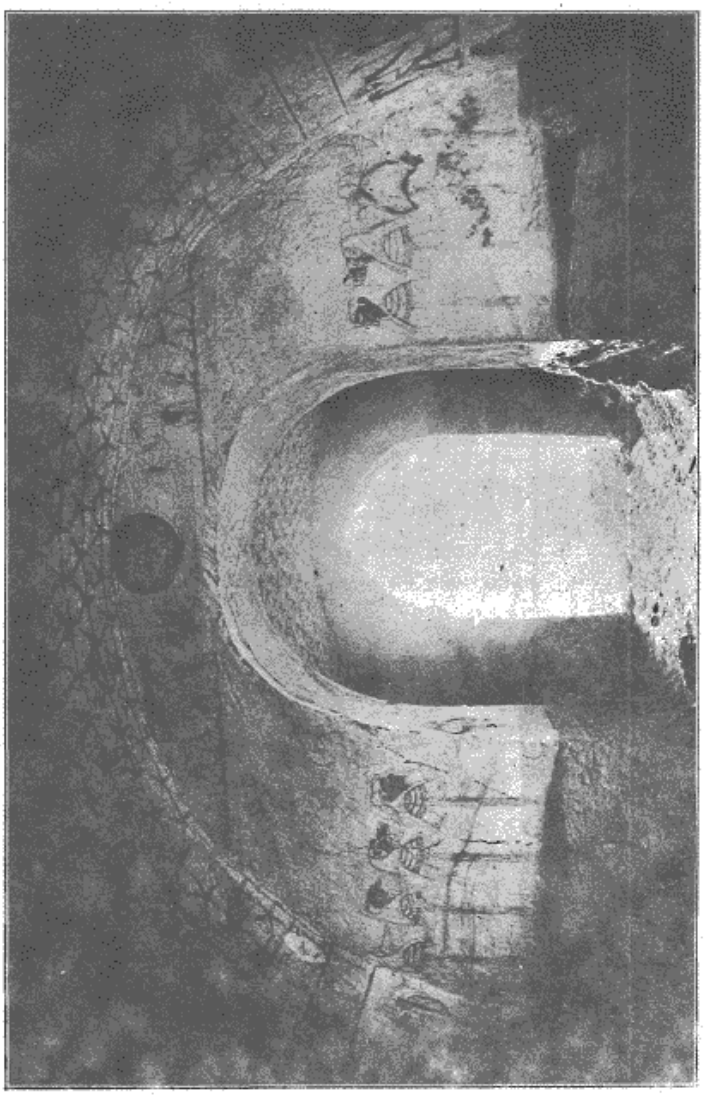
Vol. II, no. 3, p. 226, line 5. For «*Coptiang*», read «*Goptiang*».



Tomb of Piankhy with Mastaba X behind. Looking «east».



Burial chamber of Shabataka. Looking in through the tunnel.



The painted chambers of Tanutamon. Looking out from the back of the burial chamber.

