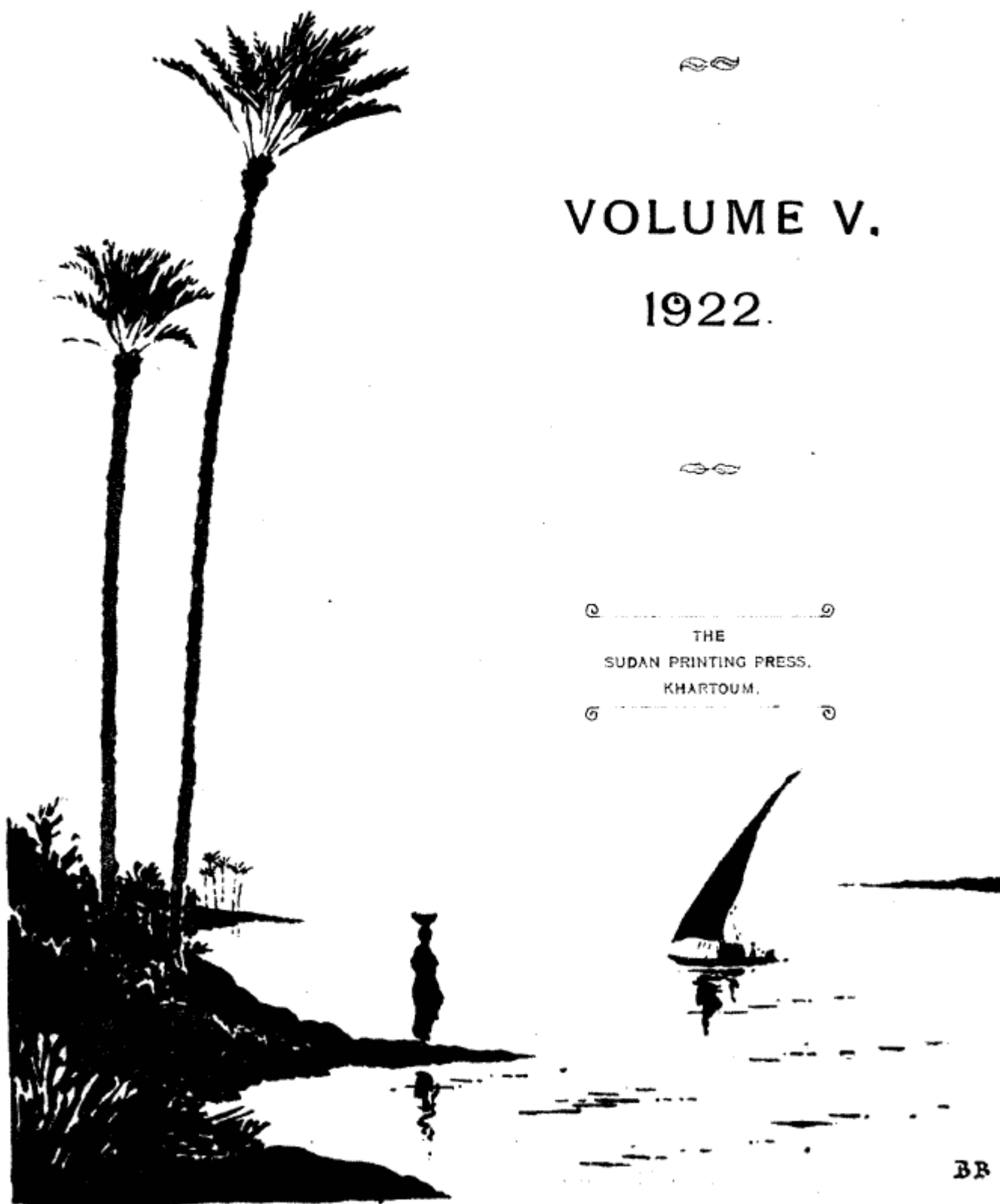


SUDAN NOTES AND RECORDS

VOLUME V.
1922.

THE
SUDAN PRINTING PRESS,
KHARTOUM.



BB

SUDAN NOTES
AND RECORDS

SUDAN NOTES AND RECORDS.

(FOUNDED 1918.)

Patron: **MAJOR GENERAL SIR L. O. F. STACK,** K. B. E., C. M. G.

COMMITTEE:

Chairman: **J. W. CROWFOOT***, C.B.E. — Vice Chairman: **W. STERRY***, C.B.E.

MEMBERS:

C. W. GRABHAM.

H. H. KING.

C. A. WILLIS, O.B.E.*

H. A. MACMICHAEL, D.S.O.*

E. N. CORBYN.

S. HILLELSON.*

HON. SECRETARY AND TREASURER:

J. A. DE C. HAMILTON, M.C.

* Editorial Committee.

All Correspondence and contributions should be addressed to the Hon. Secretary, SUDAN NOTES AND RECORDS, Khartoum.

The annual subscription including cost of four numbers post free is 50 P.T. or 10/6 and is payable in advance. Payment should be made by cheque drawn on the Khartoum branch of the National Bank of Egypt or The Anglo-Egyptian Bank Ltd., or by postal order, made payable to "The Treasurer, Sudan Notes and Records, or order."

Cheques drawn on Banks other than the National Bank of Egypt and the Anglo-Egyptian Bank, **Khartoum Branches**, should be made out at such amount as will cover the Bank's commission for collection.

Single copies of *Sudan Notes and Records*, price 15 P.T. (3/-) per copy may be obtained from the Secretary or at the following places:—

Khartoum: THE SUDAN BOOKSTALL;

THE VICTORIA BOOKSTALL;

Cairo: THE SUDAN AGENCY, WAR OFFICE.

London: THE SUDAN GOVERNMENT RAILWAYS OFFICE,

5, Northumberland Avenue,

Charing Cross, London, W.C.

CONTENTS.

	PAGE.
J. W. Crowfoot C.B.E. —Wedding customs in the Northern Sudan ...	1
R. Cottam — Observations on an entomophilous plant ...	29
H. A. MacMichael D.S.O. — Pottery Making on the Blue Nile ...	33
F. Addison and Dows Dunham — Alem, a Meroitic site ...	39
G. J. Fleming — Kassala ...	65
C. T. Madigan — A description of some old towers in the Red Sea Province	78
J. W. Crowfoot C.B.E. — A note on the date of the Towers ...	83
A. E. Robinson — The Mamelukes in the Sudan ...	88
J. E. M. Mellor — Natural History Notes ...	95
Lieut.-Col. C. R. K. Bacon, O.B.E. — The Annak ...	113
A. J. A. — The Southern Route to Kufra — told by Bidi Awdi the guide ...	130
J. W. Sagar — Notes on the History, Religion, and Customs of the Nuba...	137 —
F. A. Edwards F.R.G.S. — The Foundation of Khartoum ...	157
Prof. G. A. Reisner — The Pyramids of Meroe and the Candaces of Ethiopia	173
H. R. Palmer — A Bornu Mahram and the pre-Tunjur Rulers of Wadai ...	197
Yuzbashi Negib Eff. Yunis —Notes on the Baggara and Nuba of Western Kordofan	200 —
J. H. Driberg — A preliminary account of the Didinga ...	208
Notes :—	
Mongalla Province — Major R. H. Walsh, D.S.O., M.C. , — The Beri	47
Capt. A. H. Alban D.F.C. — The Langu ...	47
Khartoum Province — R. Cottam — A note on the Peregrine Falcon ...	52
Kordofan Province — ...	53
H. Dreams — ...	108
D. I. — Conspiracy against the Mek of the Shilluk ...	111

	PAGE.
Bahr El Ghazal Province — Capt. V. H. Fergusson O.B.E. — The Holy Lake of the Dinka	165
Darfur Province — R. Davies — Omens at Jebel Mun	169
R. V. Savile — A Zaghawa Custom	171
Sobat-Pibor District — The Ujang Tribe	171
Fung Province — The late Major C. H. Stigand — Notes on the Burun	223
W. A. D. and J. W. C. — Soap Making in the Sudan	224
Khartoum Province — A. E. Robinson — Ahmed Pasha Abu Udan	226
Nuba Mountains Province — D. N. MacDiarmid — Nuba Boys at Play ...	231 —
A Nuba Superstition	233 —

Scientific Research Committee :—

H. H. King — Note on the Origin of the Migratory Locust	54
G. W. Grabham — Abyssinian Cereals	104
R. E. Massey — Helminthosporium sp. on Wheat and Barley in the Sudan	105
The decline of cotton yield in Egypt	234
Notice of Publications	236

Correspondence :—

E. S. Thomas — Burial Customs	57
Rev. W. A. Crabtree — Bari and Nubian	58
R. Cottam — The Ruff	112
J. G. Bower — A Fellata Custom	173
S. Hillelson — The Nyangbara Language	173
C. R. K. B. — The Pibor River	237

Reviews :—

J. W. C. — A History of the Arabs in the Sudan by H. A. MacMichael, D.S.O.	61
S. H. — The Lotuko Language by Lord Raglan	105

Transliteration of the Arabic Alphabet

adopted by the Editors of "Sudan Notes and Records."

{ at beginning of word omit, ham- za elsewhere '	ذ	dh (coll. d)	غ	gh
	ر	r	ف	f
	ز	z	ق	q (coll. g)
	س	s	ك	k
ب	ش	sh	ل	l
ت	ع	s	م	m
ث (coll. t or s)	ح	h	ن	n
ج	ط	t	ه	h
ح	ظ	z	و	w
خ	ع	'	ي	y
د				

Vowels.				Diphthongs.	
fatha	a,	lengthened	ā	يَ—	ai (as in aisle)
kasra	i,	"	ī	وَ—	au (as in mauser)
damma	u,	"	ū		

The *j* of the article always remains *l*.

The silent *l* (ē) is omitted.

Notes.

1. The system is not applied to well-known names, such as Khartoum, Omdurman, &c.
2. The vowel sounds of *e* in "get" and *o* in "hot" with the corresponding long vowels (*a* in "gate" and *o* in "home") which occur only in the colloquial are expressed by *e*, *o*, *ē*, *ō*.
e.g. beled, Moḥammed, bēt (or beit), ḥōsh.

Ei may be used as an alternative to *ē*.

Patron : GEN. SIR L. O. F. STACK, K.B.E., C.M.G.

General Committee.

Chairman : J. W. CROWFOOT,* C.B.E.

Vice-Chairman : W. STERRY,* C. B. E.

Members.

E. N. CORBYN.

G. W. GRABHAM.

S. HILLELSON.

H. H. KING.

H. A. MACMICHAEL, D. S. O.

C. A. WILLIS, O. B. E.

Secretary and Treasurer : J. A. DE C. HAMILTON M.C.*

* Editorial Committee.

SUDAN NOTES AND RECORDS

SUDAN NOTES AND RECORDS.

(FOUNDED 1918.)

Patron : MAJOR GENERAL SIR L. O. F. STACK, K. B. E., C. M. G.

COMMITTEE :

Chairman : J. W. CROWFOOT*, C.B.E. — Vice Chairman : W. STERRY*, C.B.E.

MEMBERS :

G. W. GRABHAM.

H. H. KING.

C. A. WILLIS, D.B.E.*

H. A. MACMICHAEL, D.S.O.*

E. N. GORBYN.

S. HILLELSON.*

HON. SECRETARY AND TREASURER :

J. A. DE C. HAMILTON, M.C.

* Editorial Committee.

All Correspondence and contributions should be addressed to the Hon. Secretary, SUDAN NOTES AND RECORDS, Khartoum.

The annual subscription including cost of four numbers post free is 50 P.T. or 10/6 and is payable in advance. Payment should be made by cheque drawn on the Khartoum branch of the National Bank of Egypt or The Anglo-Egyptian Bank Ltd., or by postal order, made payable to "The Treasurer, Sudan Notes and Records, or order."

Cheques drawn on Banks other than the National Bank of Egypt and the Anglo-Egyptian Bank, **Khartoum Branches** should be made out at such amount as will cover the Bank's commission for collection.

Single copies of *Sudan Notes and Records*, price 15 P.T. (3/-) per copy may be obtained from the Secretary or at the following places:—

Khartoum : THE SUDAN BOOKSTALL ;

THE VICTORIA BOOKSTALL ;

Cairo : THE SUDAN AGENCY, WAR OFFICE.

London : THE SUDAN GOVERNMENT RAILWAYS OFFICE,
5, Northumberland Avenue,

Charing Cross, London, W.C.

Transliteration of the Arabic Alphabet

adopted by the Editors of "Sudan Notes and Records."

ا	{ at beginning of word omit, ham- za 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	‘	ي	y

Vowels.				Diphthongs.	
fatha	a,	lengthened	ā	اي	ai (as in aisle)
kasra	i,	„	ī	او	au (as in mauser)
ḍamma	u,	„	ū		

The j of the article always remains /.

The silent / (ḥ) is omitted.

Notes.

1. The system is not applied to well-known names, such as Khartoum, Omdurman, &c.
2. The vowel sounds of e in "get" and o in "hot" with the corresponding long vowels (ā in "gate" and ō in "home") which occur only in the colloquial are expressed by e, o, ē, ō.
e.g. beled, Moḥammed, bēt (or beit), ḥōsh.

Ei may be used as an alternative to ē ;

EDITORIAL NOTE.

The Committee have decided to issue numbers 1 and 2 of volume V. together under a single cover and the same procedure will be adopted in the case of number 3 and 4.

As will be seen from the present double number there is no reduction in the total amount of letter press issued and it is not proposed that there shall be any during the year: indeed the economy in clerical work which will be thereby effected, will, it is hoped, enable the Committee to illustrate papers rather more lavishly than before.

The main reason for the change is the difficulty we have experienced in issuing quarterly numbers at regular intervals owing to the absence of members of the Editorial Committee during the leave season, which resulted last year in considerable delay in the dates of publication.

We trust that the greater regularity in the dates of issue will justify in our reader's eyes the change which has been made experimentally for the present year.



An Ababde Bridegroom.

SUDAN NOTES AND RECORDS

Volume V.

No. 1.

WEDDING CUSTOMS IN THE NORTHERN SUDAN.

The wedding customs which I am going to describe differ in certain fundamental respects from those with which we are familiar elsewhere. They are customs which are only followed at a first wedding, and the words *bride* and *bridegroom* which I have used to translate the Arabic words *arus* and *aris* must be understood therefore with a difference, they really require the addition of the words *spinster* or *bachelor* to give the full meaning of the originals. Further, in the Sudan the consummation of marriage may be delayed for years and its failure would not annul the wedding as was the case in Western Europe. The wedding is completed not by consummation but by the acquisition of a house on the part of the newly married couple, and this house with all that is in it belongs in theory to the bride. The bride, moreover, does not, as with us, change her name on marriage: Fatma Bint Mohammed does not become Mrs. Hasan but remains Fatma Bint Mohammed to the end of her life: there is nothing corresponding to the old Roman *delectatio sacrorum* which underlies our Western marriage custom. The significance of the first of these differences is discussed below: I believe they are all likely to disappear in the future especially if the present drift away from polygamy continues.

My descriptions have been drawn in the main from four informants, one from each of the groups mentioned, and their accounts have been controlled and supplemented by reference to many other authorities, but it is not pretended that these accounts are complete or that differences in practice which have not been noted may not

exist in all the tribes in question. Where the same custom is found in more than one group I have given a full description in one case only, in order to save space and avoid repetition.

Arabic is the mother tongue of all my informants, and all, of course, are Moslems and claim an Arabian origin, but they are equally agreed in recognising the non-Islamic and old-fashioned character of their wedding customs. These customs are, as they say, customs which the people have chosen for themselves: they have no divine sanction. And the more intelligent among them also agree in believing that they are customs which their ancestors adopted after their arrival in this country. As such, these customs are fragments which have survived from a more or less forgotten past. In the following pages I am concerned rather with the fragments than with the whole to which they originally belonged.

I. Wedding Customs in Dongola District.

The home of the Danagla is a barren part of the country, and this is no doubt why so many of them have been forced to look beyond it for a livelihood. A few go down to Egypt yearly in search of domestic service but many more turn to the South as day-labourers, traders or settlers. This has long been the case; in the 18th. century Browne found a colony of merchants from Dongola established in Darfur, and the bulk of the townsfolk in Kordofan, especially at El Obeid and Bara, are of Dongolawi origin. On the rivers they have had to face more competition from the Ja'alin, the Ja'afra and others, but here too they form a large and prosperous section of the population, notably in Omdurman, Kamlin and Geteina. Many of the Dongolawi settlers in these towns have lost what small material interest they may once have had in their old homes, and have forgotten their Nubian mother tongue, but they still maintain themselves as a distinct element in the population and claim still to follow the customs which their forebears brought from Dongola.

The family history of my chief informant will throw light on some characteristic features of married life in this country. His father was a Bedeiri from Mansur Koti, the descendant of a line of learned Sheikhs. Like many of his race, the father knew how to serve both God and Mammon and got great wealth by means of trade. He had four wives, one in his home at Mansur Koti, one

at El Obeid, one at Omdurman and one at Sheikh Sherif, a village near Dongola. The first wife belonged, of course, to his own family: the other three continued to live with, or near, their own people in the places to which their husband's business as a merchant took him from time to time, and the children of these wives were naturally brought up among their mother's relations. My informant is a son of the wife from Sheikh Sherif, who came herself from a religious family, his associations are consequently all with his maternal kinsfolk and, although he has in fact inherited a few acres and some date trees on the paternal estate, his home is at Sheikh Sherif and he has married a maternal cousin. His case is typical of a number of the better families throughout this area, and shows how easily what are called 'matrilocal' marriage conditions arise, or survive, among trading folk like the inhabitants of these barren reaches of the Nile.

1. *Date of the Wedding.* After a marriage has been arranged and the business 'settlements' agreed upon, the choice of an auspicious date for the wedding is the first thing necessary. There is not here, as in some countries, one special season of the year in which weddings should be celebrated, but there are a great many periods distributed throughout the year which are regarded as unlucky. Nowadays certain days in the week and certain months in the Mohammedan calendar, notably the months between the two feasts, are avoided, but old-fashioned people pay more attention to the mansions of the moon, the twenty eight periods into which the solar year may be divided⁽¹⁾. Each of these mansions has its own special property, bringing good luck or the reverse, and it is in accordance with the traditional qualities of these mansions that the date of the wedding is fixed. To discover what date is most certain to ensure prosperity the parents must have recourse to one learned in the traditions and astronomy.

2. *Lailat El Henna.* A fortunate day having been chosen and the necessary preparations for entertainment on a lavish scale completed in each of the two households, the first public ceremony is the henna. This usually takes place at night. In the house of the bridegroom the mother of the bridegroom brings in a bowl of henna and the bridegroom sits down on the floor with his best

(1) See S. N. and R. Vol III p. 271 f.

man or *Wazir*, only women and children being present. Then a lucky woman, one who has been married once only and has borne several children, puts henna on the feet and hands of the bridegroom: the other women and children present generally dab themselves also with henna for luck, and there is the usual singing and dancing. Before he goes to rest, the bridegroom's hands and feet are bandaged so that the henna may not be rubbed off. In the house of the bride a similar ceremony is performed on her behalf.

There is a variant practice in some of the southern towns. Here the bridegroom, before he has been himself painted, rides out to the house of the bride. Her relatives produce a bowl of henna and the bridegroom himself has to put a ball of it in the hand of the bride. She is expected to show reluctance and hide her hand behind her back and her relatives help her to resist. When the bridegroom has been successful, all the others paint themselves with henna and he returns home where he is duly painted by one of his own women folk.

Some such ceremony is common all over the Mohammedan world from Morocco to Malay, but my best informants tell me that as a wedding rite it is an innovation in the Sudan.

3. *Jirtik*. On the afternoon of the day following the night of the Henna the ceremony of the *jirtik* takes place. This ceremony is the investiture of the bridegroom with the clothes and ornaments proper to his estate. What these are may be seen from the photograph of an Ababde bridegroom in Khartoum (Frontispiece). On his right wrist a silver bracelet and a blue or green stone bead, called the *jirtik*, threaded on a skein of red silk with a long tassel hanging from it: in this case a small ostrich feather has been stuck through the bead, an addition which is rare in Khartoum but common in the Nuba Hills at Talodi and Illiri. On the ring-finger of his right hand a silver ring with a large red stone in it. Round his neck four necklaces, one of black and white beads (*sōmit*) and gold beads, a second of red silk with the large tokens called *faragallahs* and a small one called a *bunduki*, a third also of red silk with a slip from a palm-branch tied to it—another rare addition, and a fourth of the usual rosary type, the *sibha*. Round his temples a handkerchief to prevent the unguents⁽¹⁾ with which

(1) Called the *darira*, and consisting of grease, powdered sandalwood and mahlīb. Described more fully below in Section II 2.

his head has been anointed from trickling down his face. A whip in his right hand and the unsewn *tōb*, a dress-length, complete the attire of this particular bridegroom, but he should properly be carrying a sword and the wedding garment of the well-to-do is of fine silk with borders such as only women wear normally.

The various ornaments are prepared beforehand by the womenfolk of the bridegroom: part of the preparation consists in dipping the beads first in milk 'to bring bright days' and then in *sirri'a*, *dura* soaked in water until it begins to germinate, 'to make the marriage fruitful'. Only women are present at the actual robing or investiture, which is performed by an old woman called the *bakhita*, a bringer of good luck. As she puts the necklaces and bracelets on the bridegroom she repeats some such phrase as the following, *B'ism Illahi, b'il mahla wa sa'da, wa b'il māl wa'l'a'yāl wa'l matmūr el kabīr wa'l rakūba el dalīla*, and the women present sing and trill.

After this the unguents already mentioned are put on the head of the bridegroom and also on the *Wazir's*, who is in attendance throughout this ceremony.

A similar investiture has taken place meanwhile in the house of the bride, and in both the two houses there is a feast for all the world and collections of presents⁽¹⁾.

4. *Lailat El Dukkha*. Up to this point the festivities have run on parallel lines in the respective houses of the bride and the bridegroom: the *dukkha* which takes place about midnight means the entrance of the bridegroom into the house of the bride and henceforth the interest is shifted to her house. A procession called the *sāira* is formed by the bridegroom, his best man and his boy and girl friends, the bridegroom riding and the others riding or walking as the case may be, with such show of torches and candles as they can muster. When they arrive at the house of the bride, they are met by her relations and welcomed into the courtyard in ceremonious fashion, the bride's father saying to them; "You go in and I go out", in other words, "the house is yours". In the courtyard the boys and girls separate and both parties are entertained by the friends and relatives of the bride. They spend the rest of the night talking together until it is announced, perhaps about day break, that the bride is ready for the next rite.

(1) See II 3, IV 1.

It should be noted that there is no opposition of any kind to the admission of the bridegroom's company, none of the mock fighting or bargaining which precedes their entrance elsewhere.

5. *Gata' El Raḥaṭ*. The next episode is called the breaking of the *Raḥaṭ*: it is the first public meeting of the bride and bridegroom and is often the occasion of a practical joke. The bridegroom is told that the bride is coming and there enter four or five figures all veiled and dressed alike, and the onlookers amuse themselves at the bridegroom's efforts to identify the bride. When he has discovered the right one, the *Wazīra* or chief bridesmaid takes off the red silk covering (*Garmāsīs*) which the bride wears over all and shows the *Raḥaṭ* and the various *jirtik* ornaments. The *Wazīra* next takes hold of seven tassels of the *Raḥaṭ* and puts them in the hand of the bridegroom who breaks them off, slaps the bride three times with them and throws them away. The bride then goes off to her own house with the *Wazīra* and her friends, and the bridegroom is left alone with his party.

The *Raḥaṭ* is the tasselled leather skirt, decorated as a rule with cowries, which is worn by little girls all over the Sudan: the symbolical meaning of the breaking of this girdle is therefore obvious—the bride puts away girlish things.

6. The four or five days following the breaking of the *Raḥaṭ* form a period of comparative suspense: the guests spend most of the time in dancing and other amusements and the bride remains in her own quarters except for an hour or two in the day which she may spend sitting, veiled, beside the bridegroom, watching the dances; in Dongola she does not dance herself. There is one game which is played more or less continuously throughout the whole period: it is called the *Gaid* or chains, and is played by the girls at the expense of the men. The girls go about with necklaces, bracelets and anklets, and try to slip one of them round the head or wrist or foot of any man they see: the man thus captured has to redeem himself by paying a forfeit which may be in money or in kind, and a rich man often on these terms supplies all the food necessary for a day's entertainment in the bride's house.

In the towns this game has been more regulated and is confined to a special day on which men of all sorts and conditions—*min fikh lil merrāsi*—are invited and appropriate entertainment provided for every class. After supper the guests sit down outside the

bridegroom's quarters and await the arrival of the women. The latter come in a procession, one holding a bowl filled with necklaces, bracelets and anklets, another a bowl full of water, while others carry perfumes and candles. Then a girl takes the necklaces and other ornaments out of the bowl and puts them round the necks, wrists or ankles of the men, and they have to pay a forfeit into the bowl of water before they can take their 'chains' off. The bridegroom has to pay first; one youth told me that at his wedding he had to put 80 P.T. into the bowl and the whole collection amounted to £E. 7. The bride herself takes no part in the ceremony, and the money is divided between the girls of the two parties: it may therefore now be regarded as a sort of thank-offering to them for their dances.

6 a. *Ḥadāna*. In the Southern towns a rite called the *ḥadāna* ⁽¹⁾ is repeated twice a day throughout this period of suspense. In the morning before sunrise when the sky is already flushed, the bride is brought in by the *Wazīra* and her other girl friends, and is seated on a mat beside the bridegroom, and her *garmasis* is stretched over the two of them. The two may neither move nor speak to one another but must sit in silent contact until the sun rises, their friends moving about and talking as they like. The same rite is repeated at sunset when the sky is again flushed and lasts until the first star is visible. Sunrise and sunset are known as the *ḥamārain*—the two reds, and the people think that spirits are particularly active at these periods,

7. *Visit to the River*. This period of rest is brought to an end on the afternoon of the sixth day by a procession, or *sāira*, to the river made by the bridegroom, his best-man and other friends. On the way the friends of the bridegroom display their prowess by baring their backs to each other to lash—the regular *buṭān* of the country. At the river the friends throw water over the bridegroom and his best man, and the latter retaliate. Then they cut palm branches with which to adorn the house and return home in the same way as they came. On reaching the home they find that a sheep has been sacrificed during their absence and that a pool of blood is lying before the entrance: they have to jump over the blood on entering.

(1) Not to be confused with the *Hadana* of the Baggara.

8. *Kubb El'Aish*. On entering the house they find the bride sitting waiting for them and the bridegroom takes his seat opposite to her, and a bowl of *dura* mixed with sugar and dates and spices is handed to him. He then makes a cup with his hands and fills them with *dura*, the bride puts her hands under his to catch the *dura* when he opens his hands: when the bride has caught the *dura* in this way, it is the bridegroom's turn to put his hands under hers and so they go on until the *dura* has changed hands seven times, when the bridegroom throws the last handful in the bride's face. During this the bridegroom repeats the local equivalent to 'With all my worldly goods I thee endow'—in Arabic '*Qana'tak b'ilsutra wal Qudra*'. Only women and children are present during the performance.

9. *Lailat El Gaila*. The evening following the last described scene is the beginning of the Seventh Night, which is the first night when the bride and the bridegroom are left together alone, and when the marriage may possibly therefore be 'consummated' but rarely is. What happens has been described to me as follows:

The *Wasira* and her friends lead the bride into the bridegroom's room. She is heavily veiled and round her waist has a cord very tightly knotted over her clothes: In the South she also wears the drawers which the bridegroom has been wearing until recently, and the cord is attached to these drawers: one by one the girls steal away until the bride is left alone. The bridegroom then gives her a present 'to open her mouth', but though she accepts the present she is not supposed to speak at least until the following night. The bridegroom next has to loosen the cord⁽¹⁾ round her waist and she must try to prevent his doing so: it may well take him the whole night to untie it, and if he cannot loosen it in any other way he cuts it. The girls meanwhile are listening outside the door all the time and if the bride yields too easily to the Bridegroom she is taunted thereupon by the girls in the village. She returns again the next night and perhaps on this occasion consents to remove her veil and to talk to the bridegroom and so on throughout the forty days the nights may be spent in agreeable converse. The 'consummation' of the marriage depends largely on the severity with which she has been circumcised: If this operation

(1) This may be compared with the Roman '*modus Hercules*' and the Latin phrase '*solvere zonem*'.

has been very severe, consummation does not take place at all during the forty days of the marriage ceremony, and the aid of a midwife is finally invoked for what is called the *tas-him*. In villages the *tas-him*, which may be delayed for a year or two after the wedding, used, I am told, to be itself the occasion of a domestic feast and rejoicing, but public opinion has changed not altogether for the better: many prefer being brutal to incurring a risk of ridicule.

Such, so far as I can discover, is the orthodox procedure, and it is hardly necessary to point the contrast between this conception of marriage and the conception current in Egypt, Morocco and elsewhere, where the exhibition of the nuptial sheet is the climax of the wedding rite.

In the South the bridegroom and his friends visit the river again on the day after the *gaila*.

10. *El'Ada*. On the Seventh day after the *Lailat El Gaila* the bridegroom goes round to the houses of his friends and neighbours, and demands from this one a chicken, from that a pigeon and so forth, in order that he may have plenty to eat during the remainder of his period of seclusion: if his demands are not at once satisfied, he takes the goods. I have not been able to learn of any name for this practice except *El'Ada*, the Custom.

The 'custom' corresponds to what is called the *Bashsha* in the South. This takes place about fifteen days after the *Gaila*: it is a visit paid by the bridegroom to the market to buy sugar and coffee and clothes as a present for the bride.

11. On the fortieth day the wedding ceremonies are over, the bride and bridegroom remove the *Jirtik* ornaments which they have worn hitherto, there is a great washing of clothes over the blood of an animal sacrificed at the door (compare § 7) (1) and a return to normal life.

12. In Dongola, as in many other parts of the country, the bride remains for at least a year in her mother's house, and sometimes for much longer. A separate house which in this part of the country is usually a single-roomed mud building with a little yard of its own walled off inside the big family enclosure, is built for the newly married couple and the possession of such a house

(1) This final sacrifice which is really an essential feature is often omitted nowadays.

is the outward and visible sign of their new estate: the bridegroom is now a *sīd bait*. As such he is not allowed to show any less deference to his father, to sit down unbidden in his presence, for example, and he has no control over the domestic economy of the new household which normally remains in the hands of the bride's mother⁽¹⁾, but the change in his status is very real as will be realised by anyone who knows how his life has been ordered hitherto. In a well-to-do home until a child is old enough to "understand things", say until he is three or four years old, he sleeps in the same room as his parents but after this decorum requires that he shall be sent elsewhere at night. If, as is commonly the case, a widowed or divorced grandmother is living in another subdivision of the family home, he spends the next three or four years in her charge. At the end of this period of training he is sent off to sleep with the other boys of the family in the subdivision which is set apart for guests or, if there is no such place in the family compound, he may go to the village guest room, which may also be used for a village school, and there he remains until his marriage entitles him to a quarter of his own.

13. If, as is often the case, the house is a new one, built specially for the bride and bridegroom, an auspicious day must be chosen for the beginning of the building, an animal sacrificed and prints of hands daubed over the walls, but these are not peculiarly wedding rites: the same things would be done whenever a new house is built, they are like the things a wise man does when he puts on a new garment (spitting, making "tff" or spilling water).

II. Wedding Customs in a Ja'ali Village.

The following account was given me by a man of the Jūdīlāb section of the Ja'alīn, whose home is on the West bank of the river opposite the station of Um'Alī. The customs are very like those of the Rubāṭāb⁽²⁾, but bear a strong family resemblance also to those of the Danāgla.

1. Date. My informant said that almost more importance was

(1) The bride's mother should supply at least all the grain that is wanted during the first year of wedded life.

(2) See S. N. and R. Vol. I p. 124.

attached to the time at which the wedding contract was signed than to any other part of the ceremony: the contract must be written not only in a fortunate month and on a fortunate day but also at a fortunate hour. If this precaution is taken, the contract may be written years before the wedding takes place, though it *may* be postponed until the bridegroom has entered the bride's house. After a formal engagement has been made, whether the contract has been signed or not, the bridegroom avoids the bride and her mother.

2. *Jirtik*. This takes place before the wedding feast in the bridegroom's house. Early in the day they send for a barber with a lucky hand, a man, that is, whose parents are both alive or who has many children or much wealth. He shaves round the heads of the bridegroom and his best man or *wasir*, leaving only a little hair on the top of the head (*ḥafḥafa*); he is then paid and departs. In the afternoon the bridegroom, with sword and whip, and his *wasir* take their seats on an *'angarib* covered with a coloured mat. Men are excluded from this ceremony, and a woman with a lucky hand is chosen to invest the bridegroom. The ornaments are practically the same as those in use in Dongola, except that an ostrich feather and the vertebra of a fish are also strung on the red silk, and some gold object *must* be worn round the neck: a man who has not got a blue stone (the *kharasa*) in his own family borrows a 'lucky' one from some-body else. The *darīra* is made in three layers, the first of grease (*dihīn makarkar*), the second of *maḥlib*, the third of powdered sandalwood, and is pasted round the head to form a sort of cap beneath which a handkerchief is tied. The whole ceremony may take three or four hours and during it the girls sing in praise of the bridegroom and his family a song called *benīna*, like the *Sūmār* among the Rubāṭāb. A similar ceremony goes on in the bride's house.

3. The next day a feast is held in the bridegroom's house: this feast is called the *Kifaya* and is followed by a collection, called the *Mi'wān* or Assistance. Men and women are entertained separately and the bridegroom does not appear.

4. The *Saira*. In the evening the bridegroom sets forth in procession to the house of the bride, followed by all his guests, including his parents. The procession halts every few minutes for

the usual dancing and clapping of hands but no visit is paid to the river or to a Sheikh's tomb (1).

5. *Entrance*. In front of the bride's house they are met by the girl friends of the bride, who jeer at the bridegroom and declare that he is unworthy of the bride, and his girl friends retort in the same tone about the bride: this is called the *nebas*. At the door itself there is a struggle between the boys of the two parties, and payment has to be made by the bridegroom's followers if they are not strong enough to force their way in. It is probably about midnight when they enter and the visitors are then duly entertained, and if the contract has not been already signed and if the stars are auspicious it is signed now.

6. *Gaṭa' el Rāḥaṭ*. This takes place the next day and does not differ from the Dongolawi custom.

7. The next night the bride is taken by her *Wazīra* after midnight to see the bridegroom and left alone with him for about an hour. During this time whenever the bridegroom makes any advances towards her, she has to utter a peculiar cry called *ghanj*, which she has been taught to make just as she is taught to dance. This meeting was called the *dukhla* by my informant.

8. *Yūm el Gaila* or *Yūm el Sabū'*. The three days following the *Dukhla* are spent quietly: there is no *Gaid*, no *Ḥaḍāna* (2), no visit to the river, no *Kubb el 'Aish*. On the 7th. day the bridegroom kills an animal called the *Ḥulāla*, which is eaten by the girls only, and then the bride and her maids come to the bridegroom's apartment and dance, the bride herself dancing a special dance before the bridegroom. They depart after the dance and the bride returns again late in the night and behaves as at the *dukhla*.

9. For the next forty days the bride spends her nights alternately with the bridegroom and in her mother's quarters, but is not supposed to speak a word to him even if she has already received the usual gift. When the forty days are over they both wash their clothes and take off the *jirtik* ornaments, and for a year at least the bride remains in the same place.

(1) In some Ja'ali villages, however, such visits are paid.

(2) The *Hadana* is, however, practised in some Ja'ali villages,

III. Wedding Customs among the Southern Maḥas.

There are two sections of Maḥas in the Sudan; the Southern half of Halfa Province is called the district of Maḥas and contains the seat of the King of Maḥas, but there are also large numbers of Maḥas who have been settled for two or three centuries at least in the villages round Khartoum. The Northern Maḥas still speak Nubian, the Southern Maḥas speak Arabic. The former go down to Egypt in numbers as servants, the latter are cultivators or men of religion. The wedding customs of the two sections differ very considerably. In the North, the *jirtik* ornaments have been reduced to a single necklace with a *Sōmīt* and gold beads and this is often tied on days before the wedding begins: there is no breaking of the *Raḥaṭ* because *Raḥaṭs* are no longer worn in this district: the *Kubb el 'Aish* on the other hand still survives, and Egyptian influence, which I regard as responsible for most of the changes, has not yet led to the bride being taken away from her own house. In the South customs differ somewhat from those we have already described, but they belong obviously to the same general class: the most striking difference is in the time of the *jirtik* which takes place on the seventh day instead of before the procession to the bride's house, a difference I have noted also among the Shaigia and in parts of Kordofan. The following description was given me by a native of Burri near Khartoum.

1. Festivities begin in the bridegroom's house with feasts for three successive nights off a mixture of *dura* milk and sugar, called *Bōsīb*, and then the *Lailat el Hinna* is celebrated.

2. *Dukhla*. The following evening a bundle of grass⁽¹⁾ is fixed in front of the bridegroom's house and the procession starts forth chanting the '*Adīl wa Zein*': they are admitted in the bride's house with cries of joy. The breaking of the *Raḥaṭ* follows almost immediately after; the bridegroom has to pay an entrance fee before he sees the bride who is still in her mother's apartment, she dances before him and he is addressed by the girls as '*Bakhīt 'Abd el Banā'*' and told that he must now obey their orders and say how much he loves the bride. The *Raḥaṭ* is then broken in the usual way.

(1) This is probably to be interpreted as a symbolical boundary, see Van Gennep, *Les Rites de Passage*. p. 22.

3. On the next day in the morning there is a *gaid* of the type already described, and in the afternoon the bridegroom and his friends go in procession to the river, dancing, singing and flogging each other. At the river the bridegroom dips his hands and feet in the water and his *Wazir* cuts a palm-branch for the new house: they then visit the bridegroom's mother and after drinking in her house return to the bride's house.

4. A similar procession to the river and the house of the bridegroom's mother is made on the day following, but on his return to the bride's house the bridegroom finds a pot of porridge (*bahla*) standing near the door: this he breaks with his sword and the boys with him smash up the fragments. After they have fed, the bride is led to the bridegroom's hut, (their previous meeting having taken place in her mother's rooms, paragraph 2) and the manner of her leading is regarded as a great jest, it is called the *gaid ḥarrān* or 'chaining of the obstinate'. Some old women lead the bride to the door of her mother's house and say 'We ask you to step forward in the name of Sheikh Khōgali': when she hears the name Khōgali she advances two steps. Then the name of another Maḥas sheikh is mentioned and she takes another two steps forward, and so on until she gets near the house where the bridegroom is waiting. Then the name of the bridegroom is mentioned in place of some other sheikh and she at once retreats two steps. When at last she reaches the house, she is seated on an '*angarīb*' and is given a mirror and told to look at herself. As she is doing so, the bridegroom also looks in the mirror and she instantly veils herself again.

5. There is then the usual period of comparative suspense, lasting in this case for four days, and on the seventh day after the *dukhla* the womenfolk of the bridegroom bring the *jirtik* ornaments which they have previously dipped in milk and *sirri'a* as in Dongola. The investiture generally takes place about mid-day and in the evening all the guests depart except the old women who are being entertained by the bride: they ask the bride's mother to send her to the bridegroom and she is led by her *wazira* to her room for the *ḥall el ḥizāmīya* or loosening of the girdle.

6. On the 15th. day after the *dukhla* the bridegroom is expected to make a liberal distribution of meat, vegetables, fruits, candles,

sugar, rice and tea to the girls of both parties: this is called the *bashsha*.

7. During the next week the bride's mother sends a present of meat, rice and so forth to the mother of the bridegroom, who is expected to give the girls who carry the present to her a liberal reward, say £E. 2 or £E. 3. The present is called the *kortomeil*.

8. The same rules are observed during the first year after the wedding as among the Danāgla.

IV. Wedding Customs among the Shaigia.

The Shaigia are a cheerful folk and their wedding customs are the natural expression of their temperament. One finds among them many of the same elements which appear in the weddings of other tribes but the key-note is quite different and there are lighter variations. Young girls go about in this district with perfect freedom, marriages are consequently arranged by the young people themselves and are preceded by a regular courtship: there is no question here of any "avoidance" between betrothal and wedding or of any period of silence on the part of the bride during or after the marriage.

1. Here, as elsewhere, a *fikih* who is learned in the stars is called in to advise about the date, and here too some days before the wedding there is a feast, called the *bōsh* ⁽¹⁾, in the house of the bridegroom at which his friends bring gifts of money: a scribe enters the amount of each gift in order that the correct sum may be given in return.

2. The great day is the day on which the bridegroom enters the house of the bride, and on this day before he leaves his own house he sends a pair of his nether garments round to the bride.

The *saira* begins about night-fall with a visit to the tomb of one of the local sheikhs and with the offering there of a handful of dates or a few small coins.

When at last the procession reaches the bride's house, the bridegroom first rides seven times round the house and if, as is usual, the maids of the bride bar his entrance, he has to give them a present before he is allowed to go to the apartment which has been built, or at least set apart, for his future residence.

(1) A word I have also heard on Tuti Island (Khartoum Province) and in Kordofan.

The bride now comes in attired for the breaking of the *raḥaṭ*: she is wearing the garment which the bridegroom has previously sent her and also a *Tennura* wound over the *raḥaṭ*, so that the bridegroom has some difficulty in getting hold of the *raḥaṭ* and generally needs the help of his *wasīr*. When he has finally broken it he slaps the bride with it for luck and her friends throw water at him and his helpers. Then suddenly the light goes out, and in the darkness naturally the fun waxes fiercer: "What maidens loth? What mad pursuit? What struggle to escape?" the grooms seek their fortune among the bridesmaids, and the bridesmaids try to protect the bride. When they have had enough the lights are restored and the bride goes off to her mother's apartment.

3. The bridegroom then goes out with his friends to the river or the desert to collect some greenery, either grass or leaves of the *sellim*, and on his return finds a *shamla* (rug) spread in front of the house. He and his friends kneel in a line on one side of this and the girls kneel in a line opposite to them. One of the girls produces seven dates and asks the bridegroom to eat them and give her back the stones. This over, she asks him, *Enta teis walla 'aneis?* and he replies, *Ana tōr* (or *'Igil*) *wa gurni Gabaḍ* (1). Then the bride is brought back again and she advances dancing to meet the bridegroom who pours all the green leaves he has got over her head, clasps her round the waist and with his lips draws her lower lip into his mouth with a fine show of passion. The bridesmaids then step forward to the attack and seize his forehead from behind until they force him to release hold of the bride's lip. After more clapping and dancing the bride goes away to her mother's house and stays there for the next three days.

4. On the fourth day the bride's mother sends for the *ḥagg el ḥizāmiya*, the payment for the loosening of the bride's girdle. The *wasīr* takes the money from the bridegroom and carries it to the mother, who hands over the bride: the *wasīr* throws the bride over his shoulders and goes off with her to the bridegroom. Then he discreetly withdraws and the bride and bridegroom are left together for the next three days.

5. The seventh day is the day of the *jirtik* or, as it is often called, the *rubāṭ*. On this day the mother of the bridegroom comes

(1) Question, are you a he-goat or a nanny? Answer. I am a bull with a lusty horn.

to visit him with a necklace called the *muṭrag*, a string of gold beads with a *sōmīt* in the centre, a silver bracelet and a ring, which have been dipped before in milk and *sirri'a*: an old woman with a lucky hand puts them on the bridegroom and they give him some milk to drink. The bride all this time is sitting on an 'angarīb hidden behind an erection of mats which is called a *kujra*. When the bridegroom has been properly invested, his father enters and presents him with a cow or a date-tree. The bride, it should be noted, wears no ornaments because, I was told, anything she wore would be certainly broken in the rough and tumbles' which recur throughout the wedding ceremonies.

6. On the fifteenth day the bridegroom and his *wasir* go round the neighbours' houses demanding presents from them for the bride.

7. On the thirtieth day the wedding is considered to be over: the bridegroom gives the ornaments he has been wearing to the bride and goes about his ordinary business. He 'avoids' his mother-in-law only for a month or two, and the length of time that he and the bride remain in the house where they were married varies considerably. The *tas-him*, if it is necessary, may take place a year or even more after the wedding and is the occasion of another gift to the bride: 40 P.T. was mentioned as a common amount for this gift.

The red silk tasselled wristlet which is so common elsewhere in the Sudan is worn among the Shaigia only at the *rubāt El ḥimla*. The *darīra* on the head, on the other hand, is essential to the bridegroom on each of the three principal days of the wedding.

These wedding customs are common, I was told, also to two of the neighbouring tribes, the Ḥasāniya and the Monāsir.

V. A Parallel from Eritrea. *Boyo*

The Eritrean tribes whose wedding rites present striking resemblances to the Sudanese rites just described, are the Mensa with their sub-tribes the Bet Ebrahe and the Bet Shakam, the Red and the Black Marea, the Bet Guk and the Bilen or Bogos⁽¹⁾. Some are Christian and some Mohammedan and they are for the most part

(1) Littmann, Publications of the Princeton Expedition to Abyssinia, Leyden, 1910 pp 121-147.

pastoral people who practice some agriculture (1). They circumcise their women in the same way as the 'Arabs' of the Sudan and this custom delays the consummation of the marriage (2) as it does sometimes in the Sudan (1.9). For convenience of reference I will number again the paragraphs in which the various episodes of the wedding are described: the pages quoted in the text are pages in Littmann's text.

1. When the betrothal ceremonies have been completed and the two families wish the marriage to take place, they fix the date in accordance with the appearance of some constellation, and each family in its own precinct begins the wedding dances a week before the constellation: during these dances the praises of the two families and their ancestors are sung (L. 130, 131.)

2. The girl and the boy both drink bitter drinks of laxative effect and do not eat very much: they rest and beautify their bodies. After this when only two days are left before the constellation, they both undergo the ceremony of *samid*... The boy enters the night before the morning on which he celebrates the *samid*, into the house of a first wife (a lucky person therefore) and passes the night in the house. The next morning the woman rises before the birds begin to warble and puts the clothes on him in which he celebrates and slides a bracelet, on his right wrist, and around his neck a string of white and black beads and silver necklace or a string of white beads. And the boy dresses in a new robe and breeches with lace trimming or a white skirt with red stripes; he puts shoes on his feet and dresses in a waist-coat of silk or of spun thread. And from now until his forty days are over he carries a sword and a whip and puts a ring with a stone and a simple ring on his hand; furthermore from this time, he paints his eyes every day with antimony and rubs '*Ellam* (*impatiens tinctoria*) or *henna* (*Lawsania inermis*) on his finger (nails). And from this time until his forty days are over, his best friend stays with him and they have their meals together'.

3. 'And his other friends come and they go together down to a river, and the bridegroom bathes. Moreover, they unbraid his headdress for him and he is combed; or if he has no braided hair, he

(1) Handbook of Abyssinia, 1917, I pp 118, 119.

(2) Littmann p. 148. In nuptiis femina quaedam puellam cultro aperit neque ante diem quadragésimum coniunx ei appropinquat.

is combed only. In this way he goes down to the river and bathes until the day of wedding, and he is called a bridegroom.' (L. p. 132.) The girl is decked similarly though more elaborately, and she too goes down to the river and bathes.

4. 'During the days of the *samīd* the people of the boy, or the people of the girl,—if they have a drum—each one of them beats his drum before the birds sing.' L. p. 133.

5. The next episode is the nuptial procession to a special nuptial hut which is built near the bride's village. The groom invites his friends and the best friend of the groom rides with him on the same mule and holds a shield over his head. And their handmaids—if they have such—gird themselves and procede with them. If they have a drum, they procede with it and march beating it. Furthermore, musicians march with them playing the flute or the violin—or the trambone and the harp. And the people of the procession sing the *hoyra*'. (p. 134). Littmann gives an example of the *hoyra*, which is sung in alternate lines by a leader and chorus like the corresponding wedding march in the Sudan, the '*Adil wa El Zain*', but he adds a note—'The people do not understand the meaning of these songs. Several of the words seem to be corrupted Tigrinia words and it is not impossible that most of the songs come from the Tigrinia country, and were handed down without being understood and so altered considerably'—a proof anyhow of their antiquity.

The procession is welcomed by the people of the girl's village, there is no mimic battle, and the bridegroom and his best friend enter the hut. All are entertained there and the night is spent in eating, drinking and dancing (L. p. 136.)

6. Then follow two or three episodes to which there is no close parallel in my notes : first, the 'meal of the covenant', the bridegroom tasting a little food prepared by the bride's mother : second, a procession of the bride gifts between the hut and the bride's house in sight of all people : third, the 'mendeq sacrifice', the sacrifice of an animal at the door of the bride's mother and the burial of the bones of the victim on the spot 'in order that this may be a symbol of rest and happiness for their daughter', a symbol, we may remark, which would be much more appropriate in a community based on matrilocal custom. (L. pp. 137, 138).

7. Next comes a ceremony which seems to take the place of the *gaṭa' el raḥaṭ*, but it is at once the first meeting of the bride and

bridegroom and also the farewell of the bride not only to her girlish state but to the members of her family. The bride makes an elaborate toilette and the two families of her father and her mother sit outside the door, and their friends come in to say farewell. Then come the friends of the bridegroom dancing: they take the bride's gifts away and carry her to the nuptial hut and put her by the side of the bridegroom: outside the hut on opposite sides sit the friends of the bridegroom and the family of the bride, and the father of the bridegroom himself asks the menfolk of the bride for their blessing. (L. p. 139).

8. The departure of the bride to the village of the bridegroom where another special hut or tabernacle has been built, follows: she makes the journey riding on a mule not with the bridegroom but with the best man, and neither she nor the best man speak or eat or drink on the journey. Although the episodes which follow are not closely parallel to our wedding customs here, they provide some supplementary information which will throw light on the ideas underlying both, and some further extracts may therefore be made.

9. On the day of their arrival or the day after, the bridegroom and a boy called the *Wad Sembel*, that is, the son of the wedding-gift, sit at the door of the tabernacle: they are undressed and washed in water mixed with sprouting corn and *asal*⁽¹⁾ in the bride's palm leaf bowl and the groom is dressed in the bride's cloak. If he is a Christian, a priest cuts off some of his hair and puts it in the water. Then the groom after receiving presents from his relatives enters the bride's hut. "A first wife changes the clothes of the bride and braids her hair. Therefore her nurse brings her water and food; and she tastes a little without taking much, and continues in this way until her fortieth day".

For five days the friends of the bridegroom live with him at the expenses of his mother, exactly the same period as among the Rubāṭāb and others in the Sudan (S. N. and R. I. p. 126), and on the fifth day they go out early to collect wood for the future fumigation of the bride. They then cut up some of the leather which the bride has brought with her into strips to make sandal-straps: each friend receives a strap and after dinner they make their last gifts to the bridegroom and tell him they have made new friends with each other,

(1) I cannot find the explanation of this among my notes, but it is given in Littmann.

and so depart. The best man and the *wad sembel* remain eating and sleeping with the bridegroom the whole forty days.

10. During the forty days the bridegroom makes four visits to the river : after the first *asal* bath he goes out, closely wrapped up, with his friends and sits down with the *wad sembel* at his feet by the river : his friends undress them, fill a palm leaf bowl with water and pour it over them seven times. The second visit is made after 20 days and water is again poured over the two but for twice seven times : on the third visit, after 30 days, the pourings are thrice seven and on the fortieth day water is poured seven times seven over the pair. (L. p. 142. l. 7).

11. Throughout the forty days the bridegroom should not leave his house at night, 'lest he see the stars or they see him' : he does not pass the night elsewhere, does not go on a robbing excursion, does not work, does not sit in a council in order not to hear a wrong judgement or an oath, does not go to a funeral. Wherever he goes, the *wad sembel* goes. On the fortieth day at his last visit to the river he has his clothes washed, and on this day he rises at dawn takes off the sword, the whip, the beads, the silver necklace and the bracelet and puts them on the bedstead. Then he goes out and sits down at the Council place. (L. p. 144).

12. The bride lives in seclusion for a year at least after the wedding : for a long time she does not speak at all to the bridegroom and when they do at last speak a feast is made. Throughout the period of her retirement she talks only in a whisper, calls by knocking and avoids pronouncing the names of her husband, his elder brothers and sisters and her fathers-in-law and mothers-in-law (the men and women, that is, of the older generation) and generally does not speak to them at all. (L. p. 145).

VI. Preliminary Comments.

The wedding customs which we have just described are closely related to one another. Indeed, anyone who considers how ritual tends to vary when it is not regulated by a written rubric, will admit that customs which correspond so closely must be derived from a common source. There is, however, one great difference to be noted between the Eritrean customs and those in the Sudan group : in the former the bride is taken away by the bridegroom early in the

proceedings, in the latter she remains with her own people throughout the lengthy wedding rites and for a long period afterwards. In one of the two groups present practice therefore represents a compromise between two different theories: I incline to think that the early departure of the bride is the new element in these customs, and that the Sudan group preserves the older character, but this is a matter of opinion only: the Eritrean record, on the other hand, contains many primitive details which supplement and explain much in the Sudan customs. Among the Shaigia also strange elements have been introduced, but these I do not propose to discuss at present.

In the Sudan the area over which the *jirtik* wedding, as it may be called, is prevalent, extends beyond the limits already described over the greater part of Northern and Central Kordofan along the Blue Nile and the White Nile so far as Mohammedanism has spread and among the Beni 'Amer (1). It does not exist so far as I know among the less sophisticated Baggara tribes in the West, nor among the Nomad Shukria, nor among the Bedawi-speaking tribes in the Northern Sudan, nor among the Berberin between Sukkot and Aswan. It would not be difficult to suggest reasons why these customs have spread so far and not further, but it seems more profitable to look first rather more closely into the nature and meaning of these particular customs.

I will begin by recapitulating the principal features of these weddings.

The wedding must be begun at a moment when the heavens are propitious: it should last nominally for forty days but the most important rites take place in the first seven days, such as the investiture of the bride and bridegroom in the *jirtik* insignia and the breaking of the bride's girdle. Both bride and bridegroom retain the *jirtik* insignia throughout the forty days, and throughout this period they are hedged about with various restrictions, they may not change their clothes for example. Moreover though the tone of the whole proceeding is festive, the behaviour of the bride to the bridegroom is cold if not hostile, and the sexual relation which is often the climax of marriage rites has no necessary place at all in this scheme of

(1) See S. N. and R. Vol. II p. 74, vol. III p. 293, also Munzinger, *Ostafrikanische Studien*, 1883 p. 323.4. The variant features, however, are numerous.

things. The parents play a very minor part (1) and appear on the scenes chiefly when they are wanted to contribute towards the expenses of the feast: a much greater part is taken by the best man the grooms and the bride's maids. Here, as elsewhere, there are wedding presents and rites which may be meant to ensure the good luck and fertility of the marriage.

Of these features perhaps the most interesting both in Eritrea and the Sudan, is the *jirtik* Ceremony. As I have previously pointed out a similar ceremony is performed here at circumcision and in the seventh month of a woman's pregnancy, (2) and used in former days to be part of the ceremonies at the coronation of a king: indeed the connection between these customs has passed into a proverb, "The son of the Arabs is a king on the day of his circumcision and the day of his wedding". About the meaning of the ceremony, native opinions differ much more than about its importance. Some natives will tell you that each ornament has a special virtue: for example the bridegroom whose photograph has already appeared, told me that the slip of palmwood was a protective charm against water-spirits, the gold coins against spirits who might have followed anyone he met who happened to be coming from a grave-yard, and the blue stone on the *harira* a charm against the *Mushahera* an "illness" to which one is liable at the times of birth, circumcision and marriage. Beliefs or rationalisations of this kind are of course common all over the world, but people in this country have generally advanced to another stage: they don't attach particular importance to each separate amulet, but they do believe that some misfortune will befall them if they omit to wear any of those which are customary in their tribes. Others, of course, attach no more specific significance to them than we do to the long veils which are worn in Western Europe at Christenings, First Communion weddings and the receptions of nuns: to such these ornaments are simply the customary badges worn at weddings, circumcisions and the seventh month ceremonies.

But so far as marriages are concerned, the feature of most significance is that the *jirtik* ornaments are worn only once by a boy, namely, on his first wedding, and only once by a girl, on her first wedding, whether she be marrying a bachelor or not. No

(1) In modern Macedonia parents are not supposed to attend their children's wedding service (Abbott, *Macedonian Folklore*, Cambridge, 1903, p. 177) and a similar prejudice survives in parts of Norfolk and Suffolk.

(2) S. N. and R. II, pp. 186 foll.

one can be a bridgroom, an '*Aris*, or a bride, an '*Arus*, more than once. Even though the marriage may never have been "consummated" at all, a man never puts on the *jirtik* ornaments a second time however many women he may marry. Nor does the death or divorce of his wife even if still a virgin affect the essence of his status. (1)

This fact marks the *jirtik* wedding in the Sudan as being in its nature something different from weddings as we understand them in the West, it marks them as falling into a class of ceremonies known as rites of transition, *Rites de passage*.

The theory of these rites is somewhat as follows: life in a community is divided into a series of well-marked stages and the passage or graduation of a member of the community from one to the next above it requires the performance of certain rites. Rites during pregnancy may be considered as marking birth which is the passage to life: circumcision rites correspond to the passage to boyhood, wedding rites to the passage from childhood to adolescence and funeral rites to the passage to the beyond. All these rites, *qua* rites of passage, have much in common with one another and a French Anthropologist, Arnold Van Gennep, (2) has shown that generally three distinct steps or grades can be distinguished in them; preliminary rites in which the novice after due preparation takes leave of his former estate and enters the threshold of a new estate: a liminal or marginal period of some duration, in which he is so to speak on the threshold and exposed to special dangers: and, thirdly, the rite of final graduation when he is accepted in the new estate and puts away the various attributes he has worn in the marginal period. It seems to me clear that a similar plan or scheme can be traced in the Sudanese wedding rites. There may be some difference of opinion as to the significance in the scheme of particular rites and as to the exact place in the ceremony at which the dividing lines between the stages should be drawn, and there is an important addition or qualification to be made. These, however, are details of little moment compared with the light thrown by Van Gennep's scheme on the meaning of the more important elements in the ceremony and of their sequence.

(1) It is for this reason probably that the ceremonies at divorce are so very simple.

(2) *Les Rites de Passage*, Paris, 1909.

The *jirtik* or *samid* and the *henna*, where it occurs, are obviously rites of preparation before the first breach with the old estate begins: so too in Eritrea is the purging of the bride and bridegroom which is like the fast which devout Christians observe before communion.

The procession of the bridegroom from his father's house in the company of the friends of his boyhood, who gradually leave him during the next few days, some after the *dukhla*, others on the *lailat el gaila*, are rites of separation. The absence of his parents or the relative insignificance of the part they play, is the natural consequence of the underlying conception: they do not belong to the class which he is leaving and have therefore no function to perform on this occasion.

The bride meanwhile has been "prepared" in the same way as the bridegroom, and the breaking of the *rahat* is obviously a rite of separation, a ritual removal from the class to which she has hitherto belonged.

The struggles and protestations which sometimes take place at the entrance to the bride's house, the fees and forfeits paid by the bridegroom or his friends, the temporary disappearance or resistance of the bride, have been explained as survivals of "marriage by capture" but for the general existence of this as an institution there is very little evidence, and Van Gennep⁽¹⁾ is probably right in regarding them all as expressions of the same idea of separation either from a class group or from a family group.

This completes the preliminary period, the four or five days of suspense in which the bride takes no active part are to be regarded as a marginal period, the curious ceremony of the *ḥadāna* being typical of the general character of marginal periods.

So we come to the seventh day, the day on which after certain rites both bride and bridegroom are left together alone for the first time in their new house. The rites on this day will be regarded according to the general scheme as rites of graduation (*Rites d'agrégation*). On this hypothesis, the *Kubb El 'Aish* will be interpreted, not like many rice and grain throwing ceremonies as a fertility rite, but as symbolising the future dependence of the bride and bridegroom on a common joint supply of food as may

(1) pp. 188.

have been the meaning of the Roman *confarreatio*. And the loosening of the bride's girdle will be taken as a symbol of the further union of the two, which brings to an end the marginal period which began for the bride with the breaking of the *Rahat*.

So far these Sudanese wedding customs may be fitted into the general scheme of rites of passage, we are now confronted with an apparent divergence; what we have described as rites of graduation do not bring the wedding ceremonies to a close but are followed by a second marginal or probationary period which lasts from the seventh day until the fortieth and is then closed, naturally, by some simple rites of separation, such as the doffing of the *jirtik* insignia, the washing of clothes and the stepping forth over sacrificial blood. The pattern of the whole wedding ceremonial, therefore, is not three-fold like Van Gennep's type ceremonies but five-fold.