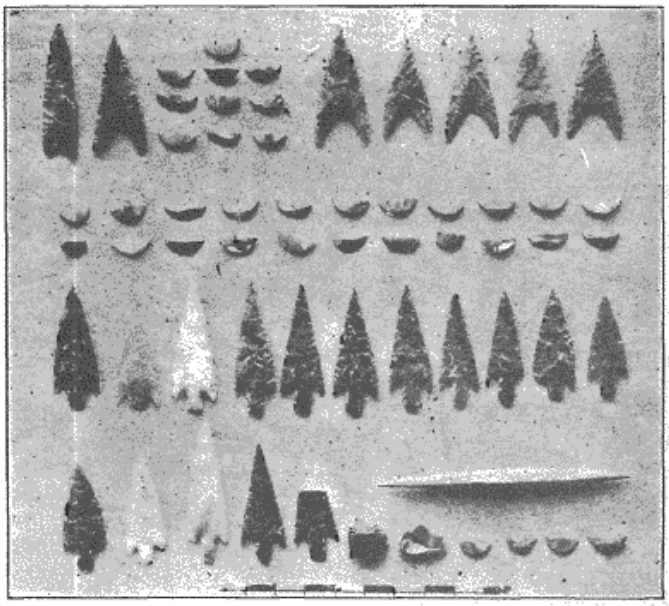
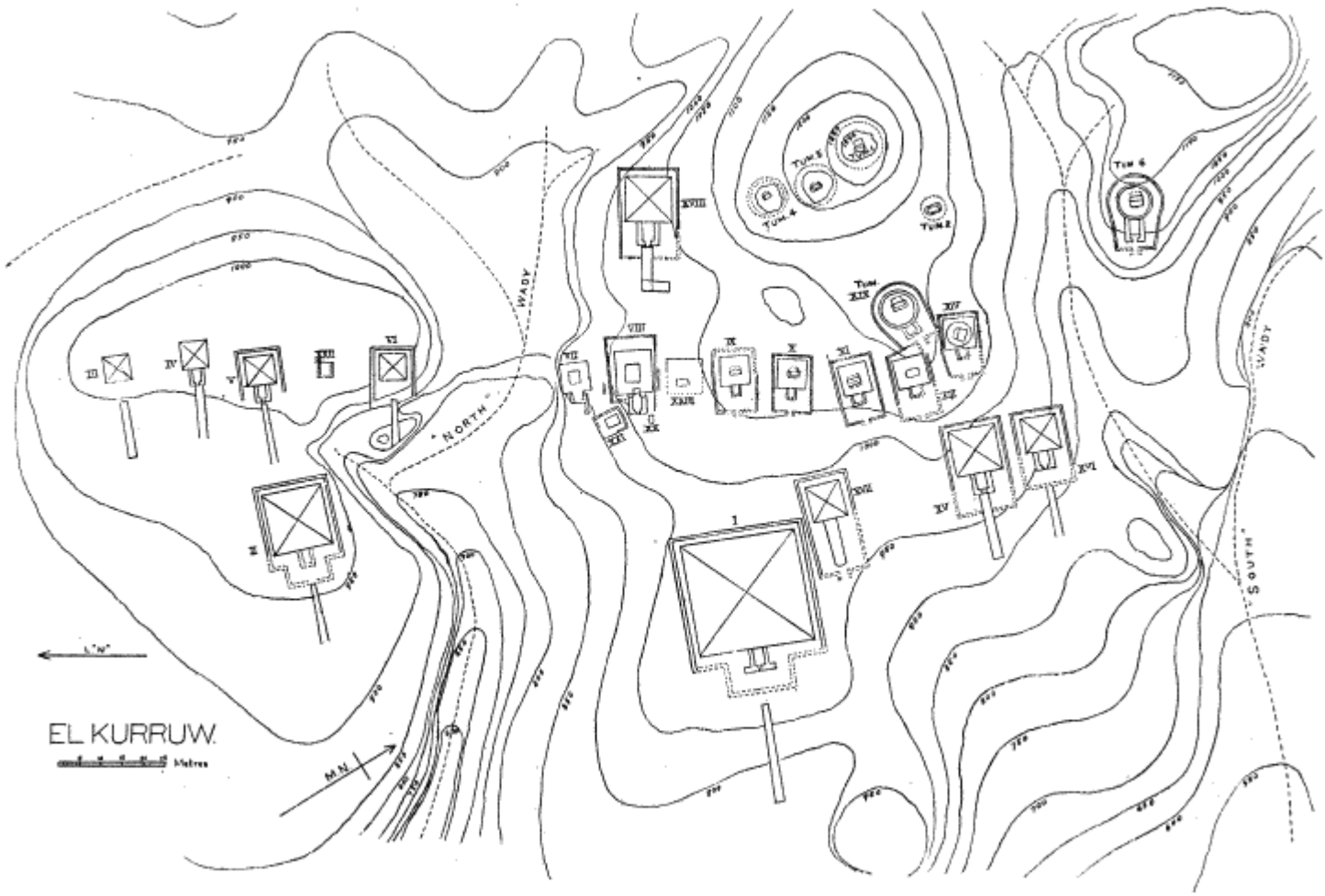


Fig. 1. — Flint and chalcedony arrow-points of Libyan types from the tombs of the ancestors of Piankhy.

Fig. 2. — Carved ivory and wood from the tomb of Shabataka, — a negro and a Libyan.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