The second marginal period is of special interest. Their young friends have departed and the bride and bridegroom spend this period in constantly renewed contact with one another in the new house: the bride often spends the whole time without uttering a single articulate word to the bridegroom, but the two must be in frequent contact with one another: that is the outstanding feature of this phase. It looks as if the idea were that they should grow accustomed slowly to one another and to their new surroundings and that this is a difficult and dangerous operation. It is the fashion among anthropologists to describe phases of this kind as holy or sacred, but the only epithet I have heard natives use is the word *green* (*akhdar*), the comparison being to a tender shoot; when the period is over the young people are said to be *dry* (*yābis*) like a tree that is now firmly set. These epithets suggest much better than the terms holy or sacred that their condition is approximated *in more than a formal sense* to the condition of persons passing through other stages of transition: they are conceived as dying unto their former selves and being born again into a new life like neophytes in so many initiation rites.

I will note briefly a few features which gain significance from this stand point.

Forty days, the period during which the wedding *jirtik* ornaments are worn, correspond to three mansions of the moon: it is the period during which a woman must remain in the house after child birth, and the period of the *ferash* or mourning days after a

funeral during which the chief mourners sleep upon the ground. It is also the period during which the kings of Argo and Mahas keep house after their coronation, and in old days the Sultans of Darfur and the greater rulers generally were also, I am told; secluded for a period of forty days after their accession: smaller Sheikhs only for seven days.

The necklaces of the *jirtik* are like the necklaces with which the dead was decked in ancient days: in Egypt charms before being placed "on the neck of the glorious one" were "suspended from the boughs of a sycamore and moistened with the sap of shoots": (1) what is the "sap of shoots" but the zirri'a or dura soaked in water until it sprouts? The whip too which is carried by the bridegroom appears on ancient tombs in Egypt and Ethiopia in the hands of Osiris and Horus and the Osirified king.

The repeated pourings of water in the Eritrean ceremony have degenerated in the Sudan into a game of splashing water about by the river, but in this form they find a counterpart in the visit of young mothers to the river on the fortieth day, and they may be compared to the ancient libations: some of these customs may be explained as purificatory lustrations but the idea of renewed contact with water, the source of life, underlies others.

A similar idea may underlie the cutting and carrying of green leaves or branches, which was also a feature of the investiture of Sheikhs. The general resemblance of all these ceremonies to funeral ceremonies is again exemplified in the still surviving custom of placing on the tomb a palm branch from a tree which once belonged to the deceased. It may be noted also that kings and queens on the pyramid chapels at Meroe are representing carrying palm branches.

The bride and bridegroom are not allowed to wash their clothes during the forty days, and the same restriction is put on the woman in child bed and, of course, on the dead. The idea of this may be that the clothes of all alike will be a source of infection to normal beings.

Whenever he does leave the house, the bridegroom carries a sword with him to protect himself against evil spirits: in the same way the

(1) Davies and Gardiner, *Tomb of Amenemhat*, 1915, pp. 112.

woman in child bed wears a needle on her head to protect herself from flying spirits, particularly those incarnated in owls. (1)

The bridegroom is allowed on certain occasions to take anything he wants from his neighbours: similarly among the Southern Maḥas after a circumcision the friends of the boy who has been circumcised are allowed to steal anything they want on his behalf, and a hook is hung from the roof of the room in which he is lying so that people who come to visit him may catch in it and be forced to ransom themselves. (2) People in this condition are outside, separated from, the ordinary moral law, again like little children and the dead.

Finally, is it too fanciful to suggest that the *ghanj*, or inarticulate cry which alone the bride is expected to utter, is a reminiscence of the wail of a new born infant? Her long silence will in this case be due not to any sexual tabu but to the make-belief that she is a child and has not yet learnt to speak.

It is amusing to note in passing that the resemblance between wedding rites and funeral rites struck the ancient Greeks so strongly that it passed into their subconscious life, and the dream of a wedding was interpreted by them as a portent of death. (3)

Many parallels from other countries might be quoted, but it seems unnecessary to add more. The general mechanism and the central ideas underlying the wedding customs still prevalent over so large a part of the Sudan are now, it is hoped, somewhat clearer. Both go back to a time when people had very different ideas about life and death from those now held by modern Christians and Mohammedans. Some of the practices still in vogue, like so much of the material culture of the land, may be traced back to ancient Egypt but further discussion must be postponed for the present.

(1) Compare Warde Fowler, *Roman Festivals*, London, 1899, p. 132.

(2) Mansfield Parkins (*Life in Abyssinia*, 1853, II, pp. 35, 37, and 56) gives an account of fierce attacks made by women upon men whom they hold to ransom which lie behind mild conventions like those mentioned above. In Western Kordofan I was once assailed by women who had just come from the circumcision of a girl and obliged to redeem myself, and I was told there of an old man who was done to death by woman whom he had watched winnowing and refused to placate with a gift. The *gaid* ceremonies seem to belong to the same circle.

(3) Artemidorus, *On the interpretation of dreams*, quoted by Lawson, *Modern Greek Folklore and Ancient Greek Religion*, Cambridge, 1910, p. 553.

OBSERVATIONS ON AN ENTOMOPHILUS PLANT, *Kanahia laniflora*, R. BR. IN KHARTOUM.

BY RICHARD COTTAM.

Entomological Laboratory Assistant, Wellcome Tropical Research Laboratories.

The milkweed, *Kanahia laniflora*, is a shub with lanceolate leaves and white scented flowers. In general appearance, it resembles an oleander. It is a member of the Natural Order Asclepiadeae and is known to the natives as "Abu Leben", or "father of milk".

Broun, in his Catalogue of Sudan Flowering Plants 1906, says that this shrub occurs at Khartoum, Sennar, Blue Nile and Gallabat. So far as Khartoum is concerned, it seems to prefer the steep rocky bank of the river in the vicinity of the Blue Nile Bridge at Khartoum North but also grows at Shambat and the Moghren Point.

In 1916, the writer observed that the flowers of "Abu Leben" possessed a certain contrivance which enabled them to capture insects of various kinds while sucking the alluring honey or nectar thereof. Some of these insects were frequently seen caught by their legs or antennae and struggling to extricate themselves, while others, after making futile efforts, had succumbed to the struggle and their legs could be seen to be held by the flowers

This remarkable adaptation cannot be fully appreciated without first understanding the inter-relationship which exists between plants of the natural order and insects.

Plants belonging to Asclepiadeae are necessarily dependent upon insects for their cross-pollination. Each flower is provided with both male and female organs, the pollinium of the former being situated in pockets which prevent the pollen grains from gaining access to the stigma of the same flower to produce self-pollination. The component parts of the flower in Asclepiad plants are designed to ensure cross-pollination and their modification is apparently well known (1). To

(1) Trans. Linn. Socy. 2, Bet. II, 75 and 173 tt 16 24-26.

my knowledge however, the part played by *K. laniflora* in attracting or entrapping insects in an endeavour to effect cross-pollination has not previously been recorded.

Dr. Justus Watson Felsom, in his "Entomology" (1), draws attention to the milkweeds, *Asclepias cornuti*, and *A. incarnata*, whose floral structure is so modified as to compel insects to carry pollen from one flower to another. According to his illustrations, the adaptations appear to simulate those of *K. laniflora*.

The flowers of *Kanahia laniflora* grow in clusters of from six to twenty blossoms on one stem, of which only a few are open at one time, and may be described as having a very conspicuous appearance owing to the ivory or waxy-white colour of certain parts. The floral arrangement consists of a pale green calyx divided into five sepals, a waxy-white corolla divided into five petals, which are more or less densely woolly, a corona made up five peculiar fleshy pear-shaped hoods, five stamens with wing like anthers and a pale green central boss containing the stigmata. Each nectary is guarded by the hoods of the corona. The anthers, which have two pockets, each containing pollen sacs, appear in front as inverted V-shaped fissures and inside as tubular channels leading to the stigmata; they are situated immediately above the nectaries. At the top and also inside each fissure, there is a dark brown disc to which deep-yellow pollen sacs are attached by filaments; this is known as the pollinium. The above-mentioned parts of the flower, except the corolla, are illustrated in Fig. II. The corolla has been removed so that the hoods of corona and a nectary of the flower may be depicted.

The *modus operandi* of the insect and the flower of this entomophilus plant is as follows:

When a moderately-sized insect is attracted to the flower, it experiences a certain amount of difficulty in gaining access to the nectar on account of the prejecting hoods of the corona. In an attempt to reach the nectar, the insect invariably places its leg, or its antenna, in the fissure and, while drawing its limb upwards, this is caught between the hairy sides of the fissure. If the insect so attracted is sufficiently strong, it will be capable of dragging its leg or antenna along the slit of the fissure until it reaches the notched disc which

(1) Entomology, with special reference to its biological and economic aspects. Felsom, 1914.



Fig 1. "Abu Leben" *Kanahia laniflora*, R. BR.

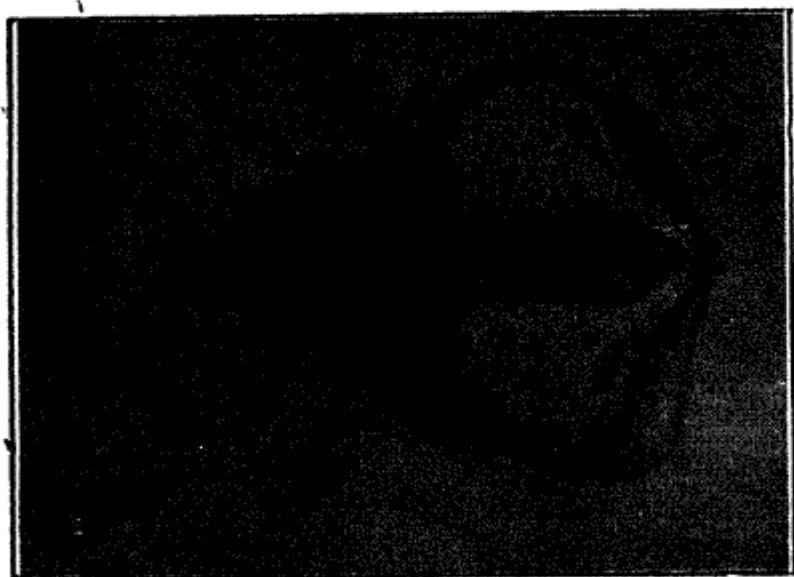


Fig. 2. Flower of "Abu Leben" with corolla taken away.
A. nectary; *B.* head of corona; *C.* anther; *D.* pocket of pollinium; *E.* fissure; *F.* stigmatic channel; *G.* disc; *H.* filament; *J.* pollen-sac; *K.* notch.

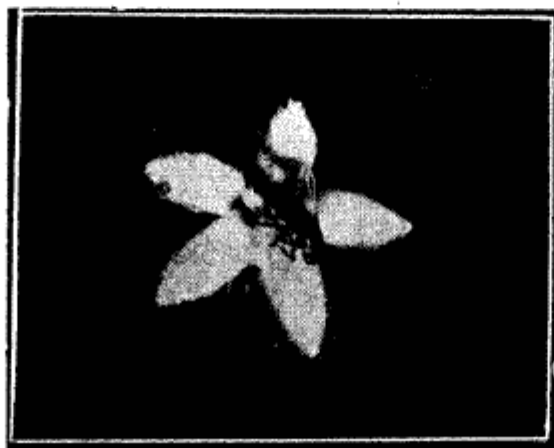


Fig. 3. Housefly, *Musca humilis*, trapped by flower of *Kanahia laniflora*.

clings to its limb. When giving a final tug, the insect, by means of the disc, draws out the pair of pollen sacs from the pockets of the anther, and is then free to visit another flower. In another endeavour to get at the nectar, the limb of the insect, with the pollen sacs attached, is once more entrapped in the V-shaped fissure. The filaments of the pollen-sacs usually break as a result of the insect's struggle to liberate itself, leaving the pollen sacs in the channel leading to the stigma.

Moderately-sized insects only are capable of carrying out this process of cross pollination for, unless sufficiently strong, they fail in their efforts to liberate themselves, and incidentally the pollinium, and remain ensnared on the flowers until they die.

The process of cross pollination described above can easily be further demonstrated by holding a fairly large insect by its wings and allowing it to put one of its legs in the fissure of a flower until entrapped, and then helping it to drag its leg along the slit of the fissure until the pollinium is drawn from the anther. If this insect be taken to another flower, and the same procedure repeated, it would be seen to leave the pollinium which was clinging to its leg in the stigmatic channel, although it might carry away another pollinium in attempting to free itself for the second time.

Ants of various kinds are regularly attracted to the flowers of "Abu Leben" and trapped, and, in attempting to regain their liberty, they lose their limbs on account of their inability to draw these along the slit of the fissure.

Houseflies are also invariably caught by two or more of their legs (Fig. III) and in their fight for liberty they appear to share the same fate as that of insects of similar size. Occasionally fairly large insects such as the Veined White Butterfly (*Pieris mesentina*), and the Senna Mecca Butterfly (*Catopsilia florella*), are seen trapped by the flowers, as well as various kinds of smaller bees and wasps, but on no occasion has the writer seen large species such as humble bees caught although they feed on the flowers quite freely.

Pollination of *K. laniflora* is evidently accomplished by a variety of insects and, from observations made, it is indicated that the fertilization of this plant is dependent upon, and regulated by, the strength of any particular insect. A regular fertilizer of "Abu Leben" is the dura plant bug (*Lygaeus militaris*, Fab.), a red and black insect commonly found on the Sodom apple, or "Ushar" which is also an Asclepiad

plant. These plant bugs have occasionally been trapped by the flowers, but trapping only occurred when two or more of their legs had been caught. Normally, these plant bugs are suitable insects for the work of cross-pollinating this particular plant inasmuch as they are frequently found feeding on the flowers, and moreover are strong enough to release their legs when caught in the fissure of the anther. When fastened on the legs of this insect, the yellow pollen sacs are conspicuous enough to be seen by the naked eye.

By collecting insects, which are flying round the flowers, and examining their limbs for dangling pollinia, one can form an idea of the particular species at work pollinating *K. laniflora*.

The chances of fertilization of the flowers of *K. laniflora* by insects appear to be fairly great, for if one cares to pull off the upper parts from many open flowers, one will see that a large percentage of the flowers have been fertilized and are in various stages of development.

To enumerate all the various kinds of insects which have been seen trapped by the entomophilous plant will hardly serve any particular purpose in this paper. It must be borne in mind however that this plant does not only trap obnoxious insects such as houseflies and plant bugs but it also destroys beneficial insects. The dead bodies of the insects, not being absorbed for food, are useless to the plant and are left to dry up. In this character *K. laniflora* differs from the pitcher plant or the sundew which absorb the juices of the decomposed insects.

POTTERY MAKING ON THE BLUE NILE.

BY H. A. MACMICHAEL.

I was asked in 1912 to make enquiries as to the methods employed on the Blue Nile, between Khartoum and Wad Medani, in making vessels of pottery. I did so, and the following are my notes describing the process in the case of

- (a) the ordinary *burma*, as used for carrying or storing water or *merissa* ;
- (b) the water-jar used in the *sagia*.

BURMA-MAKING.

Stock-in-Trade :—

1. One circular piece of old palm-leaf matting laid on a flat surface.
2. One piece of trade sacking laid over a circular dent in the ground : dent having diameter of about 15 c. m.
3. One *burma* full of heavy brown clay. This clay is procurable in any quantity in the locality of practically every village. There must be no sand mixed with it.
4. One *burma* full of powdered dry donkey's dung. No other dung is any use but that of the donkey.
5. One oblong slightly concave shell from the river, about 10 c.m. long. If this is unprocurable its place is taken by a fragment of dry water-melon husk.
6. One piece of thin undressed leather about 17 c.m. square.
7. One roughly smoothed lump of stone the size of a penny railway bun and the same shape.
8. A jar of water.
9. One *burma* full of more finely ground powdered donkey's dung: this is used at intervals for dusting and drying as occasion needs.

1. Take a handful of clay and knead it with a handful of donkey's dung until you have a heavy sticky lump about the size of your head, of firm consistency, and no particular shape. This is done on the palm-leaf mat on the worker's right side. Sprinkle some of the finely powdered dung in the dent covered by the sacking.

2. Put this lump in the dent covered by the piece of sacking, in front of the worker, and hit it a smack in the middle with the stone. Go on enlarging the resultant hole in the lump by hitting and patting with the stone with the right hand while with the left you

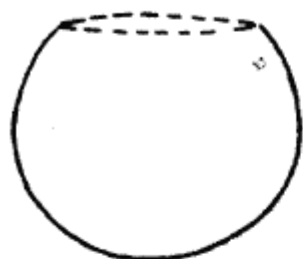


Fig. 1.

slowly turn the lump around and thereby give it a round shape: its pivot is in the dent in the ground. In less than a minute the shapeless lump of clay takes the rough shape of the lower half of a *burma*. Continue patting inside with the stone all round in order to make its sides thinner and its circumference correspondingly larger. When it has got to the following

stage (See figure 1) stop work, and make one or two more similar objects while the first is getting a little drier and firmer. At intervals scrape out the dent covered by the sacking and re-powder it.

3. Having made, say two, other objects as described and set them to dry, revert to No. 1 and hammer its inside again with the stone to make it thinner and larger. Knead out of clay and donkey's dung three or four sausage-like rolls about 4 c.m. in diameter and pointed at the ends and 12 to 15 c.m. long; and after trimming and evening the edge of the mouth of the *burma* with forefingers and thumbs to the required thickness and consistency and sprinkling it with water to ensure its adhesion, stick the rolls on, all the way round, welding them together and to the mouth of the *burma* with the forefingers and thumbs, roughly. This brings the *burma* to its second stage. (See fig. 2).

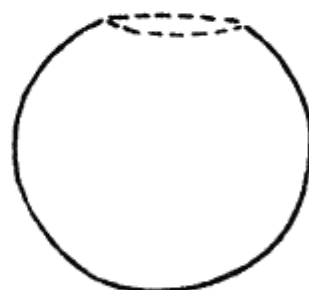


Fig. 2.

4. Round off the work and make it smooth so that it looks like one single piece etc. and scrape it with the shell. Then leave it to dry and revert to the other *burmas* and treat them similarly.

5. Revert to the first *burma* and pat its inside a little more.

6. The Rim. On the palm-leaf mat knead some clay and dung as before and make a single large sausage about 50—60 c.m. long and 7—8 c.m. in diameter.

7. After smoothing and titivating the mouth of the *burma* and

sprinkling some water on it, plant the long sausage on it, twisting it all round till the two ends join and can be welded together with finger and thumb. Break off and throw away anything that is over.

With thumbs inside and forefingers outside working outwards, squeeze the sausage until it becomes thinner from side to side and higher upwards and sticks firmly to the original *burma*. The result is as in fig. 3.



Fig. 3.

8. All that remains is to finish off, smooth, round off excrescences etc.



Fig. 4.

This is done by taking the piece of leather and placing it over the rim of the *burma* and running it with forefinger and thumb round and round, at the same time squeezing fairly tightly. The result is shown in figure 4.

Y and Z have to be scraped level with the rest of the *burma* so that no join appears, and this is done with the shell. With the shell too the final touches of scraping inside the neck and outside are done.

The *burma* is now finished and is pictured in figure 5. It has no pattern on it and the sacking has left no mark.

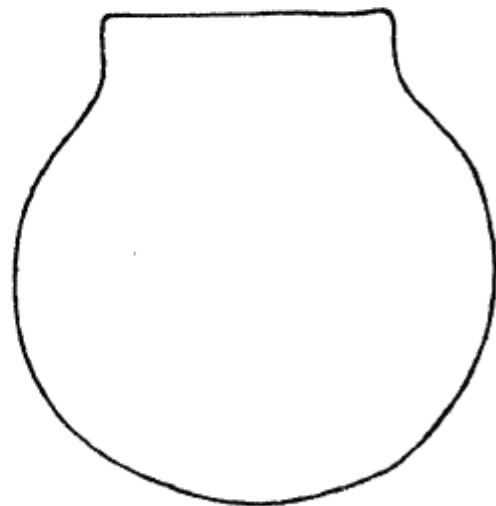


Fig. 5.

It is left for two or three days to dry and then it and several others are heaped together on a bed of dry dung and dry dung is heaped all round to form a kiln and the whole is set alight in the evening and allowed to burn slowly all night. Next morning the burnt dung is removed and the baked *burmas*, now red in colour, are taken out and put on the market and sold for a few *milliemes*.

The actual woman I saw doing the above was a Furowia (i.e. an ex-slave from Darfur). She and people I have asked on different occasions all agree that as a rule there are one or two persons who can make *burmas* in every village on the Blue Nile and also in

the nomads' camps. The majority, but by no means all, of these persons are Sudanese women (servants) but many "Arab" women (i.e. Ja'aliin, Danagla, Shukria, Mesellamia, Rufa'a etc.—the population is very mixed) can and do also make *burmas*. In some villages it so happens that men know how to do the work, and in others (more generally) only women. This is irrespective of tribe and merely accidental. Herein is a difference from the Kordofan system, under which *burma* making is practically confined to a few hills in the North or in the South, while the villagers of the plain "Arab" and the nomads cannot make their own. The *burmas* on the Blue Nile are not, I think, as good in workmanship and finish as those of Kordofan.

SAQIA-JARS.

The water-jars for use on *saqias* (waterwheels) are made in an entirely different way from the ordinary *burma*, though also hand-made. It is only an occasional expert who can do this work, and he is always a man. The industry is evidently not a Sudanese one proper but rather Nubian and riverain. Thus the man whom I saw at work was a Shaiqi who had learnt from an old black who had been taught by the Shaiqia in Dongola Province, where these jars ("gādūs" pl. "gawādīs") are in very common use and have been so from times of antiquity among the riverain tribes. The finished article is about 17 c.m. high and shaped as in figure 6.



Fig. 6.

The tools and ingredients necessary are :—

1. a heap of ordinary clay (the same as that used for *burmas*).
2. Some crushed donkey's dung (the same as that used for *burmas*).
3. a piece of palm-leaf matting laid flat on the ground.
4. a fragment of gourd used as a scraper.

The clay is first kneaded with donkey's dung until a rough lump is obtained. The fist is then driven downwards into the top of it as far as possible. The worker stands stooping over the clay and walks round it working with his right hand at the inside and keeping the outside in shape with his left hand. With the right

hand he not only presses and pummels but scoops out large quantities of clay upwards with his fingernails with a drawing motion; with the left hand he chiefly pats and presses gently but also scrapes upwards with his fingernails. The finishing touches are given with the scraper. After about 10 minutes of this the shape of the embryo pot is as in figure 7.



Fig. 7.

N.B. A bottom of thickness rather less than the sides is left in.

It is then left for a few days to dry, but a damp rag or (in season) some leaves of "ushar" (*calotropis procera*) are wrapped round A B to keep it damp there, since it is there that the other half has eventually to be welded on. After two or three days the pot is turned upside down and the bottom (which was only left to keep the shape intact) is pulled out, and A B is pressed inwards. The result is as in figure 8.

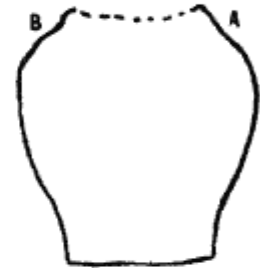


Fig. 8.

Then some short rolls of clay are added round B A and welded with the previous materials by the fingers; and working round and round as before the man rounds off the jar until it has assumed its final shape, except that in place of the knob pictured in figure 6 there is an orifice only sufficient for two fingers to be inserted in it.

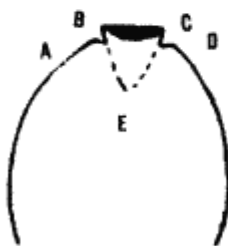


Fig. 9.

He then takes a little ball of kneaded clay about the size of a turkey's egg and makes a dent in it till it is shaped like the bowl of an eggcup, and, after slightly widening the orifice in the jar, inserts this eggcup, point downwards, and by squeezing with the fingers (from above—still walking round and round in a stooping position) welds the two together, i.e. A to B and C to D, as in figure 9. *N.B. were the eggcup not hollowed this would be impossible.*

He then moulds his jar to as near a final shape as he can by the above means with his fingers and also knocks off the point E from the inside.

The last stage is to encircle the knob with the two hands, and, squeezing tightly, and at the same time walking round and round he gives the knob and the jar its final shape. The knob is affixed

for the purpose of fastening the jar to the *sagia* by a rope twisted round its neck.

The jars are then baked in the ground and emerge a grey green colour (the same as before baking) and ready for use.

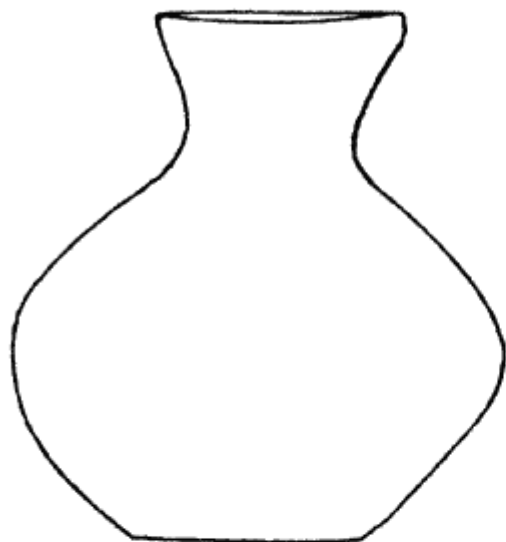


Fig. 10.

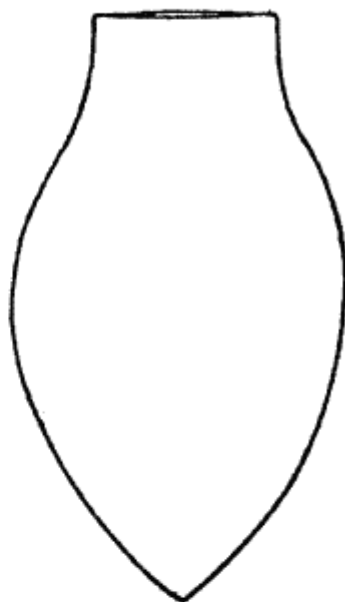


Fig. 11.

N.B. If this same man wants a *burma* he makes it in a similar way and of the ordinary round shape (and without a knob of course) and he also makes jars (by the same process) of the shape of figure 10, and called "*warràd*", i.e. used for bringing ("*warrad*") water from the wells to the house.

He also makes *zeirs*,⁽¹⁾ i.e. water-jars for use in the house, of the ordinary stereotyped shape and about 22 centimetres high. (See fig. 11.) All alike are made in two halves in the way described.

(1) Called "*laybār*" — plural "*tawābīr*"



Fig. 1. Altar.

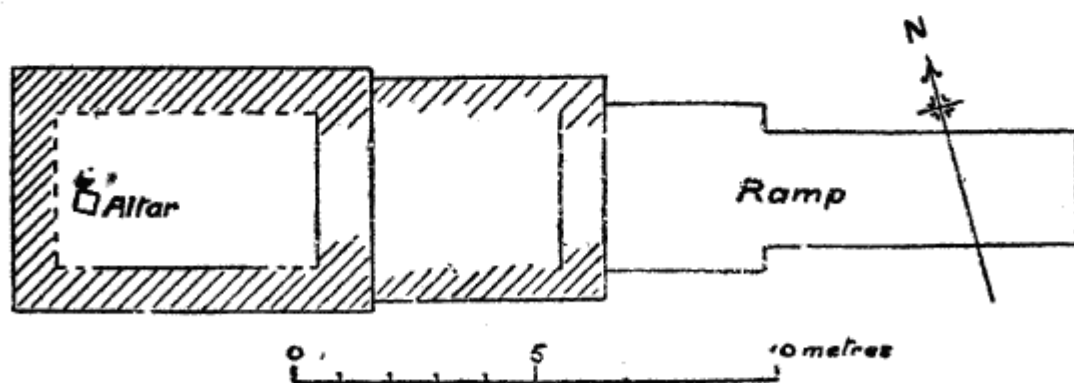


Fig. 2.

ALEM. A MEROITIC SITE.

BY F. ADDISON AND DOWS DUNHAM.

The site described in the following note lies some ten miles north-east of Meroe Pyramids, far away from any road used at the present day. The existence of a ruin there has been known from the reports of natives for some time, and is, indeed, noted on the latest maps; but so far as we know, no previous record of the site exists, nor any available information concerning the character and extent of the ruins to be found there. In order to fill in this gap in our knowledge of the antiquities of the Island of Meroe, we visited the site in January last and found the remains to be those of a small Meroitic settlement closely resembling those described by Mr. Crowfoot some years ago in "The Island of Meroe" (1). Time did not permit of a detailed examination nor an accurate survey of the site and this account makes no claim to be anything more than a preliminary note on the evidences of ancient civilization to be seen there. These are, briefly, three reservoirs, a temple, various cemeteries, and the large pile of fallen masonry which gives the site its name. There are in addition various mounds which still await investigation.

We took with us two of the trained diggers of the Harvard-Boston Egyptian Expedition, then working at Meroe Pyramids, and, starting from the pyramids at dawn, our route lay at first along a wide valley filled with the usual thorny trees and tussocks of grass, and crossed by occasional gravelly ridges. After we had ridden about an hour and a half the valley came rather abruptly to an end, and for a quarter of an hour the camels struggled up a barren slope covered with loose fragments of rock. Thence the track lay for some little distance over rough undulating ground, until at length we came out on to a high rolling plain covered with black gravel, and three miles away to the north-east, a prominent feature of the landscape, there appeared a large mound standing on a low spur, which our guide indicated as our destination. The reason for the name 'Alēm (a mark) was at once apparent, for this mound of stones is the most obvious landmark for miles around. (*See fig. 1.*)

(1) Archaeological Survey of Egypt, Egypt Exploration Fund 1911.

Its general aspect is that of a ruined pyramid, and only a close examination reveals the fact that its sides are, in fact, approximately vertical, and that the pyramidal appearance is caused by fallen stones lying banked up against them. It is built of the ordinary dark coloured ironstone of the district and is rectangular in plan, 10.5 metres by 8.4 metres, the shorter sides facing roughly east and west. The walls, as already noted, are vertical as nearly as the eye can estimate, and the height of the highest portion still standing (centre of south face) is about 2.5 metres above ground level at the south-east corner. They are built in regular courses, but from the brief examination we were able to make we would hesitate to say positively that they are of worked stone. The ironstone naturally breaks up into pieces of roughly rectangular form, and the upper courses of the walls appear to be of selected rubble of this nature. But the stones of the lower courses, as revealed by clearing the S. E. corner, are of such size and regularity of form that it is difficult to escape the conclusion that they are at least hammer dressed. During the clearing of the S. E. corner a few fragments of reddish-brown pottery were found. Trenching to the east of the east face failed to discover any trace of a stairway to underground burial chambers, but we are not justified in saying that none existed until the east face has been completely cleared. In several of the smaller pyramids at Meroe the stairway lies almost completely within the base of the pyramid itself, and it is at least possible that this is the case here also. In the same way the possibility of the existence of a chapel cannot be ruled out until further clearing has been effected, although examination of the east face revealed no trace of such a building. It will be noted that we are assuming this monument to be a tomb superstructure of the same nature as a mastaba or pyramid, and this in the circumstances is the most natural assumption to make; but no positive evidence to this effect was found and the question can only be definitely settled by excavation. Clearing on top revealed a thick cross wall of rubble bisecting the building from north to south, most probably a binding wall designed to hold the core in place.

It is impossible now to reconstruct the original design of this monument but it seems probable that the fallen stones which now lie piled against the sides are the remains of a superstructure of some kind which originally stood upon the rectangular base of which a part still exists.

Round about this ruin, and particularly to the east and south, are many graves, some marked by small piles of stones and others by oval rings. The stones used appear to have been taken from the ruin.

Some 300 metres north east of the monument just described is a small cemetery situated on a low irregular knoll. It contains twelve or more graves marked by low mounds covered with black stones and ranging in diameter from 3 to 5.5 metres, the largest being about one metre high. Two of the smallest of these were opened and both were found to be about 0.4 m deep and oriented S.S.W.—N.N.E. The first had obviously been plundered and contained only a fragment of a skull and some potsherds. The skull was found at the south end lying on its side facing east, and this position and the length of the grave (1.25 m) would indicate an original body position semi-contracted on the right side. The potsherds were mostly fragments of a large wheel-made necked jar of reddish-brown ware, straw marked, with a mouth about 9 cm. diameter; but there was also a rim fragment of a hand made bowl, red polished outside, and about 11 cm. diameter. It was discoloured in places from firing, and the fracture showed that the material was black, coloured red by firing.

The second grave contained the skeleton of a half grown child extended on its back, head south, position of hands not clear. No objects were found in this grave. On the west side was a large black stone slightly projecting into the grave, and this suggests the possibility that both graves may have been roughly roofed over with large stones, though none were found.

The temple lies north of this cemetery and some 1200 metres from the main ruin. The walls of this building have completely disappeared, but the plan may still be distinctly traced and is shown in Fig. 2. The temple apparently originally consisted of two chambers, or possibly of a single chamber with a small open court in front of it to the east. The floor of these chambers is raised about a metre above ground level, and they are approached from the east by a ramp which is widened out as it approaches the doorway. The containing walls of this ramp, and of the base or platform on which the temple stood, are well built of ironstone rubble. Fragments of plaster may still be seen adhering to them in places, and it is clear that the whole of the outside of the building was

originally covered with white plaster and painted in the same way as many of the buildings in the city of Meroe itself. In the western chamber or sanctuary, lying on the floor and evidently but little removed from its original position, we found the upper part of a small altar of yellow sandstone. It has the usual cornice top, and sun disc with flanking uraei in relief below the cornice on the east face. It is about 0.4 metres square and is clearly shown in the photograph, Fig. 3. In the eastern room, on the existing floor surface, lay a block of yellow sandstone of roughly rectangular form with plastered edges, possibly the square base for a column, although no column drums were found. There were also other fragments of sandstone which had evidently been worked, but they were so broken and weather-worn that it was impossible to say what their original shape had been. Besides the loose rubble with which the site was littered there were many fragments of red burnt brick, and this suggests that the walls of the temple may have been built of this material. The roof beams were probably of wood and have long since disappeared. The outline of an enclosing wall could be detected in places, but in the time at our disposal we were unable to take any measurements of this. Near the temple are various small mounds and heaps of debris, and about 100 metres to the west there are the remains of a masonry construction of some size.

The remains of this group of buildings stand on a low swell of higher ground, and the slopes of this, north-west of the buildings, are covered with graves. Most of them are marked by circles of stones, and in many cases the circle is filled in with flat stones, making a sort of pavement. There is also a third cemetery of similar character some distance to the south-west.

About 1000 metres to the north lies a large mound which appears to be a natural formation. It may, of course, conceal the remains of a building, but there seems no reason why a building at this spot should have been buried when the others are still completely exposed. There are a few graves on its slopes and one on top.

North west of the temple, and about a mile from the ruin first described, is a small horse-shoe shaped reservoir of the same type as is found at so many other inland Meroitic sites. The enclosing mound measures about 114 metres from top to top across its E. and W. diameter, and its height above the level of the plain is

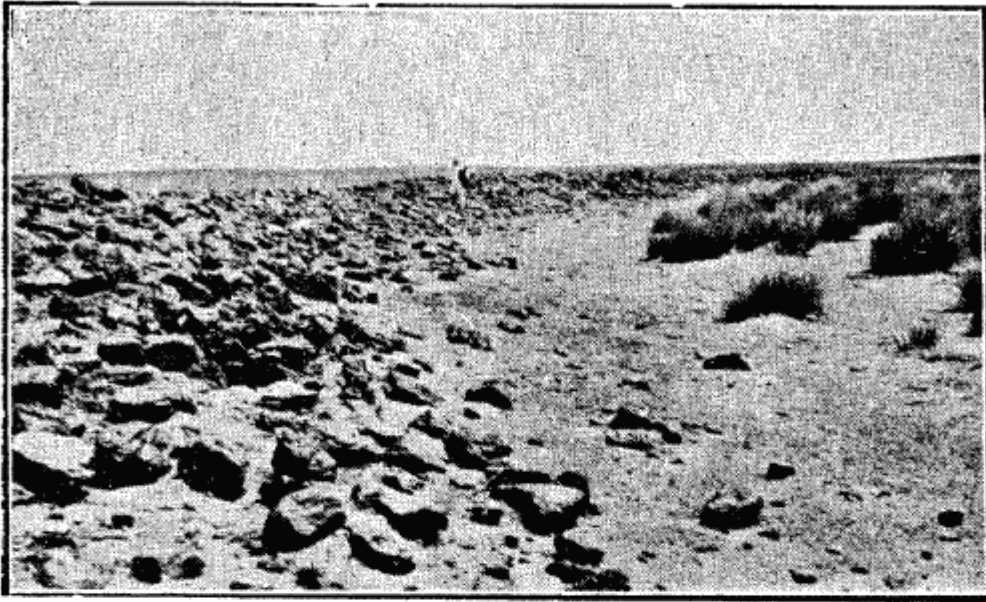


Fig. 3. Encircling Wall showing Stone pitching.

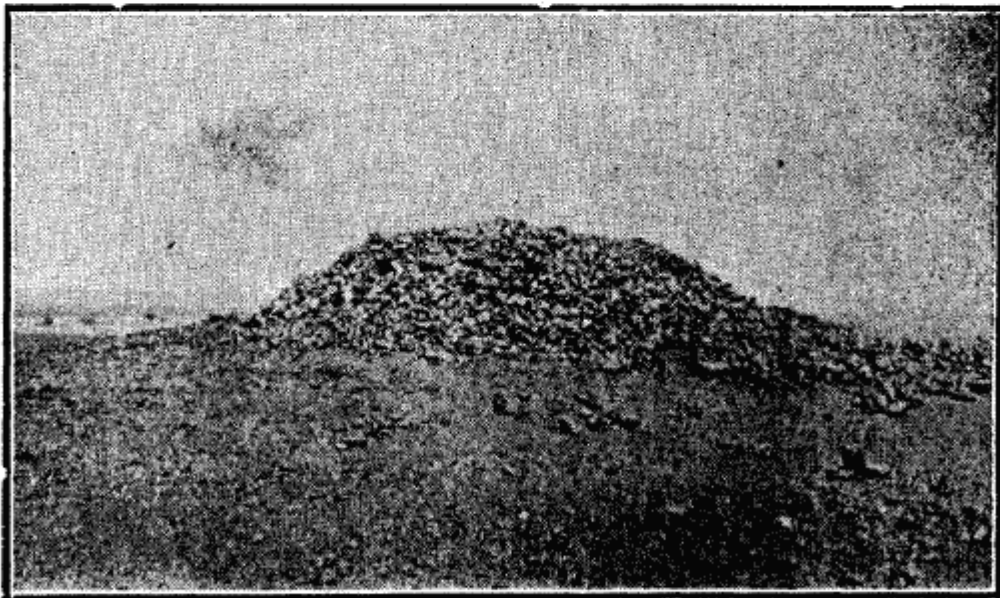


Fig. 4. Ruin at Alem.

from 1.5 to 2 metres. It is now covered with the same fine black gravel as the surrounding plain, but in many places on the inner face distinct traces of stone pitching still remain. The intake, for no obvious reason, faces south. It may be remarked that in many reservoirs of this type at other places the position of the intake appears to be quite arbitrarily fixed. No doubt accurate levelling would in each case disclose some good reason for the position chosen, but it is not apparent to the ordinary eye. This reservoir is now filled to the level of the plain with rain-washed mud and dust, and only holds sufficient water during the rains to nourish a sparse growth of grass.

A little to the north-east of this reservoir there lies what our guide had previously described to us as an ancient well, and it is indeed so marked on the map. From his anxiety to lead us to it he evidently considered it to be the most interesting feature of the site, though he admitted it had never been known, even traditionally, to contain water. It lies in a depression in the centre of a low circular mound, or perhaps it would be more correct to describe it as being surrounded by a wide bank about 0.6 metres high. The well itself is roughly cut in the sandstone and at its narrowest part is about 2.2 metres in diameter; above it the rock is terraced back in three rough steps, the last of which, the mouth of the well, is 12—15 metres in diameter. At the inner edge of the lowest terrace we noted two vertical grooves evidently worn in the rock by the ropes used in drawing water. The shaft goes right through the stratum of sandstone, a depth of 5.3 metres, and beneath this the well widens considerably, forming a chamber now almost filled with sand.

Upon reviewing the evidence it seems probable that this is not a well at all in the ordinary sense of the word. It is first to be noted that the pastoral Meroitic communities who created such settlements as that under discussion did not depend for their water supplies upon wells, but in every case constructed reservoirs of the kind already described. Further, a well sunk at this spot would have to be very deep, and it is at least doubtful if it would ever reach water at all. The surrounding bank, too, is an unusual feature. Its volume is such that it cannot have been formed simply of material excavated in sinking the deepest well, or taken out

during successive cleanings, and it is too regular to be entirely a natural formation. The inference therefore is that we have here another reservoir of a different type. The chamber beneath the sandstone stratum is possibly very large and at one time formed an underground storage tank. During the rains the reservoir would be filled, and as the water retained by the bank became exhausted, the underground supply would become available, and water would be drawn from it in the ordinary way. It should be understood that this is put forward merely as a probability. It is, of course, possible that what we have described really was a well, and was sunk in Moslem times long years after the Meroitic settlers had vanished.

On our return journey we made a detour in order to pass by a third "hafir" or reservoir which lies some two miles S.W. of the principal monument. This is much larger than the other two and has much higher banks. The reservoir itself is circular as usual, but the artificial enclosing mound only extends for little more than half the circumference, the remainder being formed by a natural slope of the ground. It is situated at the eastern end of a ridge, and at the bottom of the northern slope of this ridge. Towards the bottom of the slope, running parallel with the ridge and slightly upwards, there are the remains of a retaining wall or bank evidently designed to retain the water flowing down the slope and deflect it into the reservoir. It is of considerable length and was originally pitched with stone on its inner face. A natural depression in the ground to the north of the reservoir provides another intake, and near it are two heaps of stone and red brick which are obviously the remains of buildings. These are the only signs of human habitation that we observed, and it is somewhat remarkable that a reservoir so well preserved and so well engineered should be so far from the buildings and cemeteries already described. The circular bank of the reservoir is about two metres high, and the stone pitching on its inner face is still very well preserved. (Fig. 4.) There is a breach in this bank to the east, but having regard to the lie of the ground it would not appear to be an intake. This reservoir, like the other, is now filled up with mud and sand but apparently still holds a certain amount of water during the rains, for the whole of the interior is covered with trees and grass upon which cattle were browsing at the time of our visit.

It is hardly necessary to recapitulate the evidence upon which this site of 'Alēm may be definitely assigned to the Meroitic period. The evidence of the reservoirs alone, excluding the "well", would be conclusive, for, as has already been pointed out, reservoirs of this kind are a feature of all other inland Meroitic sites. The walls of the temple, again, are of the same type as may be seen in many of the buildings amongst the ruins of Meroe itself, and the altar is quite clearly of that period. Further confirmation is offered by the fragments of pottery found in the grave, for jars exactly similar to the one described have been found by Dr. Reisner only this year in the burial chambers of some of the pyramids of Meroe.

The question as to why this particular place should have been chosen for a settlement is not so readily disposed of, and until the surrounding district has been more thoroughly explored it would be premature to do more than discuss the probabilities. 'Alēm lies, if not actually on, at least very close to the line of the old caravan route to the Atbara and the Red Sea, and the inference is that it may have been a station on this trade route. This, however, does not seem probable, for such a post would almost certainly have been one of a chain, and so far the remains of no others have been reported. The existence of the cemeteries, too, indicates a permanent settlement rather than a mere halting place for caravans. So it would seem more probable that the site was occupied by a settled pastoral and agricultural community. The whole of the plain in which it lies is not cultivable; much of it is barren and covered with stones. But there are large patches, more particularly between the main ruin and the largest reservoir, which even to-day are cultivated during the rains, and our guide said there were others further inland which we did not see. The stony ground in places supports a vegetation of coarse grass, and there are wide shallow khors formed by the rains containing trees and grass which would afford grazing for quite a number of cattle. It has been pointed out by Mr. Crowfoot⁽¹⁾ that settlements of this kind were most probably only occupied during a portion of the year, and were possible only

(1) *loc. cit* and "Old Sites in the Butana" S. N. & R., Vol. III, No. 2.

during periods of stable government and orderly internal administration. People would migrate to them after the rains, and remain long enough to harvest their crops, and until the exhaustion of their water supplies made it no longer possible for them to graze their cattle.

Such, it may be assumed, was the character of this settlement at 'Alēm, and it was probably first founded during that period of prosperity and expansion which has left its traces at Naga'a, Musawwarat, and other lesser known sites. But there are no mounds marking the site of houses, and no remains of buildings other than those described, and it would seem probable that although people lived and cultivated there for many years, the original style and prosperity of the settlement endured for only one or two generations.



PROVINCE NOTES.

Mongalla.

The following notes were received in reply to questions circulated to District Commissioners in Mongalla Province. It is hoped to publish similar notes on other tribes in this and other Provinces in subsequent issues.

THE BERI OR, MORE CORRECTLY, PARI

BY R. H. WALSH, D. S. O., M. C.

They inhabit a small hill called Lafon, 300 ft. above the surrounding plain, situated 15 miles N.W. of the N. end of the Lafit Mountains. All the villages are built on the hill, the cultivation being in the plain at the foot of the hill. The tribe is divided into six villages one of which originally consisted of Acholi. The whole tribe originally migrated with many Acholi from the Anuak country and settled on Lafon hill, only a small number of the Acholi element taking root there, the remainder moving on S.W. and settling in the country which is now inhabited by Ocheng Farajok. The Acholi element and the Anuak seem to have always acted together in wars and raids. When the tribe first came to the country they had constant wars with the inhabitants of Lafit and also with the Latuka, especially with the people of Loronyo then under the chieftainship of Moya, the father of the present rain-maker Achelleli. Their women do not marry outside their own tribe, but women captured in war were taken as wives by the men of the tribe. They trade much dura with the people of Lafit, getting in exchange cattle and sheep. Before the advent of the Government they also obtained their spear heads from the iron workers at Longilayo in the Lafit mountains.

Anuak is the language of the tribe though the small section of Acholi origin also speak Acholi.

Chiefs are hereditary, Alikori the father of the present chief Kire having led the people in the wars against Moya. There are no rain-chiefs, even among the Acholi section of the tribe. The hereditary chief governed the tribe entirely, leading it in war,

settling disputes and delivering judgments. The people worked in the cultivation of the chief, who also took a large percentage of any captures made in war. There are now 580 taxpayers, and probably the total population amounts to 1800 people.

By occupation they are pastoral and agricultural; very large areas are cultivated round the hill, chiefly with *dura*, but *ful sudani*, tobacco, and *simsim* are also grown. They possess large herds of cattle, goats and sheep.

Hunting is carried out by all the young men together, the grass being burnt and the animals speared, as they break out. Fishing is also carried on towards the end of the rains in Khor Koss.

Baskets for *dura* are manufactured by the men from grass, *burmas* for cooking food and holding water are made by the women.

Shields and spears are used for fighting, the former being manufactured by the men from buffalo hides; spear heads are bought from Lafit or Liria. Bows and arrows are unknown, but both throwing and stabbing spears are in use. Pits, dug in the ground, are used as traps for taking game. Fishing is practised with hooks rods and line.

Mal is paid to the father of a girl when the girl reaches a marriageable age, and the girl has to marry the man who has paid the *Mal* when the father thinks the *Mal* is sufficient. When a man is buried a bull or sheep, according to his wealth, is killed over his grave and all the people eat the flesh.

All property descends to the son but if there is no son the brother or wife inherits.

The men wear brass and iron rings round the upper arm and also brass and iron bracelets. In war and hunting they colour their bodies in patterns with red earth. They also decorate their heads with feathers. The women wear goats skins and fringes of skin in front. The men are not circumcised.

The ceremony of producing rain is as follows:—

All the people collect and a goat is brought. The goat is then washed all over with water and allowed to go. The God is then supposed to send rain.

After a successful war, on return to their village, one of the captured goats is sacrificed and is left in the village to be eaten by the dogs.

THE LANGU.

BY A. H. A. ALBAN, D. F. C.

They inhabit the eastern slopes of the Imatong Mountains as far north as Lopolong, (Ref. Sheet 78 N (Africa 1/250000 Rejaf), the eastern slopes of Mountains of Teretenia (Uganda), and the lower slopes of the whole of the Dongatola Mountains.

The Langu south of Teretenia and at Madial are intermixed with the Acholi.

The Dongatola Mountains are an oval shaped mass, roughly 30 miles by 13 rising to between 7 and 8000 ft. with jagged peaks, deep valleys and no plateaus. In the rainy season there is plenty of water, in the dry season very little. No big timber, only scrubby bushes and small trees. To the E. the flat plain of the river Kideppo extends roughly 19 miles to the Dodinga Mountain. To the W. the plain of the river Koss extends about 12 miles across to the Imatong Mountains. The Imatong Mountains rise higher than the Dongatola to just over 8000 ft. and come down steeply on the E. side and are not so broken. There is plenty of water at all times of the year. On the lower slopes the same sort of scrub and small trees except near the streams as on Dongatola. On the top, which is comparatively well wooded, no Lango live, but there are a few Acholi villages. The Koss and the Kadippo only used by Chief Ingon of Ludwara are the only two rivers. In the dry season they both dry up, but plentiful water is obtainable by digging shallow wells. The Koss runs for some miles from its source at Logiri in the dry season.

They are friendly with all their neighbours except the Dodinga on the east, whom they are much afraid of, owing to numerous raids made by them. The Latuka are neighbours on the North, and the Acholi to the west and South.

The Lango intermarry freely with the Latuka and Acholi and in the old days Chief Lolega of Ludwara on the E. side of Dongatola had an alliance with the Latuka Chief Ibrahim of Tarangole,

Their language is only dialectically different from Latuka.

The Chiefs have very little authority over their people and there is no particular prestige attached to chieftainship except perhaps in the case of chiefs Lokoringan, Laponnia and Ingon, and formerly, they or their fathers, were the only three Lango chiefs. The most important Langu rain-maker is Lolega of Ludwara, who was a chief till recently and father of chief Ingon. Rain-making carries great prestige and is transmitted from father to son.

There is another rain-maker at Ludwara Atomi son of Karimoja, a noted rain-maker now dead, but he plays second fiddle to Lolega and also deals in wizardry.

There are 2404 tax payers and on a 3 to 1 basis this would give a population of just under 10000, living in 105 villages.

The men do little work, and the children look after the flocks and herds of cattle, sheep and goats.

They cultivate *dura* generally, in some parts a little *dukhu*, sweet potatoes, *simsim* and a little tobacco.

In the dry season, December to April, the men go out hunting after small game, dik dik and tetel etc. armed with spears and bows.

There is no fishing and no iron working. To make spear heads they buy the iron from the local shop and beat it into shape.

They make no pottery except *burmas* which are made by the women.

There is no basket making, nor any professional craftsmanship.

They carry 2 or sometimes 3 spears, one for stabbing and the others for throwing, and a shield of buffalo hide oval in shape, 4 feet by about one foot at the widest part.

Marriages are arranged by a third party and *māl* is paid (about £E. 6) for the girl. The husband invites the relatives to partake of goats, meat etc., and then the mother, father and uncles of the bride sprinkle water on her head saying 'May you never be ill and have a lot of children'.

The dead are buried in graves just outside the hut, and the relations kill a goat over the grave and eat it.

If a man dies and his father or mother are alive they take his property, otherwise his elder brother.

The men wear no clothes. The women wear a sort of fringe in front and a piece of goat skin roughly tanned behind. A *Navari* of white bark is worn round the waist only by the Dongatola women.

Women have only one name, men usually three, one given to them as children, one when they grow up, and one a nickname relating to some act of prowess on their part; this last always ends in "moi" meaning "he who" e.g. Asejamoi he who caused to flee an enemy sitting at a camp fire. Arusingimoi he who pursued an enemy till he got tired and slew him. Typical names of one man are Tumbo Lolega Arusingimoi.

They believe that after death they will come to life again as elephants, monkeys, crocodiles, tortoises, leopards, buffaloes etc. according to the class to which they belong.



NOTES.

A note on the Peregrine Falcon in Khartoum.

It is of sufficient interest to record the presence of a pair of Peregrine Falcons which were in Khartoum during the beginning of January of this year. The birds, a male and female, in splendid plumage, were of the European form, and displayed broad black moustachial stripes and bright slaty-blue backs in an easily observed way, for the birds were roosting in a very convenient position, namely the central parapet of the north side of the Gordon College. For a whole fortnight, these magnificent birds were residing there, the male in one corner, the female in another, and many bird enthusiasts had good opportunities of observing them. An effort was made to photograph them, but as they were reproduced as mere specks, the results were not of much value.

The daily routine of the falcons was remarkable, for each morning they proceeded separately in search of prey, the female returning first, at about a quarter to nine, the male not returning until a quarter of an hour later. They appeared always to return from down stream but how far their hunting ground extended was not known; they were not observed to bring back any prey to eat, nor was there any evidence of feathers or bones on the ground beneath the parapet. The birds were subjected to the gaze of many people, in particular, the school boys, but showed little or no indication of fear; on one occasion they were roused by an attempt to photograph them at close range. The falcons apparently disappeared from the above-mentioned parapet after a spell of cold north wind, and have not returned.

There are two specimens of Peregrine in the Sudan Government Natural History Museum, one a male collected by A. L. Butler in Khartoum, the other a female from the Blue Nile collected by W. P. Lowe. Neither of these specimens have the moustachial stripes as broad or black and their backs are not so bright as in the two birds recorded in this note.

R. COTTAM.

Kordofan.

Some time about 1911—12 an incident came to my notice which may be worthy of record. I have tried to obtain the official papers that concerned the case but could not get them. At Nahud an Arab woman (Hamar to the best of my recollection), who had been blind if not from birth from very early youth, married a Sudani. During the first month of their married life she warned her husband that she received a visit once a month from an "afrit" and he had better make himself scarce. He absented himself, thinking to humour her. When the incident was repeated the following month, he became suspicious and crept up to her straw hut to see what was going on, made a hole through the straw and watched. She apparently greeted someone, talked to him and welcomed him and set him upon her bed and behaved throughout like a wife in the arms of a loving husband, although there was no one visible. She maintained a running conversation and what was remarkable about it was that she talked as if she could see, referring to colours and shapes. The husband watching took fright and fled, but found his wife next morning quite normal and resumed life with her. The following month when the date came round, he told one or two friends of his apprehensions and they came with him to be witnesses: and the same process was repeated as already described.

The husband thereon applied to the Mohammedan Court for divorce and redress—and obtained it.

It appeared from description that the woman was in some sort of trance during the visit of the "afrit", and she stated that the visits had gone on for many years. Being blind, she had not found a husband among the Arabs and only married late in life.

C. A. W.

SCIENTIFIC RESEARCH COMMITTEE.

Note on the Origin of the Migratory Locust

BY H. H. KING.

Of the many insect pests which trouble farmers in the Sudan the migratory locust (*Schistocerca peregrina*, Oliv.), may fairly claim to be one of the most, if not the most important. For several years it may be little in evidence and then, without warning, flights of adults appear, to be followed a few weeks later by swarms of hoppers, which having caused widespread destruction of crops become winged adults in due course and vanish. The question which naturally arises is "whence do these locusts come and whither do they go?"

This question is a singularly difficult one to answer, for the movements of locusts over vast areas of sparsely inhabited country are by no means easy to follow. Moreover, swarms when definitely migrating have a tendency to fly at such an altitude as to be invisible to the naked eye. The importance of finding the answer is obvious, for until we know how the locusts spend those months when they are not in evidence with us we can scarcely hope to be in a position to foretell their coming.

From the scanty data collected on the subject of the movements of locusts in the Sudan, it would seem that one of the sources from which they come is in the west. The first flights of the season often appear in May or early June on the river in Dongola Province, coming from the west or southwest, and in Kordofan Province coming from the north west — i.e. the Libyan Desert. Those in Dongola Province proceed at first eastwards and then southwards, passing Abu Hamed on their way to the Butana. The flights in Kordofan Province spread in a general easterly direction to the Gezira, to mingle with the flights which have travelled via Dongola Province. Breeding occurs throughout the central and northern provinces, wherever rain has fallen in sufficient quantities, and the ensuing generation, having acquired wings, is very much in evidence in September and October. From then onwards, flights appear on the Red Sea littoral, coming from the south and east and remaining to breed, the younger generation attaining the winged stage towards the end of the year or early in the new year.

While we know that in certain years vast numbers of winged locusts come in from the direction of the Libyan desert, it is by no means certain that these flights constitute all, or even the majority of, the locusts which are with us during the ensuing kharif. Nor do we know from what area they have come. We know that *S. peregrina* is capable of sustained flight for a very great distance,—possibly up to a thousand miles—but when a swarm of locusts appears flying from due west, it does not necessarily follow that it has moved in a straight line due east for any distance. In fact, it may have originated in the south or east and circled before coming down. The locusts which arrive on the Red Sea littoral from the direction of Eritrea may have come from Eritrea or Abyssinia, but also may have come from Arabia or Kassala, or even farther west.

It is probable that the progeny of the locusts which come to us from the direction of the Libyan desert have a tendency to return, when adult, to the areas from which their parents came, and there is some evidence in support of the theory that a return migration may occur. Occasionally, reports are received of large swarms having been seen, towards the end of October, flying steadily, at a great height and in a westerly direction. The fact that what appears to be a return migration is more rarely seen than the arrival of the preceeding generation must not be taken as proof that it is unusual. It is only to be expected that arriving swarms should be more noticeable than departing swarms, for when nearing their destination, locusts fly low, while when starting on a migration they frequently, if not invariably, mount to a considerable altitude.

It is possible that at the end of the season the swarms—or at any rate some of them—do not migrate, but instead, break up and the individuals scatter, to lead more or less solitary lives in the bush until atmospheric or other conditions cause them to regain the gregarious habit. Colour is lent to this theory by the fact that at all times of the year single specimens and occasionally small swarms may be met with throughout the central and northern provinces.

When we endeavour to answer the question “where do the locusts come from?” we find that the information we possess does not permit of any definite conclusion being arrived at. Of the various theories which may be formulated, the one I am inclined to believe will prove correct is as follows. In certain years swarms

of adults come to us from the direction of the Libyan desert—either from the desert itself or beyond. These locusts breed with us, and of their progeny a proportion—large or small depending on the climatic conditions obtaining at the time—return to the west, while the remainder scatter and live more or less solitary lives in the bush. When the next kharif draws near, these solitary locusts collect together again into swarms, to breed. As to why in certain years there should be an influx from the west, it is probable that, when migrating, locusts are reacting to some stimulus such as an atmospheric disturbance, possibly associated with the change from the N. E. winds of the dry season to those of the rains. Thus, an atmospheric disturbance occurring in the west and moving westwards would draw the locusts of that area away from us, but moving eastwards would bring them. In the same way I think it probable that the locusts on the Red Sea littoral are occasionally reinforced by migrating flights from the east, but that many of the swarms which occur there during the rains are composed of individuals which, since the previous rains, have been leading solitary lives in the Red Sea Province and farther south. It is only fair to suppose that if in some years we receive immigrations, in other years we may send out emigrations. It must be understood that the above is only a theory with but little evidence to support it.

The only way in which we may hope to solve the problem of where the locusts come from is by the accumulation, year by year, of information on their occurrence and movements. Even though a swarm, when seen, is in an area where it can do no harm to crops, its occurrence and the direction in which it is moving should be recorded. For various reasons I am led to believe that locusts are likely to be very numerous during the coming season, and whether or not there are immigrations from either the west or east I am anticipating a bad locust year. Should my fears prove justified, the cooperation of all those readers of this journal who chance to be in the Sudan during these coming months, and who will make a point of reporting locusts whenever they see them, will be of the greatest value.

A brief account of the life history of the locust and of the various methods of dealing with it are contained in *Entomological Bulletin No. 12*, copies of which may be obtained from the Government Entomologist, Khartoum.

CORRESPONDENCE.

DEAR SIR,

In a past number of Sudan Notes and Records Dr. Reisner describes a burial which he discovered at Derna in the Sudan of the XIIth dynasty, in which the dead chief lay on a couch beneath a tumulus, surrounded by a number of bodies of persons who had apparently being buried alive with him or slain for the occasion.

In this connection the following may be of interest, quoted by Sir Samuel Baker in his work "Ismailia" vol. ii page 205, from Ibn Batuta as a commentary on a similar ceremony at the death of the king of the Unyoro, which had taken place directly before his arrival in 1872:

"I was informed in the Sudan by persons, upon whose word full reliance may be placed, that among certain infidels in those countries on the death of the king a vault is constructed in which the corpse is laid and along with it a certain number of his courtiers and servants: as also 30 persons, sons and daughters of the most distinguished men of the country. The forearms of these persons are first broken as also their legs, below the knees, and drinking vessels are deposited with them in the tomb.

I was informed by a person, one of the chief-men of the Masuffats who dwelt in the country of Koobar in the Sudan, and who was a favourite with the Sultan, that on the death of the latter the people wished to bury my informants' son in the tomb along with those of their own children who had been chosen for the same purpose".

It appears that the informant managed to ransom his son with a heavy payment.

Ibn Batuta's date is given as 1346.

Cairo,

Feb. 10th, 1922.

Yours etc.

E. S. THOMAS.

DEAR SIR,

I hope Major Murray's comparison of Bari and Nubian will lead others to continue this very valuable work. The past history of Africa may lie hidden behind the language forms; Nubia, for instance, may prove to be the farthest limit south of Egyptian influence; beneath it a Sudan type of which Shilluk, or better Luo, is a good modern representative; and behind that the possibility that this Sudan element perpetuates the tradition of the Anu as prehistoric ancestors. Luo *rwot*, a chief, is Shilluk *ret* a word which at once recalls the name *ret* by which the Egyptians called themselves.

In the second place there is philological study; not only the detailed examination of individual languages, but much wider questions. What exactly do we mean, for instance, by an Hamitic type? Is Sudanian another development of Bantu forms, an apocopa-tion of vowel ending syllables, with intonation replacing vowel length?

I have found it possible to go a little way. Bantu is the easiest line of study; and in Bantu primitive forms have altered little. It is possible to check many of them by the corresponding Hebrew and Sumerian; and I am hopeful that when we have laid this foundation, the examination of other types of African speech will be found considerably easier. To illustrate from Major Murray's paper. He begins with a list of verbal derivatives; it is not the same full list that we know in Bantu, nor is the nomenclature quite the same. But the underlying principle is clearly identical. The—*ij* or *ji* reflexive is Bantu LI, reflexive, palatalized; the intensive—*ir* is Bantu LIL, truly, as verbal suffix—(i) *rira*; and—*ör* suggests an augmentative form in—*ula* for *gula* sometimes found. The causative in Bantu denotes 'cause to do' or 'cause to be done' and comes from a primitive KA or SA, to do. The full form as it appears in the Bantu verb 'to do' is KIL, in a large number of instances; and KIL seems to be the *kid*, *kin* of Major Murray's list.

Space prevents more detailed reference. I should like however to comment on the sentence "the three main suffixes—*k*,—*t*,—*n*, . . . represent masculine, feminine, and common grammatical genders" together with the accompanying text on Plurals and Article.

i. The earliest type seems to have been a Prefix system as Bantu—the same prefixes appearing as suffixes in non-Bantu of a

primitive type. The plural in these cases was a phonetic variation of the singular; thus LI (sing.)—MA (plur.) prefixed to what was hard; base LAG, stone. The one exception was the personal class where we had MU, a unit, for the singular (omu—ntu, a man) and BA, existences for the plural (aba—ntu, men).

This suggests a possible origin for numbers of singular and plural suffixes (and possibly prefixes) in Nadi, Bari, Nubian, etc. the latter as quoted by Major Murray.

ii. An equally primitive plural formation was GI, many; its full form GIN gives Hebrew plural—îm etc; shortened to 'i' it is found in Latin and Greek as a Plural suffix; and, if we admit Dr. Ball's contention that g and s do sometimes interchange, GI many is seen to be the origin of the—es, plural found in Greek and Latin and even in Saxon.

iii. The term article is always misleading; Latin never knew an article. What are sometimes called 'articles', as in Nandi, Hausa, Fula etc. may be nothing more than definitive forms—a slight extension of the Bantu idea of Self—standing forms made by reduplication of prefix.

iv. Masai ôl—for masculine is obviously the same as Greek—os, Latin—us; but its origin is obscure. We may note, however, that Masai ôle, male; plur. *lewa* points us to either LUM, pierce or GAM beget, the two most common forms from which the idea 'male' derives.

Major Murray's 'k' form for male is seen in Logo a—ko, male; and the base kol in Luo *la—cor*, a man (vir); Teso *aki—lyok—it* and with g to m Dinka *mor* (plur.) male: (sing.) *nior*.

v. Masai *en* for feminine is probably for *na*, *ma*, mother; but certain ideas are attached to this primitive which do not enter into our modern conceptions of the word. I have discussed them under the MU—MI or Tree Prefix.

Major Murray's 't' form is the Semitic feminine. It may possibly be also an Hamitic form, Hamitic and Semitic often starting from the same base. Dr. Ball traces the Semitic form back to Sumerian *tam*, companion, spouse.

vi. Major Murray's 'n' for common gender may be the *el*—collective prefix of Masai; the—um, neuter of Latin, and—on of Greek. The base is GUN, a total, allied to GAN, a flock. The curious interchange of these two forms is well illustrated by comparison of Bantu reciprocal suffix—*ana*, for *gana*, with Hausa receiprocal *juna* used as a sort of noun—*da juna*, with one another; and 'they hit their one another (*juna—n—sa*)' meaning 'they hit one another.'

The above is a mere skeleton outline. Some of the detail, however, can be found in my Primitive Speech; Part I Phonetics Part II. Prefix System, to be out shortly. Written primarily as a Bantu study, the matter will I hope be suggestive for much wider studies.

Yours faithfully,

W. A. CRABTREE.



A HISTORY OF THE ARABS IN THE SUDAN

By H. A. MacMICHAEL, D. S. O.

Cambridge, 1922. 2 Volumes.

(FIRST NOTICE).

The full title of this book is, *A history of the Arabs in the Sudan and some account of the people who preceded them and of the tribes inhabiting Darfur*. It is not a history of the Sudan but the history of a single stock in the present very mixed population of our northern provinces. Accounts of other stocks here are included as a historian, say, of the Normans in England might introduce accounts of the English and other people who preceded the Normans in England and ultimately absorbed them.

Mr. MacMichael has "Viel gelesen viel gereist": the work of older writers is familiar to him, he knows the country they wrote about better than most of them, and various official positions he has held have enabled him to get more information from the people than the ordinary traveller can hope to do. He is scrupulously accurate and much too acute to be blind to any shortcomings in the subjects of his choice. Any pioneer historian of the Sudan has a difficult enough subject before him and Mr. MacMichael has, as it seems to me, increased the difficulty by attempting too early to distinguish Arabs from non-Arabs. This, however, is the task which he has imposed upon himself and, given the subject and the materials, I think these volumes could hardly be bettered.

The first volume begins with three chapters about the people who were here before the Mohammedan Conquest. Each chapter is concerned with the appearances in what is roughly the same historical period of different elements in the population, namely, the pre-Islamic Arabian Element (Chapter 1), the Nubians the Nuba and the Libyan element (Chapter 2) and the Beja the Blemyes and the Nuba of Meroe (Chapter 3). One is tempted to ask, Are we justified in making this classification? In particular, in distinguishing the Nubians or Nuba of Dongola and Northern Kordofan from the Nuba of Meroe, except on geographical grounds? Again, do we know that the ancient writers who referred to

Arabians meant what we understand by Arabs, and in what significant sense can they be differentiated from Libyans and other African nomads? Mr. MacMichael assumes that the names mentioned by his literary predecessors belonged to elements which were differentiated in the same way as at present. Even if the assumption be accepted as reasonable *a priori*. I question whether it helps us much in interpreting the recorded facts, but this criticism of the plan of these chapters does not affect the value of their contents, which are extremely well documented. These chapters are followed by a most important original account of the non Arab races of Darfur, and this by two chapters, also very well documented, on the progress of the Arabs through Egypt and the conquest of Dongola. The remainder of the first volume is filled by a long original disquisition on the grouping and inter-relationships of the Arab tribes now settled here.

The second volume is devoted to the publication in English of the sources of the disquisition in volume one, and as these sources consist almost entirely of new and unpublished material, the value of this volume to all who are interested in the history of this country cannot be exaggerated. It is not, all of it, easy reading, for nearly half the book deals with genealogies about which most of us will agree with the native genealogist who wrote "The knowledge of the pedigrees of persons who are unrelated to yourself is no use.....and the following saying of the Prophet about one who was learned in pedigrees bears this out: "A knowledge of them is useless and ignorance harmless". On the other hand, 'the history of the Fung Kingdom' (M. S. D. 7) and the *Tabaqat wad Daifulla*, a series of biographies of holy men (D. 3), are excellent reading: they give an admirable picture of native life in the Sudan during the last four hundred years, a picture withal painted by natives, and their publication in English is most welcome. The *Tabaqat* is, indeed, the most characteristic expression of native ideals as yet thrown up in this country, and the commentary and notes which Mr. MacMichael has added to his translation are models of what such things should be—if only the notes had been printed on the same page as the text. The history of the Fung Kingdom is less racy, but to an official who wants to understand how natives judge those in authority the concluding pages on the Turkish period cannot be too highly commended.

The M. S. numbered D. 1 which is described as 'General genealogical and historical information about various tribes' occupies a position midway between the above mentioned works and the purely genealogical writings at the beginning of the volume, and the general summary of the tribal situation given by the author of this manuscript appears to me worth quoting in full. It runs thus—'The tribes of the Arabs who are in the Sudan, other than those (the Nuba, the Abyssinians and the Zing), are foreigners, and have merely mixed with the tribes mentioned above and multiplied with them. Some of them have retained the characteristics of the Arabs, and the element of Nuba and Zing that is interspersed among them has adopted the Arab characteristics; and on the other hand, there have been some Arabs who have been fused with the Nuba and the Zing and adopted their characteristics; but in each case they know their origin' (vol. 2 p. 197). The problem of the ethnology of the Northern Sudan could hardly be put more concisely, and an ethnologist would do well to take these words as his motto: various absurdities which have found their way into standard English books on ethnology, concerning for example 'the unsullied Arab lineage' of this or that tribe, would then disappear. The last few words of the quotation above made will no doubt be called in question by some sceptics: do the natives in each case really know their origin? Of course, many natives certainly do not know their origin and rely in their statements about it on pedigrees which have been manifestly faked, but before adopting a general negative attitude the sceptic should ponder Mr. MacMichael's arguments. It seems to me that these arguments will carry conviction so far as the broader issues are concerned. Mr. MacMichael himself admits so frankly the weakness of much of the evidence that one is the more disposed to accept a contention which is at once temperately urged and carefully qualified.

The bulk of Arabs in the Sudan are divided by Mr. MacMichael into two main groups, the Ja'aliin—Danāgla group which includes most of the riverain tribes as well as many of the sedentary tribes in Kordofan, and the Juhayna group which includes the Baggāra tribes and many of the camel and sheep owing nomads. The distinction corresponds roughly to the vulgar distinction between Ashrāf and 'Arab, common both here and in Egypt, but even this distinction must not be pressed too far: the greater the tribe, the

more mixed it is, such a tribe as the Kababish, for example, being as Mr. MacMichael shows a congeries of the most heterogeneous elements.

These volumes are so packed with detail that it is impossible in the limits of a first notice to do more than call the reader's attention to the most salient features. We hope to return at some future date to many special points which are raised by this work. Meanwhile we offer our warmest congratulations to the author on his achievement. His book is a mine which will not be exhausted for years to come. It will be of permanent value to all workers in this field.

J. W. C.

ERRATA.

The following error has been brought to notice by Mr. H. K. Gray in the printing of the article on "Methods of Accelerating the Germination of Seeds" in Vol. IV, No. 3, Page 165 first word of line 9.—for irrigation read *inundation*.

SUDAN NOTES AND RECORDS

Volume V.

No. 2.

KASSALA.

BY G. J. FLEMING.

Kassala is the name given to one of the largest towns in the Eastern Sudan, and the same name is applied to a whole Province comprising an area of 46000 square miles.

The town is situated about the middle of the province on the 15th parallel and has always been a place of considerable importance situated, as it is, at the apex of a deltaic river called the Gash.

It is made up of the three small townships of Kassala, Gharb El Gash and Khatmia.

The present town of Kassala has grown up beside the original village of the district, peopled by the Halenga tribe who affirm that they left the shores of Southern Arabia about 550 years ago and that some of them travelled via Abyssinia and the Gash valley and joined the rest, who came via the Red Sea and Suakin, at Kassala. Although they speak the same tongue as the Hadendawa, they do not appear to be particularly friendly with the latter, and they never seem to have submitted to their authority. Their sphere of influence in the Gash valley seems to have been very considerable formerly, but the number of the tribe in recent times has greatly diminished.

Besides the Halenga there is a considerable admixture of other peoples, which is not surprising, when it is remembered that for more than fifty years in the last century, the Turks maintained a garrison there four thousand strong, composed of Turkish, Egyptian, and Sudanese troops. The result is that people who call themselves Kassalawia are found, whose origin is not a little vague.

Besides these, the town includes among the numbers Somalis, Abyssinians, Greeks, Indians, Italians, people of the Nile, Beni Amer, who form the bulk of the Camel Company of the Eastern Arab Corps, a few Hadendawa, and others.

All these together number close on 6000 souls.

The largest of the three townships is Gharb el Gash, which numbers over six thousand and is situated on the opposite site of the Gash from Kassala. Its inhabitants are composed entirely of Sudanese and West Africans. The former include among their numbers many of the old soldiers, who have served in Sudanese battalions. These men form the "Redif", which body corresponds to a militia and yearly undergoes a training of four weeks duration supervised by the Commandant, Kassala, but under the command of their own officers.

It may here be mentioned that the fort and district of Kassala are held by an "Idara"⁽¹⁾ composed of roughly 250 men and a Camel Company of 180 men. These troops form part of the Eastern Arab Corps, whose Headquarters are now situated at Gedaref. This corps originated from the Arab troops, with which the Italians garrisoned Kassala Fort in the nineties. The native part of the Italian Garrison was entirely composed of the Beni Amer tribe and indeed the badge of the Eastern Arab Corps today is the "Shotai".⁽²⁾

The Idāra and the Hagāna are composed entirely of Arabs. The former include many Somalis among their numbers, together with representatives of the local tribes, while the Hagāna is almost entirely composed of Beni Amer.

The West Africans, who form the other section of the inhabitants of Gharb El Gash, are pilgrims going to or returning from Mecca. They work in the Gash lands, earning sufficient money to take them forward on the next stage of their journey Eastwards or Westwards. These pilgrims form the back-bone of the labour supply of the Gash, and as a body are a most law-abiding people, whose

(1) Idara is a word of Turkish origin with no English equivalent but it may be described as a double company of infantry containing its own mounted and machine gun sections.

(2) The "Shotai" is the curiously shaped knife used by the Beni Amer. It is two edged and may be used for both thrusting and cutting. It is worn in a leather girdle and is sheathed in front of the wearer.

aim is to pass through the country with as little trouble as possible. Their presence is a god-send both in the deltas of Tokar and the Gash, and it is gratifying to see that these cheerful people are beginning to settle in Sudan Territory.

The smallest of the three towns is Khat'mia, which only numbers about 700 inhabitants. This is the town in which the family of Mirghania have settled for about one hundred years. The town is situated at the foot of Gebel Kassala and boasts of a mosque, and the famous tomb of Sayed El Hassan. Sayed El Hassan was the second head of the Mirghania family after its settlement in Kassala. He died in 1869, was a man of great piety, so much so, that an oath taken on his tomb by a follower of the Khatmia sect of Islam, even at the present day, will hardly be broken and is often the only oath, which will bind a man to his word. Sayed Ahmed El Mirghani, the present head of the family in Kassala is the grandson of Sayed El Hassan. His half brother Sir Sayed Ali El Mirghani K.C.M.G. lives in Khartoum and received a knighthood for great assistance rendered to the Sudan Government during the War.

There are no specially striking features about the town itself. The fort originally built to protect the ginning and sheds, is only noticeable on account of the chimney rising 70 feet from the middle of the fort enclosure. The town runs along the side of the Gash for about 2 miles and at the southern end, the last few grass houses border the dom forest, which continues on both sides of the Gash right to the Eritrean border. This forest in certain places is so dense (where it has escaped the ravages of fire) that it is possible with impunity to sit below the dom palms, even in the heat of the day, without a covering for the head.

The dominating feature of the town and district is Gebel Kassala. It rises sheer above the surrounding plain for 2791 feet and has the distinction of never having been scaled. It is impossible to describe adequately these wonderful masses of smooth granite, which, rising from the midst of a confusion of boulders, rear themselves dome-like to the skies (1).

The central peak called *Tolus* is the grandest and highest of all, although the other four, if found apart from it, would be considered

(1) Kassala itself is called in the older books El Lus or Kassala El Lus. 'To' is the Bega feminine article which appears also in Tokar and Themiam and Lus is said to mean 'smooth' "The unclimbable" might serve as translation.

very striking land-marks. Gebel Mokram lying 3 miles to the north rises 1551 feet above the plain but its height and formation do not catch the eye like Gebel Kassala. The smooth granite precipices of the latter are so near and yet so far that full grown trees in the midst of the boulders at the foot of the mountain appear small and insignificant in their setting. This is all the more striking in a country where often every tree is a feature. No tree, no grass can find a nook to establish themselves on the sides of the main peaks.

The eyries of birds of prey can alone be distinguished as minute specks far up on the inaccessible cliffs.

It is not intended in this short note to attempt to present anything in the nature of a history of Kassala or its people inasmuch as the intention is to deal chiefly with things agricultural but a word or two about the recent history of Kassala and its development may be of some interest.

The first man to visit and describe for English readers the Gash or "Taka" ⁽¹⁾, as the delta was, and still is called by Hadendawa and Halenga alike, was Burckhardt. He left Upper Egypt in March 1814 with a caravan of merchants bound for Sennar. He went no further than Shendi, however, and turned back North again to follow the course of the Atbara with another caravan going to Suakin. It was when travelling with this second caravan of merchants that he spent 10 days in Filik which was at that time, the chief town of the Hadendawa in the Gash Delta.

The goods which the caravan brought to barter in "Taka" were principally damur, tobacco, and slaves in exchange for which were accepted dura and live stock.

In those days the only crop in the Gash of any importance was dura, although bamia and lubia also seem to have been cultivated, but to a very limited extent.

It seems that the Gash in these days formed the granary of the Eastern Sudan. Apart altogether from the quantity which could be grown, the quality of the grain was exceedingly good. The dura which made the Gash famous was undoubtedly the "*Taolib*" variety. This dura has several interesting characteristics. The flour made from it is considered little inferior to wheat flour. It will give a

(1) Taka is the Bega name of the original town at the foot of the mountain.

yield in suitable soils of over 10 ardebs per feddan, and it has the extraordinarily long-growing period for a dura of 150—180 days, and will remain in the earthen granary called a "Matmura" for as long as five years without greatly deteriorating. Some duras will remain one year only. This variety owing to the ravages of 'Asal' has almost disappeared.

Burckhardt further informs us that the Gash dura found its way even to Jedda while Suakin drew practically all its grain supply from the Gash.

The presence of Tokar is merely mentioned by him and described as a fertile plain, the produce from which only supplied the town of Suakin with a small portion of its requirements.

During famine years on the Nile, the Gash dura appears to have found its way to Shendi and other markets lying to the West.

At this time, the inhabitants of the Gash had their villages scattered up and down the delta and the location of the tribes seems to have been as follows:

The Beni Amer occupied all the area of the Gash from Gulsa Southward but they also held small pieces of land as far North as Gammam 20 miles from Kassala. Their cultivations on the Gash were held in a sort of friendly partnership with the Halenga.

The Halenga seem to have been the original people of the Gash and inhabited Kassala town and the greater portion of the Eastern and Western Gash.

A small tribe called the Mitkinab formed a buffer between the Halenga and the Hadendawa⁽¹⁾, the latter inhabiting all the land lying to the North.

The coming of the Mirghania family in 1840 brought a series of changes, for in that year the Turks with Egyptian Troops took possession of the town.

It is of interest to note the effective steps, which were taken on one occasion to reduce the Hadendawa to order. It appears that this tribe did not see its way to pay tribute and it was considered inadvisable by the authorities for some reason or other to make a

(1) The early history of the Hadendawa appears to be rather difficult to discover. They, themselves, affirm that they came to the Sudan direct from the Hedjaz. Although they speak the language of the *Beja*, they say that they established themselves as conquerors of the *Beja*, and only adopted the language of the conquered.

punitive expedition against them. The authorities stated that, if no taxes were forthcoming, the two arms of the Gash would cease to flow. Needless to say the Hadendawa considered this threat an utter impossibility, not taking into account the Kurbag of the Turk to induce labourers to further effort. The people of Kassala dammed the Gash and diverted all its water down *Khor Kwent*i. The Hadendawa paid.

It is probable that a certain amount of cotton was grown in the delta from 1840 to 1874 and was probably introduced from Sennar. Tobacco also seems to have been grown in pretty considerable quantities introduced and cultivated on the Sagia land by the Turkish Garrison, and experiments carried out last year, go to show that the soil found in these Sagia lands near Kassala will successfully supply the requirements of this profitable crop.

The garrison at Kassala about this time consisted of one Egyptian battalion of 800 men, 1 Corps of Arnauts 400 men, 1 Corps of irregulars 800 with probably 2000 camp followers and women. This seems a large number compared with the 430 now present but this was none too great a garrison, when it is remembered that the Turks laid claim to all the land running along the Red Sea and right down to the borders of Somaliland. It is also said that the Turkish Governor of Massawah called himself Governor of Habesh, but this claim capable of being vaunted with impunity in the streets of this seaport by a thieving band of Turkish soldiers, was much discredited as the confines of Abyssinia were reached.

Mention must be made here of the visit of Sir Samuel Baker to Kassala in 1861. The account of his journey can be read in "The Nile Tributaries of Abyssinia" a book full of great adventure and wondrously fresh.

After 50 years occupation of Kassala, the growing of cotton had presumably passed the experimental stage and the Pasha, Ahmed Mumtaz who had already established the cotton industry in Tokar determined to introduce the mechanical ginnery of cotton in Kassala.

The growing of cotton over the Eastern Sudan is even now associated with the name of Ahmed Mumtaz. Until quite recent times the people of Kassala grew the strange plant, which went, not by the name of cotton, but of Mumtaz, and the cultivator on the Rahad still grows Mumtaz from which he spins a damur of fairly good quality.

He also had the enterprise to introduce machinery for the spinning

of the cotton in Kassala and the building of the ginnery and spinning shed was commenced in 1921 and the work of construction put by him into the hands of Munzinger Pasha.

The work went forward with considerable vigour.

The machinery was brought over the mountains from Massawah but in 1874 just as the work was nearing completion, Munzinger Pasha was ordered to lead an expedition against the Abyssinians. This he did, but the expedition proved a failure and Munzinger never returned to Kassala. He went to Massawah and ultimately died fighting on the borders of Abyssinia and Somaliland, whence he had led a much larger expedition, which ended most disastrously.

Be that as it may, the work, which he left undone in Kassala was never completed and on the fall of Kassala into the hands of Dervishes in 1885, the peaceful instruments of commerce brought with infinite pains over the mountains to Kassala, were beaten into implements of war.

It is interesting to record that after the occupation of Tokar in 1891, it was decided to make a strategic railway from Trinkitat situated on the Red Sea littoral to Kassala and possibly on to Gallabat. A few miles of this rail were actually laid but the project was abandoned, due presumably to the high rocky country over which the line would require to run and which continues for quite 200 miles i.e. till the Gash Valley is reached. This inhospitable country with its very poor water supply was well described by an old Sudani soldier, who formed one of a working party sent yearly to inspect the telegraph line, which stretches across this district "Wallahi", he said, "el bilad da hawa wa hagar bas".

The capture of the town by the Italians in 1894, their construction of the present fort and the handing over of Kassala three years later to the Anglo Egyptian forces are all matters of recent history and need not be mentioned here.

The Gash, or Mareb as it is called in Eritrea, rises in the mountains south of Asmara. Its flow in Eritrea is confined for the most part to a gorge-like channel, which precludes the possibility of any irrigation works, except on the smallest scale, being undertaken. The river passes into Sudan territory 16 miles South of Kassala town, but no off-take from its waters is possible until

a point 6 miles south of the town is reached when, on occasion of very high flood, a khor called Kwenti carries water away to a fertile region of large extent.

The river had, previous to the building of a weir in 1906, a very well defined channel opposite Kassala town. This deep channel no longer exists but has given place to a broad shallow channel, which is not nearly so comforting a type of river to live beside for the people resident in Kassala. It is much preferable to see a river, rich in silt, confined to a well-made channel than to regard the same type of river growing broader and broader and flowing often with great speed, not very far from buildings on which much good money has been spent.⁽¹⁾

The river definitely spreads out a few miles North of the town and previous to the construction of irrigation works in the delta proper, its waters went down the Eastern and Western Gash respectively.

The Western Gash had the shorter flow of about 40 miles, but from a cultivation stand point was easily the greater favourite. This was due, partly to its proximity to Kassala town, and partly to the great ease with which its waters lent themselves to the system of irrigation practiced throughout the Gash.

The Eastern Gash is the real Gash and from the point where the Western branch takes off, its flow continues usually for over 50 miles, although in a year of big flood such as 1920, its volume, assisted by small local Khors reached a point approximately 110 miles from the point of branching. It is interesting to note that many of the old maps indicate by vague lines, the entry of the Gash into the Atbara River. This is not, however, accurate geographically and the Gash with its heavy deposit of silt has probably never reached the Atbara.

The channel of the Eastern Gash for the first twenty miles is often exceedingly deep, but after this point, two branches called Tokar and Filik, take off and the Eastern Gash shortly after begins to spread out more and more until a point is reached where the flow goes Northwards in one broad ribbon of water sometimes over two miles broad with its expanse unguided by any big channels.

(1) The river overflowed and ran down the streets of Kassala in recent years.

This district boasts of many "*Shiotes*" or artificial irrigation channels and this is the region where development will sooner or later surely take place, and which gives every promise of being able to produce an excellent type of long staple cotton.

It is necessary to explain here the meaning of "*Shiote*" and a sketch is shown.

"*Shiote*" is a Halenga word and is the name given to the water-channel cut by the cultivator at an angle from the Gash to bring water to his land. The same name is also applied to the areas watered by these channels.

"*Shiotes*" have existed from the earliest times and sometimes require to be cut at great trouble and expense.

They serve a three fold purpose, however. In the first place, water in such a channel can be regulated and, as the waters of the Gash are not the land over which the natural flow spreads is jungle sometimes of the densest description while that watered by the "*Shiote*" itself is comparatively clean. Moreover the Gash water may continue its flow for a period of 100 days.

The consequence is that the cultivator by cutting his "*Shiote*" through the "flow zone" called in Halenga "*Balag*" and so out to the rain land can sow earlier and thus harvest earlier. This is generally a great advantage in Sudan agriculture.

The third advantage is that the cultivator has by this device saved himself the immense labour of cleaning the jungle after the Gash has ceased to flow and has led its rich waters into the rain land region, where all the grasses are shallow rooted and therefore easy to clean.

It is a simple matter to sow land. A man and a boy can sow with the wooden spade known as a "*Seluka*" $\frac{1}{2}$ —1 feddan in the day. The cleaning of land is the trouble. It is so expensive and a feddan of land in the natural "flow zone" of the Gash may take as many as 25 men one day to clean, while an equal area of land watered by the "*Shiote*" may only take four to six men one day to clean.

Owing to the Gash carrying so much silt, it is necessary to have these channels cleaned yearly before each flood, if the owner of the "*Shiote*" wishes to have a plentiful supply of water. The arrangement followed is the same throughout the Gash. The owner employs

labour to clear the previous year's silt and if he provides only the food for the labourers, he must let them have half the area flooded by the *Shiote*.

On the other hand, he may prefer to cultivate the whole flooded area himself, and if so, he has to pay his labourers a contract wage according to the price ruling at the time and the type of channel, which requires to be cleared.

The area of the *Shiote* varies from 50 to 100 feddans, although in years of a heavy continuous flood, the area may be extended, especially in the lower reaches of the river, to several times that amount. It is needless to say that the regions, where the Gash flows in a channel, which shows no signs of scouring, the development of cotton will certainly take place. Here channels cut on the same principle as the native cultivator has worked on for ages past, will probably prove the most efficient. Large Irrigation works, hastily undertaken, cannot be too strongly condemned.

The development of the Gash by native enterprise has already received a severe check by the too hasty construction of Irrigation works undertaken between the years 1906 and 1910.

It is easy to be wise after the event but there is no doubt that the damage then done, was caused by undue haste.

The result of these untimely works has been to cut off the whole water supply of the Western Gash. This branch apart from the ease with which its waters could be utilized by ordinary native methods was not situated as far from Kassala as the good lands of the Eastern Gash.

It may be argued that what the Western Gash has lost, the East has gained, but this is poor consolation to the inhabitants of this district; who have not even got a proper supply of water for domestic purposes.

The damage done by the dam built 14 years ago promises to be permanent and the lesson then learnt should be taken to heart both in Kassala and in Tokar.

If investigation is done comprehensively and not hurriedly, it is generally found that the local native really leads the way towards development, that his methods though crude are effective, and his long experience not to be despised.

The valley of the Gash promises to have a much brighter future than that of Tokar, inasmuch as besides the Gash having a greater average discharge than the Baraka the climate is much more agreeable.

Fever is certainly very prevalent at Kassala during the rains and the valley of the Gash is not a healthy place at that time for man or beast, but the surrounding high lands remain comparatively healthy, even although situated close to the flooded area and the Gash is a good place to live in after the rains have ceased and the flood abated, which is not the case with Tokar.

The rains at Kassala may not be copious, but they never entirely fail and so the Arab can always find some grazing even apart from the flooded area itself. In other words the regions near the delta of the Gash can be inhabited with some sort of comfort and, in time, considerable settlement is almost sure to take place by the natives of the surrounding hills; while the Tokar delta will never be peopled except by a floating population.

It may here be noted that Kassala Province resembles Kordofan in many respects. The same migrations of the Arab with his flocks and herds to the North takes place yearly, many settling on the high ground on the East and West of the Gash to avoid disease especially among their camels. The damage caused by Trypanosomiasis is extremely great so much so that camels from Gedaref must be sent North during the rains into a region of less rainfall. It is for this reason that the Camel Company of the Eastern Arab Corps is stationed at Kassala.

It is also worth noting that the absence of sheep South of approximately the 15 inch rainfall line is due to the prevalence of a specific disease.

No sheep are to be found in Gedaref or on the Rahad from a village near Wad Medani southwards, until a certain point on the Abyssinian uplands is reached, when a sheep different in type, from the long-legged water-pursuing Sudan sheep, is met with.

It is impossible to mention the Southern part of this province, in which are situated the three towns of Gedaref, Mafaza, and Gallabat without referring to the bright future, which must lie before the region in which these towns lie. So long as a demand for gum, vegetable oil and cotton exists, so long must the non-development of this region be deplored.

In this district a skilled cultivator is met with, who is willing enough to cultivate oil yielding, and fibre-producing plants, but who cannot market them now, if he grew them, as the present lack of transport kills almost all enterprise.

Unlike these natural rain lands, the Gash delta just as the Tokar delta is merely a freak of nature found, as it is, running steadily northwards into a region of low rainfall.

The result is that the Gash is cultivated by shepherds, who look upon this valley as a good place to graze over, when the failure of the wells, among the hills, compels them to descend yearly upon the shallow water holes of the Gash. Fortunately these do not fail the Arab even in a dry season, and it is a wonderful sight to see hundreds of cattle daily watering at a group of wells.

The approach of the animals to water in the middle of a hot summer's day makes rather a pathetic spectacle.

The coming of a large herd is hid from view by the tall tamarisk trees, but a muffled noise of feet is heard and the first animals are seen arriving at the run, followed by the rest of the herd dimly seen and approaching rapidly in a smothering cloud of fine dust. The animals are mad with thirst and now the activity of the herdsman is seen. He must gently lead his herd to the particular earthen "Hod" where the water is ready waiting and here disputes are often rife with the owners of other "Hods" awaiting the arrival of their cattle. The herdsman, who does not know his cattle and cannot get them to obey him is indeed a menace to the peace.

The brutes would, of course, drink from the nearest "Hod" and in their mad desire for water would probably break down its flimsy earthen walls, and so allow to escape the waters containing perhaps as much as 1000 gallons laboriously drawn by hand from the well, a few feet away and so rendering void the whole previous nights' toil of a drawer of water.

Although this disaster does not often take place, it is by no means uncommon.

If the herd, is really thirsty or if it is somewhat large, it is necessary to divide it into two and while one half approaches and drinks, the other half, stamping, lowing, and restlessly moving to and fro, a short distance away, watches for the least sign from the herdsman to permit approach.

This scene is always of interest and the drawing of water is carried on throughout 24 hours of the day. The "hods" require to be protected at night by means of cut branches of thorn tree to prevent damage being done by wild animals while they would drink, lion, hyenas, water hog, leopard, foxes and many other night prowlers, but of a smaller kind timidly leave the safety of the forest and provided no one is drawing water near at hand and the "hod" unprotected the silence of the night is broken by the lapping noise made by a thirsty animal.

As already pointed out, the Gash although running for several weeks in the year as a river, is nevertheless very variable in its volume. In 1920 it was computed to be 793 millions cubic meters, while in 1921 it was only 160 millions.

The rainfall averages about 13 inches. This means that the watering of the Gash land like that of Tokar land will be a gamble. This type of cultivation suits some temperaments, but can hardly be considered as tending towards economic agricultural practice and so while full use must be made of the local shepherd type and his interests in the land of his fathers safeguarded, every encouragement should be given to good types of settlers coming from outside sources.

It must be admitted that the Arab, even now, is taking some interest in his cultivation and so preparing himself for the day when the railway track commences to tap the rich natural resources concealed in the present jungle of the Gash.

A DESCRIPTION OF SOME OLD TOWERS IN THE RED SEA PROVINCE, NORTH OF PORT SUDAN.

VISITED BY C. T. MADIGAN, *Assistant Geologist.*

IN DECEMBER 1920.

There are several towers on the Red Sea littoral North of Port Sudan, and three of these were examined in detail. The towers do not appear to be of any great antiquity, but nothing of their origin is known by the local Arabs, who have no interest in them and merely say that they were built by *nās gedim*.

Of the three examined, two are similar, with octagonal bases and domes at the top, and the third of much simpler design and square section. The latter was visited first. It is situated on a small mound-like hill in the alluvial plain between the mountains and the sea, $1\frac{1}{2}$ miles North of the Khor Garrar Iswid, about four miles S.W. by W. from the sea at Mersa Arus and some thirty miles North of Port Sudan. It is marked on the 1/250,000 map sheet of the Port Sudan area. From the tower one looks over the level plain to the sea, and the tower can be seen for many miles up and down the coast.

Photographs were attempted of all the towers but by an unfortunate accident all the negatives were ruined. However, sketches were made on the spot and these are reproduced here.

This first tower is square in outline with vertical sides, the sides being 11 feet long, and the height about 15 feet. These four walls are 2 ft. 6 ins. in thickness and each is pierced in the centre by a small opening or window. (*See fig. 1.*)

The four corners are produced above the level of the top of the walls for about 18 inches as shown in the sketch, this being the only attempt at ornamentation. There is no roof of any kind, and the interior is quite open. Ingress can only be effected by the windows, the lowest portion of which is a good six feet from the ground and through which a man can just climb.

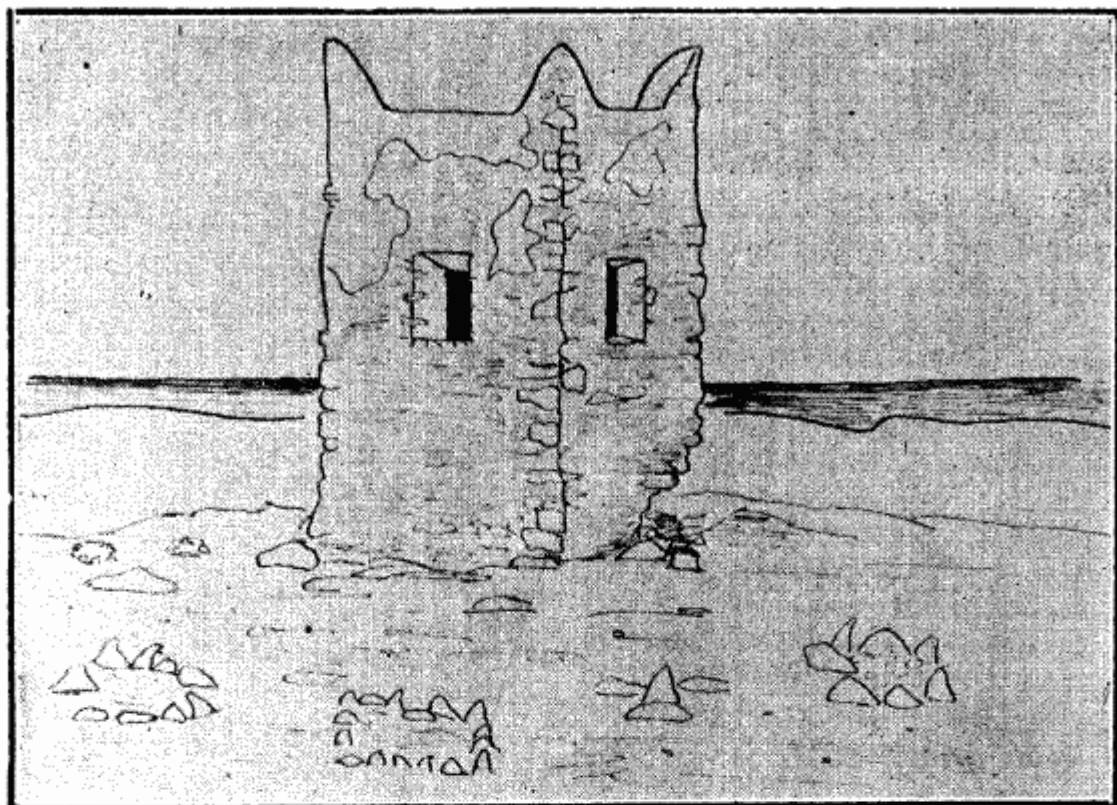


Fig. 1. — Tower near Khor Garrar Iswid.



Fig. 2. — Tower at Haleib.

The material used is rounded boulders from the surrounding fluviatile deposits, set in very strong brown sandy mortar. The tower has been rendered over with white plaster but only portions of this remain. The inside was left rough.

There are numerous graves round about the tower on the hilltop, marked by circles and rectangles of stones. These are probably of later date than the tower itself, and resemble any recent graves of these parts. The local people probably think the neighbourhood of these towers may be holy ground and therefore desirable as a burial place. None of the graves were really new, and only the eagles use the tower now, as a resting place. The interior is partially filled with twigs and bones and there are nests in the window openings.

This tower with its wide view of sea and shore may have been merely a watch tower. There is a square tower of similar dimensions and with four small windows at Haleib, the little coast village near the Egyptian border north of the 22nd. parallel. This is on the higher ground close behind the fort and was evidently built comparatively recently. It has been roofed over inside slightly below the level of the top of the walls, but only square timber beams remain of the roofing. (*See fig. 2.*)

The locality of the tower on the Khor Garrar Iswid is known as Gowitri to the local people.

The next tower examined was the one near Mohammed Gul. This is similarly situated to the one near Mersa Arus, being on a small hill among the first rises from the gently-sloping coastal plain sculptured out by the fast flowing *khors* in the steeper ground cutting deep into the alluvial debris.

The tower is 5 miles West North West from Mohammed Gul, on the track to the Gaborit Mine. This tower is of much better workmanship and more ambitious design than the first described. The tower and main portion is octagonal in shape, the sides of the octagon being 5 feet in length. This tower octagon is about 12 feet high, and the corners are produced into the same pointed ornaments as the corners of the first square tower.

On the top of the tower octagon, or, more correctly, octagonal prism, stands a smaller octagon about 3 ft. in height with its sides

opposite the corners of the basal octagon and crowning the second octagon is an hemispherical dome. A plain cornice runs round the top of each octagon.

In the base there are again four small windows about 6 ft. from the ground, one in each alternate face of the octagon, but these are arched at the top instead of being square. In the blank spaces there are false windows recessed about six inches.

The thickness of the base wall is 2 ft. 3 ins. and the total height of the tower about 20 ft. The tower is circular in section inside.

The material is mainly boulders set in brown mortar, but faced coral blocks are used for the corners. The dome is thin and hollow and built of quite small flat pebbles placed horizontally and set in mortar.

The whole has been covered with white plaster but only patches of this remain.

This more pretensions building would appear to have been a monument or tomb, though there was no direct evidence of its *raison d'être*. (See fig. 2 and 3.)

The only other tower visited was right up in the hills, at the top of the watershed. It is on the South side of the Khor Dimiakok, immediately South of Gebel Nakwat, and is close to and easily seen from the *hamla* track from Port Sudan to the Gabait mine. It is a couple of miles North of the point marked tombs on the map.

It stands in the middle of a valley instead of on a hilltop, but still commands a long view up and down the valley and of the hillsides on every hand. It is almost exactly similar in size and construction to the last described, except that the lower octagon rests on a circular foundation some foot thick. All the plaster has weathered off this tower and the top of the dome has fallen in.

There are four narrow windows as before, about 7 ft. from the ground, but the alternate faces of the octagon are here blank. The recesses in place of windows may have been in the plaster only, in which case they would not be visible now.

There is one grave beside the tower, a large heap of stones enclosed in a circle of stones, but no other graves. This grave is probably that of an important man buried near the tower as a conspicuous place, and of later date than the tower itself.

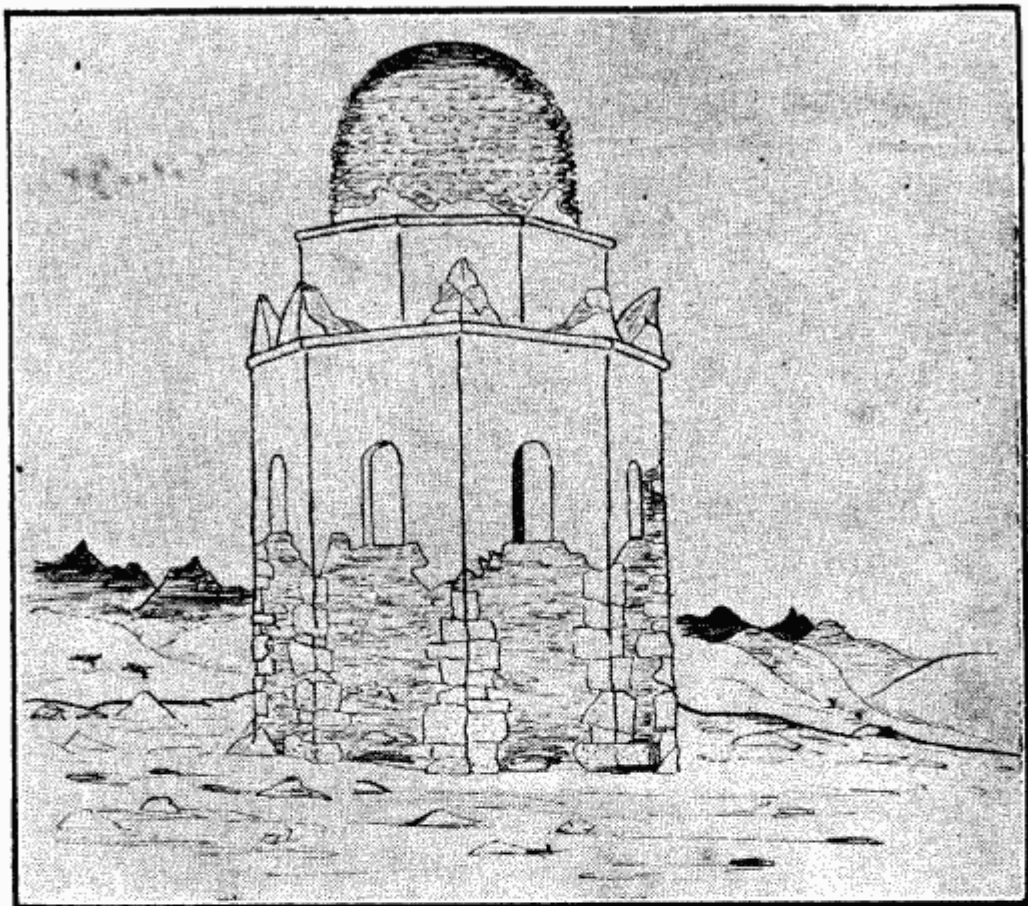


Fig. 3. — Tower near Mohammed Gul.

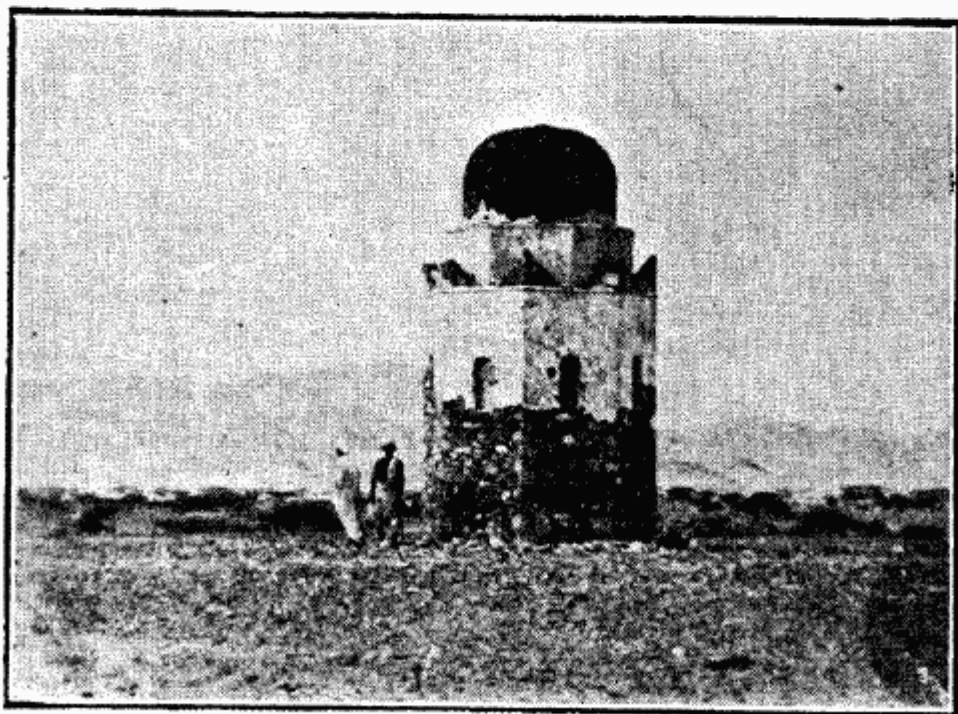


Fig. 4. — Tower near Mohammed Gul.

It may be mentioned here that a grave was passed at the top of a small rocky divide on the track from Gabait Mine to Wadi Oyo, a day's march from Gabait, close to the khor Adoniab and due South of Gebel Adarawab. The camel men and police all threw a stone on to this grave as they passed it, adding to the pile which was already of every large dimensions. The camel men handed up pebbles to the police, who were riding, for them to throw.

Another custom, which may perhaps be quite general, was observed at the Eitri wells, about eight miles South of Haleib. Here goats or sheep had recently been killed by local Arabs at the mouths of the wells so that the blood ran down the sides and into the wells. The police said this was done as a rite in supplication for a good supply of water.

Several peculiar works of stone, which are probably tombs or monuments, were seen on the hills along the side of the Wadi Odib. These can be seen from the track in the Wadi. Two were visited, on the top of small hills on the East Side of the Wadi, about two miles South of Gebel Karamareitri. They were circular stone works, 16 ft. in diameter and three feet high, level across the top and with a circular hole in the centre four feet in diameter almost filled with drift sand. They were very well built with vertical sides and perfectly circular outline, in what is known as dry stone walling that is, carefully laid stones without any mortar setting. The camel men said they were not graves, but "Sharah", a word unknown to the writer.

Many ancient gold mine workings were visited but there are nowhere any buildings of any pretensions near them. In every case there are merely the remains of little huts closely grouped together which were simply four dry stone walls about 4 ft. high, enclosing a space about 6 ft. square. They were probably roofed with mats. In almost every one can be found one or two millstones for grinding quartz specimens of which were brought back to the Geological Museum in Khartoum. These little groups of huts are an indication that there are old workings near. The huts are always in a *Khor* bed, where water could be obtained for washing the ground quartz and usually a track can be found from them to the mine in a hillside.

The absence of any more pretentious buildings for the head men was rather remarkable, although much searching and digging was done no remains or signs of tools or utensils other than small stones that have been used as hammers and the millstones could be found, and these latter have without exception been broken.

In the old workings there are unmistakable signs of the use of pointed iron or other metal picks or drills, but none have been found by the miners. These drills were evidently beaten by the stone hammers, which are very numerous around all the old workings, square stones slightly hollowed on the surfaces by wear.



A NOTE ON THE DATE OF THE TOWERS.

BY J. W. CROWFOOT.

The towers described by Mr. Madigan are interesting as advanced examples of a type that is widely distributed in the Eastern Sudan.

The largest group of similar constructions known to the writer is at Jebel Maman, some sixty miles North of Kassala on a road to Suakin. Schweinfurth visited this place in 1865 and has published two notes upon it (1). He estimated the number of buildings here at over a thousand but I think this is an exaggeration. The commonest type of building is a square one-storied structure built of flat unhewn stones without mortar, and crowned by a squat circular drum with a low "dome"; the four corners of the main part of the building end in triangular projections exactly like those described by Mr. Madigan; there is no trace of any plastering. Some of the buildings have a second story, and many of them have no entrance at all. In a few the builders have tried to decorate the outside by using bands or squares of different coloured stones, but otherwise there is no attempt at ornamentation and no trace of writing whatever. The external appearance of the building is like that of many mud brick *gubbas* erected over Sheikhs in Egypt and Nubia, but the internal structure is quite different: Some are solid blocks of masonry, in others the inner chamber is vaulted on the 'false arch' principle and the "dome" is a dome only in appearance. The tower at Mohammed Gul, on the other hand, has a true dome and arched windows, built apparently on centring, and far beyond the capacity of the architects at Maman. It looks as if the latter were familiar with the outline of the Gubba and tried to reproduce it without any regard for the original purpose of the forms they copied. Schweinfurth found six skulls in one of the buildings which he opened, but neither he nor I could find any trace of a town site so I suppose the site must be regarded as the necropolis of a great nomad tribe.

(1) Zeitschrift f. allgem. Erdkunde. Neue Folge Bd. XIX. 1865 und Verhandlungen d. Berl.-anthrop. Gesellschaft 1899.

See also Budge, The Egyptian Sudan, 1907, II, pp. 176, 178.

Several more buildings of the Maman type are to be found between Maman and Thamiam on the Red Sea railway: I noted 20 on a small hill called Jebel Sangadeieb some 12 miles North East of Maman, and several more sixty miles further North at Jebel Hamboleib: there are the remains of about 5 near the well of Adarmimish on the East bank of Khor Langeb and others between this and Thamiam at Khor Dageint, Khor Odardeb and Khor Sheieb.

A third group⁽¹⁾ of similar structures is at Khor Gamarota, which is west of 'Aqīq and South East of Tokar. In structural character this group is like the Maman—Langeb groups, but the buildings here were plastered like the Northern examples described by Mr. Madigan.

In Eritrea also there are similar buildings of which photographs have been published by Professor Littmann⁽²⁾.

The 'watch tower' theory may suit one or two isolated examples in these groups, but it breaks down completely in such places as Jebel Maman and Khor Gamarota, and I do not think there can be any doubt that all these buildings were erected as tombs by some tribe or tribes whose memory has entirely faded away.

The second class of monument described by Mr. Madigan consists of large circular stone structures about three feet high and level across the top. Similar structures, most excellently built in dry stone walling, are found in the same area and on many of the same sites as the *gubbās*, and a peculiar development of this type at Erkoweit was published by Dr. Seligman some years ago⁽³⁾. Some of these structures are circular like those above mentioned, others square or rectangular but usually with rounded corners, but all are of the same general character, vertical sides 3 or 4 feet high, flat tops, and very careful building. The Erkoweit monuments consist generally of three main parts, a rectangular portion at the South East end, and one or two oval, round, or beanshaped structures, terminating in lower extensions fish tail in shape, and connected by low curved walls to one another and to the rectangular portion. I have seen monuments of this type, which for convenience I shall call *fishtails*, as far South as Arideib, Lat. 16°45' N, and as far North as Kamobsana, Lat.

(1) Geographical Journal, 1911, p. 549.

(2) Publications of the Princeton Expedition to Abyssinia, Leyden, 1910.

(3) Journal of Egyptian Archaeology, 1915, p. 178, ff. Dr. Seligman's description is very full and well illustrated with photographs and diagrams.

19°15' N. and they are common on the hills round Sinkat. I opened two on the slopes of a hill called Hoshatriba some five miles North West of Sinkat, and found that the rectangular portion contained a burial in each case. The bones were found in a shaft grave in the middle of the rectangular structure about 4 feet below the original ground level. Above the bodies there had been a packing of biggish stones which had protected the bones to some extent. In one the shaft was cut roughly on the long axis of the monument, and the body lay extended on its back with hands folded in front and legs crossed just below the knees, the head to the South, compass reading from head to feet being 293°. In the other the grave was at right angles to the long axis of the monument, the body lay on its right side, the position of the hands was doubtful and the compass reading from head to feet was 73°. The position of the first approximates to that of the orthodox Muslim, but it is clear from the second that these people were not particular about the orientation of their bodies. Nothing whether in the form of adornments or offerings was found in the graves.

If, however, the people were careless about the orientation of their bodies, they were fairly regular on the whole in the orientation of their monuments. Seligman noted that the long axis of the graves at Erkoweit points always to the North Western quadrant; he argues that their divergence from the cardinal points was due to the ignorance of the constructors who meant to orientate their structures on the rising sun with the long axis east and west, and believes that they are pre-Mohammedan. The North west—South east orientation which he notes at Erkoweit is characteristic of the very numerous examples I have found elsewhere: indeed, I have noted only one exception—a tomb at Hamawed, but I am not convinced by his reasoning: it seems to me quite likely that native builders would have made many mistakes in their orientation, but highly unlikely that if they had been trying to draw a North—South line they would have drawn it invariably north-west to southeast and never north-east to south-west. But accept the orientation as it is and assume that the fish tails are pointers, and you see at once that in this latitude the buildings are orientated on the direction of Mecca and that the tombs are therefore the tombs of Muslims, a conclusion which is quite in

keeping with the result of my excavation near Sinkat⁽¹⁾. I do not believe that the variations from the true Qibla are greater or more numerous than the variations to be found in many modern Hadendowa cemeteries.

Are these fish-tails and the circular and rectangular erections which belong to the same group, earlier or later than the *Gubbas*?

I only know of two places where *gubbas* are found together with buildings of this ruder type, namely Maman and Adermimish. At both these sites the ruder buildings, although offering much less resistance to the weather, have not suffered more than the *Gubbas*: this in itself suggests that they are later in date, and this is confirmed by the fact that at Maman the ruder buildings occupy sites which are obviously less desirable than the sites of the nearest *Gubbas*.

None of the natives to whom I have spoken have any traditions as to the authors of either group of buildings: they are assigned indifferently to the Fung, the 'Anaj, the Fars (Persians), the Christians and the Rum, to whatever people in fact the speaker believes to have preceded the present occupants. Without native traditions and without any other archaeological evidence to guide us, we can only base a conjecture as to their date and origin on general historical considerations.

According to information given me by Sheikh Idris El Kādi, late Wakil-Nāzir of the Hadendowa who are now dominant over the whole area with which we are concerned, the Hadendowa were of no great significance before the middle of the 18th. century. About this time his great-grandfather, Weil 'Ali, defeated the Hameg and secured from them horses and coats of mail which enabled him to reduce the neighbouring tribes. Before this time various 'Beja' tribes such as the Hanteluq, the Hautar and the Mitkenāb held the country between Sinkat and the Gash, and it is to these tribes and to the period of the 17th. century that Sheikh Idris suggested referring the fishtail and other related tombs. The suggestion is a pure conjecture but there is nothing impossible about it.

(1) Two slight excavations which I made at Erkoweit in 1920 were unfortunately resultless: Either I did not excavate far enough, or all indications of shaft and bones had been obliterated by the action of rain.

The workings in the gold mines and the *Gublas* belong to a considerably earlier period. The gold mines were actively exploited by the Arabs in the 9th. 10th. and 11th. centuries, the period when Badi was a flourishing sea-port⁽¹⁾, but at this time, as the remains at Bāḍī, Deraheib, and elsewhere show, the Arabs were fond of putting inscriptions on their graves. I think, therefore, that we shall be safe in connecting the *Gubbas* with a later generation of Arabised Beja who had been brought into contact with more advanced peoples by the extensive use which was made of the desert route from Qūs or Aswan to 'Aidhab by pilgrims and traders during the 11th. 12th. and 13th. centuries. There seems no inherent reason why some of these *Gubbas* should not be five or six hundred years old.

(1) See Geographical Journal, 1911, p. 542. Since writing this paper I have heard the name Badi' in current use in Tokar: it is applied still to the whole mainland from Massowa to 'Aqiq, but this in no way weakens my identification of Badi' with 'Airi.



THE MAMELUKES IN THE SUDAN.

About 1795 Murad Bey, then ruling Egypt, sent a party of Mameluks to conquer Darfur. Among these was a certain Ahmed Kashf, a renegade native of Zante who was an experienced artillery-man with a knowledge of mathematics. Ahmed Kashf died in Darfur and is believed to have been a brother of Huseyn Bey el Zantioti, a Kashf formerly under Rohwan Bey—the Mameluke.

These two brothers arrived in Egypt in 1792 and both voluntarily, took service with the Mamelukes ⁽¹⁾, and adopted Islam.

Omar ibn el Tunisi, vide page 108 of his work "Voyage au Darfur" published in Paris, states that during the occupation of Egypt by the French (1798—1801); Zaoanah, a mameluke of Murad Bey arrived in Darfur with ten other mamelukes. They had many camels, much baggage, servants and a cannon, and were well received and given slaves. Permission was given to them to erect a house or fort similar to those in Cairo of burnt brick. This fort was encircled by a wall of great size with two embrasures, in one of which a cannon was mounted and the other embrasure contained a mortar which commanded the Sultan's quarters and we are told that from the walls the interior of the Sultan's Palace and Hosh could be easily seen.

The Mamelukes designed to kill the Sultan Abd el Rahman and gain the country. With this end in view a conspiracy was hatched with a certain Fiki el Tyeb Wad Mustafa whose daughter had a son by the late Sultan Tirab, but the plot was revealed to the Sultan by a Darfurian and Zaouanah was invited to a banquet, seized and disembowelled.

The fort was then attacked and demolished. The Mameluke's followers including the Khaznadar Yusef were put to death and the Fiki was killed later instead of being invested with a red robe.

(1) Mengin Histoire de l'Egypt, Vol. 1 page 58 and Vol. 2 page 238, Paris 1823.

See also "Travels in Africa, Egypt, and Syria" by W. G. Browne, London, 1806. Date given of Ahmed el Zantiote's departure from Cairo, is November 1796.

The massacre of the Mamelukes in the Citadel, which Mohamet Ali informed more than one European was in accordance with the Sultan of Turkey's orders, finally broke the power of this slave order and had the effect of it dispersing them all over Egypt, North Africa, the Red Sea and Sudan.

Mengin states that over 1000 Mamelukes perished in the massacre at the Citadel in Cairo on March 1st 1811. All found in the Provinces were attacked and killed with the result that over 70 were slain in the Province of Said.

Among those killed in the Citadel were Shahim Bey, Soliman Bey el Boabi, Yehia Bey, Marzuk Bey (the son of Ibrahim Bey el Kebir), Naman Bey, Ibrahim Bey el Soghayr, Rustem Bey Gherkawi, Osman Bey Ibrahim, Mustafa Bey Jeddawi and Zulficar Bey Juju and Mourad Bey Elfi.

Omar Bey Elfi ⁽¹⁾ was, seized in Fayum and his head with that of 15 others of the principal Mamelukes sent to Cairo and Constantinople.

The mother of Marzuk Bey was permitted to bury her son in the family tombs. This was the only mameluke slaughtered so buried ⁽²⁾.

There was one survivor from the Citadel, Amin Bey who was apparently late in attendance and by galloping through an unclosed door forced his horse to leap the ramparts. The horse was killed, and when some days afterwards Amin Bey surrendered, he was taken to Mahomet Ali who gave him a horse and his freedom, provided he left Egypt for Syria ⁽³⁾.

(1) The name Elfi became a "family" name and there were many successors of the Great Elfi Bey mentioned in contemporary records.

The original holder of the name "Elfi" was purchased for 1000 pieces of coin, hence the name. He was received at the court of St. James and encouraged to put forward his pretensions to the rule of Egypt for political purpose. Each mameluke slave adopted the name of his master. There was no right of succession. Upon the death of a mameluke all his property was divided and generally fell to the strongest of his followers. Marzuk Bey (alluded to above) was never a slave. He was specially elected a Kashf and then a Bey in view of his father's power and influence. He was probably the only mameluke who was not originally a slave.

(2) Mengin *Histoire de l'Egypte* page 360 and seq. Vol. I also notes on p.p. 448 and Marzuk Bey was one of the very few sons of a Mameluke Bey and was specially elected a Bey on account of the prestige of his father.

(3) *Life of adventures of Giovanni Finati*—Page 113 (Edited by the Sarkes) London 1830.

The "French Mamelukes" (1) were however not massacred but locked in a room although one of their Masters—Mourad Bey Elfy was slain.

The Mameluke women became the property of the Turks and Finati took a young girl as his wife.

Many of them escaped disguised as "Dahlys" a Kurdish corps of mercenaries, or as women and gained Nubia. A party who gained Beyra in Upper Egypt sued for pardon and in response Mustafa Bey, Mohamet Ali's brother in law proceeded to attack them.

One of the reasons for this policy of extermination was that the Sultan in order to prevent the mamelukes recruiting had prohibited the export of Georgian Slaves, immediately the French left Egypt.

The French however had reopened the Sudan caravan trade (under Kleber) and the mamelukes purchased slaves from the Sennar and Darfur caravans to strengthen their armies and some of the Mamelukes had thus about 2000 personal adherents all trained to arms. The black slaves were armed with European weapons stolen or raided from Mohamet Ali's troops.

Burckhardt ("p. 12/13 "Travels in Nubia") states that the mamelukes were betrayed from the deserts near Esneh under promise of pardon and 400 massacred. Two French Mamelukes were spared but 200 black slaves were killed. The survivors were attacked in May 1812 at Kostamneh, a ford above Assouan and almost annihilated (2). A party under Ibrahim Bey el Kebir and Osman Bey Hassan fled to el Haimar and lived with the Ababdeh. Some of the mamelukes died there and the tombs were recognised by travellers 40 years ago. The main body appear to have made Ibrim (Primis) a rallying place (Mengin p. 376 Vol. 1) where they massacred the inhabitants and killed the Kashif in 1812 (3). His lineal descendant is to-day Sk. Ahmed Mohammed Agha Keneish of Nuri.

They were subsequently driven out of Ibrim owing to the bombardment of the town by the Turks with an army under Ibrahim Pasha, then Governor of Said (the step-son of Ismail Pasha) in the

(1) Most of the French Mamelukes joined the American expedition against the Dey of Tripoli, later.

(2) Burckhardt "Travels in Nubia" p.p. 11, 12, 32, 33, 67, 181 etc. (1819 edn.).

(3) Legh Narrative of a journey etc., pages 165 and 166.

same year ⁽¹⁾ and marched into Dongola, with 1200 cattle and 100,000 dollars ransom from the inhabitants of Nubia. They had been received by the Kashif of Derr in a friendly manner and taking advantage of a quarrel between him and the Mek of Argo they attacked the latter, after successfully attacking Saye and removing the old Turkish cannon.

The Kababish retired to Egyptian territory with Sk. Hai ⁽²⁾.

The Mamelukes are stated to have then numbered about 300 and the same number of slaves. They were practically all on foot as they lost their horses in the desert. Their women were sent back to Egypt but the caravan was betrayed and these wretched creatures were stripped naked by the Ababdeh with whom they had lived in the desert ⁽³⁾. The Mek Tombol ibn Zebeyr of Argo fled to Egypt and a certain Zebeyr was appointed Mek by the Mamelukes (*see Burckhardt Travels in Nubia p. 7*).

Argo was occupied by the mamelukes and their head-quarters were fixed at El Ordeh (the camp) which later became a large town (New Dongola) ⁽⁴⁾.

The mameluke leaders were at that time Ibrahim Bey el Kebir and Abd el Rahman Bey ⁽⁵⁾. They were interviewed by Mek Mah-

(1) Waddington & Hanbury "Travels etc." page 225.

(2) Burckhardt "Travels in Nubia" page 67.

(3) Life and adventures of Giovanni Finati (Banks' edition) pages 565, 371 etc. (London 1870).

Burckhardt "Travels in Nubia" Pages 181 and 182.

(4) Waddington and Hanbury "Travels etc." page 54. Also erroneously described as Maragga.....see Lepsius "Letters from Egypt, etc." pages 209 et seq.

The dress of the Mamelukes is illustrated by several plates in the "Journal of the late campaign in Egypt" by T. Walsh, published in London 1803.

Plate No. 33. Turkish cavalry man and infantry man.

32. Mounted and foot mamelukes with Bedouin auxiliary.

35. Albanian soldier

and also in "Travels in Asia minor, Syria, and accross the Desert" by William Wittmann, published in London 1803.

Plate III. The Capitan Pasha.

VIII. A Dehly.

XII. An Arnaut soldier.

XIV. A mameluke soldier.

Frontispiece, showing a Turkian force on the march etc.

(5) Finati "Life etc." page 371.

Abd el Rahman Bey is believed to be the son of the mameluke of Ali Bey el Kebir and who is described by Artin Pasha as an ancestor of Mnhmoud Pasha Sami el Baroudi who was a colleague of Arabi Pasha. (Appendix II page 227 "The mameluke or slave dynasty of Egypt, Muir; 1896).

moud of the Adlanab and his adviser the Fiki Mahomed el Qadi.

In the course of an altercation which arose during the interview the Mek was stabbed by Abd el Rahman Bey. The Shaigia had in 1610 raided Argo and taken away many of the inhabitants to recruit their population (Waddington p. 214).

Mek Shawish succeeded his murdered father and in 1814 was attacked and defeated by Mek Zebeir and the mamelukes at Kor-fiyh (1). The mamelukes appear to have penetrated as far South as Mareiga, the modern Merowé which they rebuilt but they were out-flanked by the Shaigia crossing the desert and the garrisons at Argo and Khandak were killed.

The Mamelukes were subsequently defeated by the Shaigia at Hetteni (Waddington p. 229),

It was in March 1813 that Burckhardt (Travels in Nubia p. 15) met the mamelukes Ibrahim Bey Djezarli and Osman Bey Souhanes who had come into Derr with five women and 2 servants to rejoin their comrades at Derr. They had been holding a post opposite Jeddah as the Mamelukes even then hoped to regain their lost power in Egypt. They captured Kosseir at one period.

In 1813 Ibrahim Pasha marched with troops as far as Wadi Halfa and occupied the country. Caillaud (Vol. 3, p. 384) informs us that he saw Sheikh Mohammed in 1822 at Mahas. This worthy had killed his 3 brothers and their two children and usurped the Mekdom. He then drove off the mamelukes and latterly ruled part of Mahas with Mek Zebeir. Waddington (p. 196) says there were 2 Meks of Mahas with Mek Zebeir and Ibrahim (Wad Haji Omar).

Ibrahim Bey el Kebir the doyen of the mamelukes and the joint ruler of Egypt with Murad Bey died in 1813 at Shendi of old age. The mamelukes apparently were then friendly with the Jaalin the deadly enemies of the Shaigia (Burckhardt page 256).

Ibrahim Bey el Kebir was succeeded by Abd er Rahman Bey as leader of the Mamelukes in the Sudan. In 1814 the mamelukes lost 50 killed and the Shaigia 150 as the result of warfare. At

(1) Waddington and Hanbury "Travels etc." page 228. Twenty months after the mamelukes had arrived the Mek Tumbul was with the mamelukes.

There is some misnomer in respect to Mek Tumbal who is stated to have fled to Egypt and that his *brother* usurped the Mekdom of Argo.

The Mek "de jure" returned to the Sudan with Ismail Pasha's army in company with the deposed Mek of Berber, Nas ed Din.

that time a Mameluke Selim Bey el Tawil who had escaped from Egypt via the desert lived at Berber (1).

The Mamelukes about then sent their remaining Circassian and Egyptian women to Egypt and bought Abyssinian slaves or espoused Nubian women. These bore them children and remained faithful to the fathers until the last (2).

In 1815 Turkish Troops again visited Nubia and collected the taxes (Burckhardt p. 136).

In 1817 whilst Belzoni with Irby and Mangles were excavating the Abu Simbel temple they saw the Darfur caravan of 4000 camels pass through to Egypt. It had been obliged to pay a ransom of nine thousands dollars (two thousand pounds) to the Mamelukes in Dongola (3).

Belzoni was joined by a young mameluke (26.7.1817) who assisted him as a translator etc. He was probably a European adventurer like Finati.

About 1818 twenty five mamelukes proceeded to Cairo after the defterdar's reconnaissance in Dongola (prior to the invasion) and implored pardon. They were entirely divested of arms etc. and clad in white shirts.

The son of Ali Bey Fayoumi also specially went to Cairo to petition upon behalf of his father. Mohammed Ali Pasha gave Ali Bey and all the other mamelukes the "aman" (pardon) except Mohammed Bey Manfoukh and the then leader Abd er Rahman Bey. The unfortunate Ali Bey Fayoumi was murdered by his companions upon accepting Mohammed Ali's terms and preparing to return to Egypt (4).

Upon the arrival of Ismail's army in Dongola, 300 mamelukes with their retainers fled to Shendi where they encamped outside the town. They had been forced to cut their way through the Shaigia they met en route and Abd el Rahman Bey went to Darfur (5).

Mr. English, an American who commanded the Turkish Artillery informs us that after the occupation of Berber, 100 mamelukes with

(1) Burckhardt page 256.

(2) Narrative of the Expedition to Dongola and Sennar (page 110) London 1882.

(3) Travels in Egypt and Nubia by Irby Mangles (London).

(4) Mengin (Vol. 2 P. 195.) History d'Egypte.

(5) See Waddington page 230.

hundreds of black slaves came from Shendi to Berber and saw^{*} Ismail Pasha. Their slaves were confiscated and embodied in the Turkish Army. The mamelukes were promised their lives and sent to Cairo where Mohammed Ali formally pardoned them⁽¹⁾ and most of them joined Seves' army of negro slaves, as officers; which was sent later to the Morea. The remainder dispersed and went to Suakin and Tripoli many of them dying en route. A party of 10 mamelukes and 600 men under Marfour Bey reached Tripoli, Barbary after the greatest privations⁽²⁾. Adowram Bey was killed at Tripoli Barbary.

The last of the mamelukes in the Sudan was probably Mohammed Bey Fanfou⁽³⁾.

Their rule between the Shaigia country and Wadi Halfa lasted about 9 years. It is quite possible that if it had not been for the bravery of the Shaigia they would have conquered the Sudan. They were however heavily handicapped by want of gun powder and in their latter days their clothing and accoutrements were so dilapidated that they were regarded with contempt by the steel clad warriors of the Sudan.

NOTE.—The mamelukes are very fully described by Volney in Volume I, Chapter XI of "Voyage en Syrie et en Egypte". The heraldry of Egypt which included that of the mamelukes and Arabs has been dealt with by Yakub Pasha Artin in a book called "Contribution a l'etude du Blason en Orient" published in 1902.

Suakin is identified with the mamelukes inasmuch as Khochkadam el Ahmadi, who was a vizier of the Sultan Kaid Bey during the years 1474—1475 died there.

He was a Greek and the mameluke Eunuch of the young princes. He built the mosque of his name now in Cairo and was exiled to Suakin where he died 894 A.H. (1488—1489).

His full name was, Khochadam et Zahiri Djakmak el Roumi (the Greek) and he took the name of el Ahmadi from the slave merchant who sold him (Khitat-el-Tawfikieh by Ali Pasha Moubarak (Daou-el-Lama d'el Sakhani).

The mosque in Cairo was restored in 1909 and the above details are from a paper by M. Max Herz Bey published at the time.

(1) Narrative of the Expedition p. 110.

(2) Burckhardt "Travels in Nubia" p. and Hoskins Travels in Ethiopia" page 202.

(3) Caillaud "Voyage au Merowé" Vol. 2, Page 12.

During the war in Arabia the life of Ibrahim Pasha threatened by a mameluke who was arrested and beheaded,

One of the mamelukes who escaped from Dongola and who was known as Turkche Bilmy was in 1832 elected commander by the Turkish troops who had mutinied. The mutineers marched on Hodeidah and Mocha and instituted a system of piracy on vessels there or passing to or from Jeddah with pilgrims or cargo.

They were attacked by Ahmed Pasha with 10,000 men and practically annihilated.

Turkche Bilme was picked up out of the sea by the crew of H. M. S. Tiger (Mengin, Histoire d'Egypte).

NATURAL HISTORY NOTES.

Notes on a *Bengalia*-like Fly, which I have called
the "Highwayman" Fly, and its behaviour
towards certain species of Ants.

BY J. E. M. MELLOR, M. A. (Cantab.)

I made the observation given here at Shambat, near Khartoum, during July and August 1920, and July, August and September 1921. The highwayman fly is a large greyish yellow-brown fly of about the size of a Blue-bottle fly. It has not yet been definitely identified, but resembles the maggot fly (*Bengalia depressa*, Walker) not only in general appearance, but also in that it has similar dealings with certain ants.

I give here also a note which I find that Mr. Cottam made on this fly in Khartoum in 1914 and 1915; and an extract from notes made by Lamborn (1) in Southern Nigeria, by Gaillard (3) in the French Sudan, on *Bengalia depressa*; and by others in India and Ceylon on *B. depressa* and *Ochromyia*, which being somewhat similar in appearance and habits are of interest here for comparison.

It may be noted here that *Bengalia depressa* is the parent of a maggot (1) which is sometimes found under the skin of humans, there forming boils; and that the fly also attacks dogs, rabbits and other animals. *Auchneromyia luteola*, Fabricius, which is also an allied species, is the parent of the Congo floor maggot, which at night crawls out of crevices of mud floors and from under the sleeping mats, and sucks the blood of men, women and children. Both *B. depressa* and *A. luteola* have been found in the Southern Sudan (2); the latter as far north as Melut.

On the night of the 17/18 July 1920 there was a shower of rain. On the morning of the 18th the "little red-brown" ant was very busy removing insect debris from its hole under one of the trees

(1) The maggot which lives under the skin of man, monkeys, dogs, etc., in the Sudan and other parts of Africa is the larva of *Cordylobia anthropophaga* Grunberg. The life history of *Bengalia depressa* is not known but it is unlikely that this fly causes myiasis in its immature stages.

in the garden at Shambat. I saw a number of sand-flies (*Phlebotomus* sp.) walking over the insect remains and bird droppings which surrounded the entrance. Some ants were seen to be bringing in fresh supplies. Amongst the prizes brought in were a lacewing fly, a sand-fly, a large red-brown camponotid ant, and the thorax of a wasp.

Suddenly a female highwayman fly came and stood near the hole and accosted any returning foragers, trying to wrest their booty from them. She usually ran up to meet an approaching ant, stopped it and examined its prize, but seemed to make very little effort to take away the spoil, though she could have done so easily on account of her very much larger size. This slackness may have been because most of the insects brought in by this ant were too small to provide a meal worthy of her consideration. For, though she took little interest in a sand-fly and a lacewing fly, which, after examination, she allowed to be carried off, she held on firmly to the larger body of a red-brown *camponotus* ant, which gave her a better hold. Having sucked what she required from the dead ant she permitted the little ant to carry off the rest.

The fly kept moving round quickly as if nervous of receiving a nip from a passing ant.

Her long legs enabled her to command a good view and she preferred to run up to meet her approaching victim, only using her wings when she wished to take up a fresh position.

On July 20th. I found several of these flies posted at intervals of about two feet along the bottom of a dry irrigation channel (gadwal). The bottom of the channel was of dry, hard, smooth sand. Some flies were also seen on the lower portion of the smooth trunk of a tree on the edge of the channel. The flies were watching and waylaying a medium sized black ant, which had a grey down on the posterior dorsal portion of its abdomen.

As far as I could see the ants were carrying nothing, so I could not make out what was the object of the flies.

A fly would run up to an ant, which would either avoid it or, more often, execute a series of very rapid circles, and so bamboozle the fly and get past it. This manoeuvre was always successful. Sometimes when past the fly, the ant would repeat the circles backwards towards the fly and so make a second attack. Some-

times an ant would make straight for a fly she saw in her way, executing these rapid circles. The fly would rise with a buzz and move off quickly. Once I saw a fly pursue an ant on the wing, keeping 4—6 inches above it and making buzzing dips at it, chasing it away through leaves and twigs on the side of the irrigation channel. I never saw a fly either take anything from or capture an ant.

In the afternoon I saw the same performance take place on the smooth stem of a banyan tree on the lawn. The flies were posted at intervals up the trunk, and were busy waylaying these black ants, which were passing up and down the tree. I could not see that the ants were either bringing anything or taking anything with them.

Sometimes it seemed that the flies were taking advantage of slight roughnesses of the bark for concealment.

In September 1914 Mr. Cottam saw these flies in his garden, in Khartoum, on a wall, at the base of which was a nest of the black garden ant (*Aphaenogaster barbara*, L.). "Many male ants were running about the wall, and every time an ant turned its back to the fly, the latter would make a spring as if to seize it; but if the ant showed fight it would glide away to return to the attack later."

Mr. Cottam kept females of this fly in glass tubes containing horse and cow dung, but no eggs were laid. On July 8th. 1915 he placed a female fly in a tube with rotten grass. Within three minutes she began to lay, and in about an hour had deposited 82 eggs on the surface; and on the 9th. and 10th. she laid approximately 230 more. On the 10th. July these eggs began to hatch. The larvae, which somewhat resembled those of the flesh flies (*Sarcophaga*), were uneasy in confinement and wandered restlessly about their prison.

The eggs in general appearance were like those of *stomoxys*. The ovipositor of the female fly was comparatively short and very thick.

In 1921 I visited Shambat on July 15th. after the first showers of rain had fallen, and again at the beginning of August, and on September 2nd. On the first date I saw a highwayman fly, which like myself, sought shelter from a very strong south wind in an

embrasure of the old Dervish fort behind Shambat house. Its eyes had a wonderful greenish iridescence. But on this day and the two others I saw no other specimens of the fly and few ants. There were none in the old places of last year.

On September 9th. Mr. Cottam and I went out to Shambat and found and caught several of these flies. We found them on the smooth trunks of the banyan trees worrying a small black ant, which was passing up and down the trees. We could not make out that this ant was carrying anything.

About two in the afternoon we found this same small black ant rushing up and down the walls of a house near some of the banyan trees on which the flies were on duty. There were no flies on this wall, but the ants were moving up and down the wall in a flustered frenzied way. Some of them were carrying fragments of other insects, and a few had charge of pupae. The peculiar behaviour of this nest of ants was probably due to the fact that they were moving their young and possibly anticipated a visit from a Highwayman Fly.

Lamborn (1) observed *Bengalia depressa*, Walker worrying a driver ant (*Dorylus nigricans*) on the march on Moor Plantations, near Ibadan, Southern Nigeria, from October to December 1913. He first observed about eight of these flies "settling here and there usually on an elevated object, e.g. a stone close beside the drivers, which, in a column about two inches broad, were crossing the road.

Every now and then one flew up hovered over the column, retiring as the larger soldiers assumed a threatening attitude. Several times he saw a fly run over the ant column with abdomen slightly anteflexed as if she was ovipositing. But on December 1st 1913 he observed several of these flies settling on blades of grass, stones, and other raised objects near the ant column. They were very alert and never let any ant approach nearer than a quarter of an inch. When any ant made a little circuit away from the main body, a fly would generally pursue it at a distance of about half an inch, but back away as soon as the ant turned towards it. Other flies, after remaining motionless for a time, rose on the wing and hovered over the column, but retired to a place of rest, as soon as the driver ants, realising their presence, threatened them with widely open mandibles.

Eventually Lamborn saw a fly stalk a minor ant carrying a pupa in its jaws. Suddenly the fly rushed forward and apparently pierced the pupa bringing the ant up with a sharp jerk. The two insects then had a tug of war with very little advantage to either side, until the ant apparently became annoyed and letting go of the pupa rushed at the fly, which escaped with the booty which it proceeded to suck.

Then he saw a fly swoop down on the ant column and rise at once with a pupa and attendant ant, both of which it dropped after carrying them for about a foot. The ant, however, still held on and started to run off with its charge. The fly caught it again and this time rose three feet in the air and then dropped ant and pupa again. This time the ant left the pupa which the fly immediately seized and proceeded to suck.

Lamborn remarks that though the flies which he observed were taking ant pupae, they probably take other things from the ants—"portions of dead insects." This agrees with my first note.

Gaillard (3) has recorded *Bengalia gaillardi*, Surcouf, preying on termites in a rotten tree stump dug up at Koulouba, French Sudan, August 13th. 1908.

Green and Nagle (4) have observed an allied species *ochromyia obscuripennis*, Biggot, and *O. jejuna*, F. attacking termites in Ceylon and Secunderabad. Yerbury (5) and Green (6) saw *ochromyia* stealing sugar grains from large ants in Ceylon. In a note accompanying a series of this species in the British Museum Col. Yerbury states that he found this fly "very common in shady places". Mr. Cottam and I have noticed that the flies at Shambat seemed to distinctly prefer shade. Yerbury often observed *ochromyia* have a tug of war—"a regular pulley-hawley game"—with a large ant (*lobopelta* sp.)

Similar observations have been made at Dehra Dun in the United Provinces in India by Col. F. W. Thompson (7) on *O. jejuna*.

Of the ants which are here recorded as being attacked by these flies, the little red-brown ant of the Sudan gardens, which surrounds its nest-entrance with the droppings of small birds, is a great scavenger and becomes a pest in laboratories and houses, where it will eat specimens of insects or even birds, or carry off food from improperly closed tins.

The large black ant with greyish down upon its abdomen nips the budding leaf shoots of certain trees.

Dorylus nigricans is capable of much damage when on the march ; and *D. orientalis* is a garden pest in Ceylon, eating potatoes, dahalia roots, etc.

REFERENCES.

- (1) Lamborn, W. A. Observations on the Driver Ants (*Dorylus*) of Southern Nigeria. Note 5, Trans. and Proc. Ent. Soc. London, 1913, pp. ccxxix.
- (2) Theobald, F. V. Report on Economic Entomology. Second Report of The W. T. R. Laboratories, Khartoum, 1906, pp. 83—87.
- (3) Surcouf. Bull. Mus. D'Hist. Nat. 1912, No. 7 (pub. Apr. 1913), p. 42.
- (4) Green, E. E., and Nagle, K. E. Notes on *Ochromyia obscuripennis*, Biggot, and *jejuna*, F. Trans. and Proc. Ent. Soc. London, 1906, pp. 394—396.
- (5) Verbury, Col. J. W. Same reference as (4).
- (6) Green, E. E. Notes on *Ochromyia* in Ceylon and description of the strongly toothed tongue of the fly. Trans. and Proc. Ent. Soc. London, 1908, pp. xxvi—xxvii.
- (7) Thompson, Col. F.W. Note in Trans. and Proc. Ent. Soc. London, 1913, p. cxxix.

Note—Reference (3) to (6) give the subject but not the correct title of the papers, as the publications in which they appeared are not available. They are, however all referred to in Trans. and Proc. Ent. Soc. London, 1913.

N. B. The Fly and Ants concerned in this paper are being taken to England to be worked out there. These Notes are being published now, without waiting for the scientific names, with the intention of drawing the attention of Readers to this interesting Fly, in the hopes that some of them may add to our knowledge of its habits by sending in accounts of any observations they may make, if possible, accompanied by specimens of the insects referred to in their notes.

Such notes will be very gratefully received : and if with the specimens, are addressed to me to the W. T. R. L., will be forwarded to me to be worked out in England.

A NOTE ON THE RANGE AND NESTING HABITS OF THE SPANISH SPARROW. (*Passer hispaniolensis*).

Range.

Comparatively speaking the range of this species is not extensive, for it only inhabits S. Europe, N. Africa, the Canaries and Asia as far as the Punjaub.

It is very common in Spain, where it inhabits the groves nesting in the trees, whereas in the towns and near inhabited places it gives way to *P. domesticus*. Irby found it displayed for sale in the markets of Catalonia and very numerous at Aranjuez and near Medina.

On the mainland of Italy it is replaced by *P. italiae*, which however gives place to it in Sicily, Sardinia, Corsica and Malta, on which last island it is said to be tolerably common.

In Greece it is by no means common and very local. Dr. Kruper observed it in a few localities in Acarnania and Aetolia and several specimens have been reported from Constantinople. According to Dr. Krüper it abounds in Asia Minor where it is a "perfect pest." Canon Tristram (Ibis 1867. P. 370) found it in Palestine "confined chiefly to the Ghor or Jordan Valley where it congregates at all times of the year in countless myriads, breeding in colonies.

"It is also found in most wooded districts in other parts of the country, though not in such vast numbers as in the Ghor; but it never becomes a denizen of the towns."

This sparrow is a winter visitant to N. E. Africa but, though numerous in the winter season, according to Shelley never remains late enough to breed. Early February was the latest date at which Shelley observed the bird in that part of the world.

Von Heuglin saw it in parties in Lower and central Egypt and Nubia as far south as Abubukol.

Hartman found it on the Upper Blue Nile and it is said to be very common in N. W. Africa where it breeds in vast numbers. Salvln and Tristram found it breeding in great numbers in Algeria and Col.

Irby records it from the African side of the Straits of Gibraltar but there as on the Spanish side found it to be very local.

It is very common on the Cape Verde Islands but does not reach as far West as Teneriffe.

It does not stretch further East than the West of India. In Persia it is scarce according to Blandford, who got one from Ghistigan, Baluchistan and one from S. W. Karman. Dr. Jerdon (Birds of India. II. p. 364) writes that it has occurred at Peshar and Shikapor, but appears to be common further west in Afghanistan and is said to be common at Kandahar.

Hume (Stray Feathers. p. 209) reports stragglers in Sindh, but says that it invades nearly the whole of the Punjaub in vast flocks during the cold season. In places it apparently associates with the common Indian Sparrow (*P. indicus*) sometimes only a few being present at others forming half the flock.

Dr. Severtzoll says that it is rare in Turkestan in winter.

Nesting Habits.

The Spanish sparrow avoids close proximity to man and his habitations and nests in large colonies far from his haunts. In Spain it has been found to resort to groves and the outskirts of woods where it nests in the trees and bushes, it was only numerous in well wooded localities. Colonel Irby found it breeding in several large trees the nests being suspended among the smaller branches in such a way that it was quite impossible to take one without destroying the eggs. Canon Tristram (Ibis 1859. p. 293)⁽²⁾ found that it "affects moist places, especially among the reeds in the Salt Marshes and always breeds near water in vast colonies of many thousands. Salvin (Ibis 1859. p. 314) found it breeding in large numbers in tamarisk (our Turfa) thickets on Chemora and in the high sedge at Zand, and writes that the Arabs destroy the nests and eggs and young whenever they find them as their great numbers do much damage to the corn. The nests were placed as thickly as they could stand—a whole colony of about 100 pairs occupying only 5 — 6 trees.

Canon Tristram who met with it in Palestine states (Ibis 1867 p. 370) that countless myriads breed in "colonies so crowded that I have seen the jujube trees absolutely broken down under the weight of

their nests, whilst their noise is so deafening that it is impossible to carry on conversation in their "rookeries" I have known their eggs brought in by thousands."

It has been found to build its nests in those of some of the larger birds of prey, one observer recording it for the foundation of those of the Buzzard, Kite, Black Kite and Booted Eagle; and in one case a Sparrow's nest was only a few inches from the head of the Eagle who was sitting on her eggs.

Probably as this observer remarks the Sparrows were too insignificant to be noticed by the Eagles or Buzzards which afforded them protection from the smaller birds of prey.

According to Tristram this bird, like the Doves, feeds largely on the leaves of leguminous plants.

REFERENCES.

Sharpe and Dresser. History of the Birds of Europe. III. pp. 593 — 596.

Bree C. R. 1867. Birds of Europe not observed in the British Isles. Groombridge and Sons, London.



SCIENTIFIC RESEARCH COMMITTEE.

ABYSSINIAN CEREALS.

Small collections of these were sent both to the Royal Botanic Gardens, Kew, and to Professor Biffen at Cambridge.

Tef, *Eragrostis abyssinica*, forms a most important article of diet in the country. It is a small grain either white or brown in colour and Dr. A. W. Hill states that there are now 500,000 acres of land under this grain in the Transvaal and that the whole of this is a result of seed originally sent from Abyssinia.

For years, Prof. Biffen had been desirous of getting samples of Abyssinian cereals because many of the types cultivated there are utterly unlike those in any other part of the world and it seems not unlikely that some of the races of wheat and barley originated there—worked their way down the Nile and thence round the Mediterranean. Prof. Biffen proceeds to remark that the type called ADJA is an exact counterpart of some IX. Dynasty Egyptian wheat which Prof. Flinders Petrie has been finding in quantity.

The SINDIE wheat is particularly puzzling for its endosperm is unlike that of any other that the Professor had ever seen. Before long he hopes to have enough to mill and bake to see how it compares with ordinary types. SAINTIE wheat proves to be a mixture of types which are gradually being isolated. Among these is stated to be the only purple grained wheat known any where. Prof. Biffen announces that he is going to try and raise a set of hybrids from the wheats and possibly from the flaxes as well.

The barleys are being dealt with by Mr. Engledow at Cambridge and he records that they are interesting on account of their rust-resisting qualities and their being cultivated at great altitudes.

It is clear that even the small collection of cereals from near Lake Tana contained types of very real interest and it seems probable that there are still many other varieties cultivated within the confines of the great table land of Abyssinia. It is very important that examples of all these should be in the hands of those who are studying grains with a view not only to improving

the qualities and yields of kinds already cultivated but also producing new strains better suited to particular areas. Only quite small samples are wanted—such as 20 or 30 grains of wheat—so that several may be sent in an ordinary letter but they should be accompanied by details of the locality and, if possible, also by notes on the times of sowing and harvest etc. and the approximate altitude of the district. A number of separate samples obtained from the same market at different times will be welcome for though they may all look quite similar, the expert may recognise important differences. Such samples may be addressed to Prof. R. H. Biffen F. R. S. at the School of Agriculture, Cambridge.

G. W. GRABHAM.

Khartoum,

31. I. 1922.

Helminthosporium sp. on Wheat and Barley in the Sudan.

In March 1919, while inspecting the wheat crops grown under irrigation in Berber Province, the writer's attention was drawn to a number of dull orange-brown, irregularly shaped patches of wheat which contrasted strongly with the pale coloured straw of the surrounding crop. Closer examination showed that the plants in these areas were stunted in growth and that the ears were either empty or only partly filled with shrivelled grain. When grasped the straw broke off at the crown of the root which was found to be rotted through and much discoloured. With the exception of the brownish pigmentation there was no other external evidence of the presence of any parasite on the aerial portion of the plant. The roots, however, showed distinct signs of disease from the crown downwards, being brittle, withered, and much discoloured internally.

There was nothing obvious in the immediate surroundings to suggest a possible cause of the disease, and the fact that the infection was found to extend as far as Khartoum North on varying types of soil rendered the question more difficult. The irrigation of the crops, a fruitful source of trouble, does not seem to furnish a clue, for whereas the water supply was actually deficient in certain localities where the disease was found, it was normal at Khartoum North where the greatest damage in any one spot occurred.

It is interesting to note that imported Australian and Indian wheats, and wheats bred by the writer proved immune even when sown side by side with the indigenous wheat. These wheats ripen earlier, and have also so far resisted rust even when grown in badly infected localities. Barley was found to be attacked in a precisely similar manner at Khartoum North, but a search for other possible host plants among the few grasses present met with no success.

Examination of diseased plants in the laboratory revealed the presence of a *Helminthosporium* in pure culture on the crown of the root. The discoloured tissues were permeated with mycelium, and on the exterior clusters of dark brown conidiophores bearing conidia were to be found.

As the species was indeterminable from the literature at hand, material was forwarded to Dr. E. J. Butler at the Imperial Bureau of Mycology. Cultures have been supplied by him to the American pathologist Dr. F. L. Stevens who has published an account of a "Footrot" of wheat in Illinois, also due to a species of *Helminthosporium* ⁽¹⁾, and to Dr. A. S. Johnson of the Bureau of Plant Industry, Washington, U. S. A. who is monographing the cereal parasites of this genus.

Since this note was written a detailed description of a similar disease has appeared in the Agricultural Gazette of New South Wales Jan. 1st, 1922 by Mr. C. O. Hamblin, Assistant Biologist. It is stated that the damage to the wheat crops in New South Wales varied from 2 or 3 up to 85 and 90 per cent, and that some crops completely failed. This is of great interest as wheat varieties from this State were not attacked in the Sudan.

Until more is known of the disease it is advisable that, whenever found, notification of its presence be made to the Dept. of Agriculture in order that investigations may be continued.

The writer is communicating with Mr. Hamblin in order that a comparison may be instituted, morphologically and physiologically, between the two species.

R. E. MASSEY,
Govt. Botanist.

(1) See Science n. s. 51 page 517—518 21st. May, 1920.

REVIEW.

The Latuko Language by the Lord Raglan. (Bulletin of the School of Oriental Studies, London Institution, Vol. II part II page 267—296).

The Lotuko or Latuko language is spoken by about 40,000 people, most of whom belong to the district of that name in the East of Mongalla Province. It is related to Masai and in a most remote degree to Bari and should accordingly be placed in the so-called Niloto—Hamitic group of languages. The dialects of Lokoia (Liria) and of the language of Dongatola and Imatong differ only dialectically from Lotuko, though speakers belonging to these tribes have some difficulty in communicating with the Lotuko proper.

The main portion of Lord Raglan's paper consists of an English Lotuko alphabetical vocabulary of nearly 1000 words. This is followed by appendices giving further lists of words arranged according to subject matter. The present writer had abundant opportunity of using the vocabulary when travelling in the Lotuko country and can testify to the accuracy of the information given and the correctness of the phonetic spelling. The grammatical notes prefixed to the vocabulary are too slight to give an insight into the structure of the language, and the writer does not throw much light on the nature of the prefixes na—ne—and do—which seem to be used with every noun, but apparently can be omitted in certain cases. A number of sentences or phrases would have been a welcome addition.

Lord Raglan is to be congratulated on a very accurate piece of pioneer work, and it is to be hoped that he will give us still further information about the Lotuko of whom he has an unrivalled knowledge. The names of ceremonies and superstitions given in Appendix 6 whet one's appetite for full accounts of an ethnological nature.

S. H.

NOTES.

Dreams.

The subject of dreams having been introduced by Dr. Seligman in the October number of the Sudan Notes and Records 1921, the following series of three dreams is submitted for his and your readers' consideration.

It is of interest because the symbolism used to express the thoughts and desires, that arise from the "Unconscious", whither they have been unceremoniously thrust by the moral censor, to appear again only in some fantastic guise in dream-life, is very similar to that described by students of the subject among civilized races.

The dreamer who is an educated native of the Sudan was living in Omdurman, though his real home was in another part of the country. The time was about two years ago.

1st. dream.

He found himself crossing the river to Khartoum-North in a small boat accompanied by two or three friends. Suddenly he observed two enormous snakes gliding over the water in pursuit of the boat.

Both he and his friends were very much frightened, but the boat reached the other bank and his friends ran off and left him to cope with the snakes, refusing him any assistance. It never occurred to him to run away; he felt he must fight it out with the snakes. So he took a piece of sharply pointed stick which he saw lying on the ground and stabbing the first snake through the head killed it. He then did likewise to the second snake and the danger being now over his friends returned and congratulated him.

2nd. dream the same night.

He returned from Omdurman to his own village and as he was approaching his house he was attacked by a huge dog which leaped

up at him and seized him by the left arm. A friend who was with him had a stick but refused to help him either by striking the dog or by lending him the stick. At last with his own hands he tore the dog asunder catching hold of it by the jaws.

3rd. dream the same night.

Still at his own village he went to visit a friend. On the way he turned aside to pass through his dura cultivation. Some of the crop he found very poor and small. But another part of it was excellent and very tall. He broke off a stem of the dura and started to eat it. To his surprise he found it sweet to the taste, as is the stem of the ankolib (native sugar cane.)

Analysis disclosed the following facts. He had been living in Omdurman for some-time away from his wife, who remained at his own village. He had off and on been assailed with desires but had put them from his mind.

About two weeks previously to the night of the dreams he had been sitting with some friends at Omdurman in a coffee-shop and they had suggested to him that he should join them in a certain amorous adventure. He felt inclined to accompany them but eventually refused in spite of their efforts to persuade him.

The identity of the dream friends with the friends of this incident is not suggested. In fact the identity of the dream friends was not remembered.

The explanation of the dreams seems now fairly clear. Desire took the symbolic form firstly of two serpents and secondly of a big and wild dog.

His friends so far from helping him threw their weight on the side of desire. In the second dream, it will be noted, his friend would not even lend him his stick.

In the third dream his cultivation stands for his own recent mental processes.

The bad dura signified the desires and the good dura his better feelings, respect for his wife etc. His mental approbation of the result

of the struggle is symbolised by the sweet taste that was found to pertain to the stalk of the good dura.

I might add that the dreamer was much troubled as to the meaning of the dreams and went to a friend, an old man of Egyptian origin, who had considerable reputation in matters of this sort, and requested an interpretation. The friend took a grave view of the case and said that the dreams foretold a very serious illness in the near future, from which the dreamer would eventually recover. His anxiety was now considerable and he waited with unhappy confidence for the first signs of approaching sickness. Sure enough after a few days he felt very ill and lost the use of both legs. He was at home at the time and for several days his relations thought he was about to die. At last he improved sufficiently to enable him to return to Omdurman, where he saw a doctor. The latter could detect no symptoms of any specific disease and soon put him right.

If our explanation of the dreams is the correct one, the cause of the dreamers illness is not difficult to guess.

The suggestion of serious illness made to him by his kind friend, coming on the top of his own misgivings as to the meaning of the dreams, was quite sufficient to bring on a serious illness, especially an illness in which the chief symptom was 'functional'—temporary paralysis of both legs.

The apparent loss of the use of limbs, in cases where there is no organic trouble, is often attributed by experts to some serious derangement and is sometimes treated by "suggestion". In the case we are considering suggestions of a contrary nature to those of his friends, by someone, in whom he had confidence, would probably have cured him at once.

On the other hand the friend is no doubt convinced of the accuracy of his interpretation and can at any rate point to the result as strong evidence in his favour.

H.

Conspiracy against the Mek of the Shilluks in 1917.

A conspiracy was made against the Mek of the Shilluks in 1917 shortly after his coronation and the conspirators proposed to secure the King's death by sorcery.

In the course of investigations the methods of sorcery that were adopted were described.

A grave was dug about 100 yards from the Mek's house. It was quite small about 2 ft. x 1½ ft. x 8 inches. At the head of it was a circle of heglig sticks with a long stake in the middle with beads on it and beyond that three pegs in the form of a tripod.

In the grave was placed a straw figure with a head of straw. A bowl of merisa (native beer), a jar of fat and a bowl of water were placed outside the row of heglig and the Kugur ran round the whole thing with two lighted torches in his hands.

Apart from this ceremony the sorcerer was supposed to have sprinkled blood on the lintel of the King's door.

Another spell that was said to have been used was one in which a baby was speared close to the house of the King and the idea was that the owner of the house near which a baby has been slain will die.

Intelligence Dept.

D. I.

Khartoum,

19/4/1922.



CORRESPONDENCE.

With regard to the note on the Ruff, *Machetes pugnax*, L, in S. N. and R. No. 4 Volume 4, I should like to draw attention to the following observations.

From about the 10th of October onwards great numbers of these birds can be seen passing over Khartoum on their way south, and during mid-November enormous flocks are seen feeding over the sewage trenches near the Mogren; at early morning the ruffs are there, but during the hottest part of the day congregate on the bank of the White Nile. Ruffs in certain numbers may be observed in the above locality practically all winter.

Although I have not seen *M. pugnax*, with ruffs and frills fully developed in Khartoum, I have a recollection of observing in March 1915, half a dozen of these birds performing as it were their sexual display, of dancing about and cutting queer capers in front of each other and also showing some attempt at fighting; the ludicrous side of the whole thing being that I could not distinguish which were the males and which were the females because of the absence of full breeding plumage.

It is well known that the Ruff is a grain-eater, although in appearance it figures as a typical wader.

In the Ibis, July 1905, p. 397, Mr. A. L. Butler says "the Ruff is largely a grain eater, frequenting the dura fields at harvest time in flocks. It is also attracted to the vicinity of garbage and carrion searching for insect food." The latter observation explains why the sewage farm is a popular feeding ground for Ruffs.

In identifying the Ruff whether in immature or mature plumage, I must point out that no reliance, whatsoever, can be put on the legs being of any particular colour; this assertion is made on the strength of having handled a great number of Ruffs both in the flesh and in the skin, and having particularly noticed the diversity of colour. I might also refer to Mr. T. A. Coward's remark in "the Birds of the British Isles"—"Most writers seem to have overlooked or ignored Montagu's pertinent remark that when identifying a Ruff at any age, neither the colour of the bill, nor the legs, is to be depended upon."

R. COTTAM.

Khartoum, 27—4—1922.

SUDAN NOTES AND RECORDS

Volume V.

No. 3.

THE ANUAK.

By Lieut. Colonel C. R. K. BACON, O.B.E.

Historical.

The ancient history of the Anuak is, for lack of further research, at present rather obscure. There can be no doubt that they are closely connected to the Shilluk in language and tradition, and their dialect also is very similar to that of the Jur people of the Bahr el Ghazal. They themselves agree that they are probably related to the Shilluk but say that their original ancestors were a brother called Chuwai and his sister who were suddenly brought into being by "Rabbona". Chuwai married his sister and had two children, a boy and a girl, who were known as the Marru, these children in turn married and thus founded the Anuak people. But Chuwai's rule was cruel and the people groaned under his tyranny. Then under the following miraculous conditions there appeared on the scene a man called Uchoda whom the Anuak look upon as their real ancestor.

The children of the village used to go down to the water every day to catch fish and constant quarrelling used to take place as to who had the right to a fish that two had caught together. One day whilst a quarrel of this nature was in progress there suddenly appeared out of the water a man who seeing two children holding a large fish, one by the head and the other by the tail, asked them what they were quarrelling about. They told him that each claimed the fish as his own. The unknown man then said to the child holding the fish by the head "let go of it". Thus released the fish escaped the grasp of the child who was holding his tail and got back to the water. Then said the stranger "catch another one". The two children caught another large fish and one holding it by the head and one by the tail

brought it before him. This time he said to the child who was holding the fish's tail "let go of it". The child released its hold but the one holding it by the gills was easily able to prevent the fish getting away.

Then said the stranger "now in future there will be no need for these daily quarrels; the child who catches the head of the fish is the owner of it," and having said this he vanished back into the river.

When the children returned to the village they told the story to the old people who refused to believe them, but as they were anxious to know how such a just decision as to ownership had been obtained they decided to lay a trap and if the children's story was true to capture the unknown man of the river. They therefore told the children to go and catch fish and make a quarrel about it whilst they hid in the grass close by and if the stranger appeared they would seize him whilst he was settling the quarrel. Everything happened as on the previous occasion and while the river man was rebuking the children for quarrelling again after he had told them how to settle the case themselves the old people leaped upon him and took him to the village before Chuwai to whom he said that his name was Uchoda.

Chuwai then gave his daughter Korri Nyairu in marriage to Uchoda and with his daughter Chuwai also presented Uchoda with the *Gurmatto* necklace. Uchoda brought with him from the river the *Uchok* necklace (*see under heirlooms*).

As the people had now become tired of the tyranny of Chuwai they made Uchoda their Sultan, and the latter's people multiplied.

Uchoda's wife then gave birth to a son called Gila and soon afterwards Uchoda, anxious to return to his own people who lived in the water, suddenly vanished. The Grandfather Chuwai then fearing that his grandchild Gila might vanish like his father had certain Kujur rites performed and Gila was made Sultan in place of his father.

Now before Uchoda appeared on the scene the Marru children had after marriage given birth to a boy called Ooterno who was born circumcised. This boy was said to have been a great musician and also to have first made the types of spear called *Dem* and *Jo* which are now rare and worth a cow each.

Later in life Ooterno killed the Sultan Gila W. Uchoda and was in turn killed by the people.

Ooterno had a sister called Akango who when the former killed Gila put Gila's son Enno and the unnamed son of her brother into a large

earthenware jar. In the night elephants passed the village and so taking her brother's unnamed son out of the burma she put him upon the elephants track and sent him off. This forlorn son of Ooteeno had also been born circumcised and the Anuak attribute to him as his offspring all circumcised people. The child Enno was then presented to the people as Sultan Gila's successor.

The present habitations of the Anuak tribe are on the Baro—Gila and Akobo rivers with two villages on the Sobat river near Nasser and at Ajungmir near the mouth of the Pibor river.

Many years ago the Anuak lived on the Sobat river from the Pibor mouth down to Tawbai and also in the Tawj district to the N. E. of Khor Machar and on the Adura and Mokwai rivers to the south. But they were driven out of all these places by a part of the powerful tribe of the Jekaing Nuer who came from, and still occupy, all the swamp country inland from Shambe in the Bahr el Ghazal District. A split occurred among these Jekaing and a large section started off to seek new pastures and in the course of their wanderings drove back the Shilluk from near Tonga and harassed the Eliri where they crossed the river to Melut. Round Melut these Nuer captured numerous Dinka and their cattle and then turning south marched through the Dinka Donjul country to Abwong on the Sobat river where they wiped out the Dinka living on both banks and pushed out westwards as far as Nyerol. They also swept up the Sobat and Baro river and drove the Anuak east and south east. In consequence, there has always been enmity between the Anuak and Nuer, and it was only owing to the former getting, within recent years, arms from Abyssinia that they became powerful enough to attack in turn the Nuer and carry out those raids that were so frequent when the Government commenced administration in the Sobat river area.

Heirlooms in possession of the Anuak Sultan.

- (1) *Wellu* or throne : this was made by Uchoda out of the Looli tree (An. Wedu).
- (2) *Udola Wuruchamu*—a small drum beaten on state occasions—contains extracted teeth of Sultans' children.
- (3) *Uchok*—a bead necklace brought by Uchoda from the river: no other similar beads are known.
- (4) *Gurmatto*—a bead necklace given by Chuwai to his daughter Korri Nyairu or her marriage to Uchoda—type now unobtainable and unknown elsewhere.

Dwellings—Food etc.

The Anuak are not semi-nomadic like the Nuer. They always live on or near the banks of rivers where their water supply is assured, and as they do not own many cattle there is no need for them to be taken far afield in search of grazing grounds. They sometimes, however, form temporary villages on khors where the fishing is good.

When suitable ground is available they prefer to build their *hoshes* apart from one another. But in places one finds crowded circular villages surrounded by the remains of a stockade within which the people have gathered for protection against neighbouring tribes. Also when a mound (*dabba*) forms the only good site for houses in a part liable to be flooded by the river one finds dwellings closely packed. These mounds have probably been formed from the debris of the houses and rubbish of many generations, and judging by the size of some of them may be hundreds of years old.

Each married man has a separate *hosh* or compound circular in shape and surrounded by a grass fence 6 feet high. On the circumference of this compound are built his houses. For each wife he must have a separate *tukl*, and a common cookhouse serves for all. Another *tukl* is provided for boys and unmarried men living in the compound.

The dwelling *tukl* of the man and his wife is usually about 10 feet in diameter. The walls are mudded up to a height of about 5 feet inside and are ornamented by curved lines and designs. The floors are also well mudded and the interior of the house is beautifully clean. Numerous skins are strewn on the floor, household utensils hang from the roof. The actual entrance to these *tukls* is small, being about 2½ feet high by 2 feet wide, and at night this is closed by a small grass mat. To enter the house one must crawl on hands and knees. The grass roofing comes down almost to the ground forming a small veranda round the mud walls, and the opening in this grass does not always coincide with the entrance into the house, but is sometimes so placed that one must crawl a couple of yards along the veranda before entering the actual house door: this is done to baffle thieves. These dwelling houses are of course very dark, but on that account are free from flies. If mosquitoes are numerous a small fire is kept smouldering at night inside.

The cookhouse is a small circular *tukl* of about 6 feet in diameter with mudded walls. The fireplace is a sunken hole about 8 inches deep and made usually in the form of a trefoil. Four feet above the

fire is built a platform of sticks on which dura is placed. Large circular receptacles like jars are made of matted or interwoven grass and mudded outside. These hold the dura grain.

Cooking utensils are made of burnt earthenware and flour and other food is kept in gourds. Large mussel shells are used as spoons, and a finely meshed bag of grass is used for straining merissa (dura beer).

Inside the clean and carefully sanded *hosh* a circular hole is made; this is sunk in the earth about 2 feet deep and of one foot diameter and is called by the Anuak *pang*. It is used as a mortar for grinding dura into flour with a long stake for a pestle.

For food the Anuaks eat *kisra* of dura flour, fish and meat, and drink merissa. A few men eat chickens, but only boys eat eggs. They will also eat guinea-fowl, partridges, duck, geese, dura birds and doves in addition to all ordinary game animals, but they will not eat ostrich, zebra, crocodile, lion, hyena, leopard, python, or snakes. If dura is short they collect the *lalob* (fruit of the heglig tree) and pound the kernels into flour.

Cattle and other domestic animals are kept in large circular *tukls*, and if the former are scarce a *tukl* is shared by the community.

As a rule the cooking is done by the women, but it is interesting to note that the Anuak Sultan employs a man cook only to do everything, while other Sheikhs have their *kisra* made by a woman, but other food cooked by a man.

Physique.

The Anuak men are of a good average height, about 5 ft. 9" and are well made and not remarkable for leanness as the Shilluk and Nuer. They do not paint the body or smear it with ashes, and are accustomed to bathe at least once a day. To our European standard they may be considered to be a good looking type of native, as their lips are not unduly protrusive nor their noses flat. As a rule the women are small in stature, but well made and may be also classed as good looking.

Marks, Teeth, Hair, etc.

The Anuak has no distinct or recognised tribal marking. Such marks as are made are done according to the individuals' personal fancy unconnected with any custom and for no other reason than that some form of tattooing is considered as likely to be pleasing to the other sex. This tattooing which both young men and girls practise

takes the form of dotted squares, three dots on each side. Intervals between these squares are always observed.

The dot is made by piercing the skin with the thorn of a creeper and then cutting across the pierced skin with a native razor. The wounds thus made are rubbed with cow fat or oil from the *lalob*, (heglig tree) fruit, and they result in small raised dots of about $\frac{1}{2}$ " diameter. These dotted patches are usually made on the forehead, cheeks, back, chest and calves of the legs of young men whereas the young girls make them anywhere.

Hair-dressing is seldom practised and then only takes the simple form of plaiting the hair into short lengths and covering the hair and head with red ash and oil.

Both sexes pierce their ears for ear-rings but there is no universal custom in this connection. Ear-rings are usually small ones of brass or iron wire.

The majority of both sexes have the 6 centre teeth of the lower jaw removed when about the age of eight to ten. The reason for this operation is apparently that it is considered an improvement to the shape of the mouth and does not give the appearance of a long or protruding lower-lip.

As a rule children of the Sultan's family do not have their teeth removed, but if they are taken out they are put into a special small drum called *Udola Wuruchamu* which is beaten on state occasions.

In every village or community there are two or three special dentists who perform the operation of extraction by means of a small iron spike like the end of the kind of spear called *kokab*. This spike is inserted among the teeth and by a lateral movement loosens them: the teeth are then prised out one by one, and the gums after washing with hot water are rubbed with cotton.

This operation is always performed free and takes a very short time but needless to say it is not a gentle one and is not appreciated by the children.

The men are not circumcised, nor do the women undergo any operation at any time.

When hunting or at work away from their houses the men usually go naked; but on all other occasions they almost all wear either a skin or piece of cloth knotted over one shoulder or else a loin cloth.

Their ornaments are not profuse and usually consist of a necklace of beads, iron or brass wrist bangles and when obtainable fine ivory

armlets worn above the elbow : these armlets are sometimes as much as 3 inches wide and a single one would be worth a cow. The most prized bead is that called *dumoy*. This bead in the genuine and original type is no longer made, and in consequence a small necklace of them is worth one or more cows.

All women and young girls wear a small apron and usually in addition a skin or cloth covering suspended from a shoulder or tied round the waist. The young women are profusely adorned with beads and wire chiefly worn as necklaces and ear-rings. A number also pierce a hole in the lower lip and wear in it a piece of straw or even a nail.

Family Names.

Each family has a special ancestor or ancestral object such as a tree, hill, crocodile, lion, snake, etc. The members of a family related to the lion, for instance have no fear of this animal and would certainly not molest it.

A case recently occurred in which a man of the lion family unwittingly killed a small lion in the grass having mistaken it for a hyena. As soon as possible the head of the family and the other members proceeded to the spot and slaughtered two goats to appease their ancestral spirit.

During the pregnancy of a woman some one may dream that her child at birth should assume the name of one of the sacred trees (*see under "Kujur"*) in addition to the family name. If two or more people dream that an unborn child should have different names then it will probably die. When a name is not thus given before child birth the following conditions will usually decide it.

		if female	if male.
(1)	A woman's first child will be called . . .	<i>Amat</i>	<i>Umat</i>
		or <i>Agwatto</i>	<i>Ugwatto</i>
	„ „ second „ „ „ „ . . .	<i>Ajulo</i>	<i>Ujulo</i>
	„ „ third „ „ „ „ . . .	<i>Abonga</i>	<i>Ubonga</i>
	„ „ fourth „ „ „ „ . . .	<i>Angudo</i>	<i>Ungudo</i>

Subsequent children will receive any family name.

(2) In the case of twins :—

- (a) If both are boys, the first delivered will be called *Upion*
and the second „ „ „ *Utchan*
- (b) If both are girls, the first delivered will be called *Apion*
and the second „ „ „ *Atchan*

- (c) If a boy and girl are delivered :—
 the boy will be called *Upiou*
 the girl " " " *Atchan*
- (d) If a girl and boy delivered :—
 the girl will be called *Apiau*
 the boy " " " *Utchan*
- (3) A daughter born subsequent to the birth of twins is called *Akela*
 A son born subsequent to the birth of twins is called . *Ukela*
- (4) If a woman's first child dies at child birth and she later gives birth to another that lives, such will be called, if a daughter, *Nyantau*, if a son, *Otau*.
- (5) If a woman bears a child when on a journey such will be called
 if a female , *Aiyyo*
 if a male *Uyyo*
- (6) If a woman gives birth to a child during a time of war or raid
 A female child will be called *Atong*
 A male " " " " *Utong*

Nuer children captured by Anuak in a raid were often called by these names.

Marriage.

The Anuak are polygamists, but probably the great majority have only one wife as they are expensive items to purchase. The average *mal* or dowry paid to the parents of the bride by the bridegroom is approximately as follows :—

- 2 waiststrings of *dumoy* beads.
- 4 cows.
- 1 bull.
- 70 spears of the *okwen* type.
- 2 " " " *dem* type.
- 1 " " " *jo* type.
- 10 brass wrist bangles.
- 1 bead necklace *shauweir*.
- 5 waist strings of *tet* beads.

The *dumoy* beads are of a opaque blue colour varying in shade between a watery blue to a dark blue. They are very unevenly cut at the edges—the Anuak say they were made by their own people in olden days. They are very scarce and none can be bought in any open market, but they are much in request and always form part of a marriage dowry. In consequence a single waist string of about 30 inches long is worth one cow or 30 *okwen* spears.

The *okwen* type of spears is nowadays made by the local blacksmith out of trade spears. It usually has curved projecting spikes on the iron haft below the head.

Both the *dem* and *jo* spears are scarce. They are not made nowadays and the Anuak believe that anyone attempting to produce these types will die. In consequence they have an increased value and are also always in demand for marriage dowries. One spear of these types equals one bull or 8 *okwen* spears.

These types also have small curved spikes below the blade varying in number from 2 to 42.

The wrist bangles are made of brass melted down and then formed into a thick ornamented ring. As a rule these are obtained from metal workers at Gambeila, but are sometimes made locally. Eight of them equal the value of a cow.

The *shawweir* bead is a largish red bead, and the *tet* bead is of a dark greenish colour.

The payment of this *mal* may be, and usually is, spread over a number of years and defalcation is common and gives rise to many disputes. Should a woman die after marriage and before she has given birth to a child then the *mal* or such part of it as had already been paid by the husband is returned to him.

The birth of a son is welcomed by the father as giving an heir to carry on the family name.

There are four forms of marriage arrangements among the Anuaks viz :—

(a) *Bil*. When a father has a daughter whom he wishes to marry to some one whom he knows can pay a good dowry, he himself or some selected proxy goes to the man and puts forward a proposal for marriage. If the intended bridegroom is agreeable a committee of the elders is held and the amount of the dowry is decided on. The bridegroom pays the dowry and the father hands him the bride.

(b) *Nyum*. If a man wishes to marry a certain girl he sends a friend with a spear head and necklace of white beads to the father, and the friend informs the father that so and so wishes to marry his daughter. The father then informs the girl that so and so has sent a present and wishes to marry her—what does she think about it? If the girl is agreeable the friend and the father come to an agreement regarding the dowry. If the girl does not wish to accept the proposal the spear and necklace are declined.

(c) *Luk*. Under this form the young man and his girl secretly cohabit for a month or more. At the end of this period the girl asks the man if he will now make her his wife. Apparently the man nearly always agrees to this course and says he will hand her dowry to her father. She then gives him some small articles as a mark of affirmation of the marriage agreement and the man then goes to her father and tells him he has accepted from his daughter such and such a thing, and the father gives his consent to the marriage.

The bride then collects some girls and goes to the house of the bridegroom who provides a feast. The father then sends his representative to the bridegroom asking if the dowry is ready and if so it is handed to the father who then gives away his daughter.

(d) *Danion*. Under this arrangement a man has paid a marriage dowry for a small girl in accordance with the *Bil* form of marriage. But when the girl grows up she refuses to marry her intended husband and arranges to marry another man. The latter then repays to the jilted man the dowry originally paid to the father of the young girl and marries the girl.

When there is a dearth of suitable young men in a village it is sometimes the custom for the Sheikh and a party of men to take a number of marriageable young girls on a visit to a neighbouring village where dances are held, and the young ladies put forth their charms to capture young men who can pay a good dowry.

Childbirth.

On the day a woman gives birth to a child a rope or thorn zariba is placed at once round her house and for 30 days no pregnant woman or her husband is allowed to enter within this cordon. Should by chance this custom be infringed then the women collect and a sheep is slaughtered as a sacrifice that no harm may come to the new born child. If however the child dies within thirty days of its birth or within a few months afterwards then the pregnant woman (or her husband) who entered within the cordon must hand over her child on birth to the woman whose child died. After 30 days the cordon is removed and all can approach the house wherein a child has been born.

Divorce.

Divorce with the subsequent procedure occurs under the following circumstances :—

(a) In case of adultery the husband who divorces his wife keeps any children of their marriage and the wife returns to her father who

is not called upon to repay any of the marriage dowry. But if there are no children the father of the divorced woman must repay the dowry in full.

(b) If a woman is always quarrelling with her husband and "talks badly" to him he sends her back to her father and keeps the children; if however there are no children he receives his *mal* back again.

The divorced woman can then look for another husband and the latter pays no *mal*; but if the woman later, after bearing children to the second husband, returns to her first husband she takes the children of the second marriage with her as her second husband paid no *mal*.

(c) If a husband is the cause of quarrels with his wife and the latter does not wish to stay with him, she goes to her father and asks him to repay the dowry and her husband then lets her go.

Burial.

The method of burial is the same, for men, women and children and is apparently simple and unaccompanied by mystic rites and ceremonies. Burial takes place within a few hours of death and as soon as the old men have dug the grave. The grave is dug about 3—4 feet deep and usually within 2 paces of the door of the deceased's hut; the direction of the grave is immaterial. A skin sleeping-mat is laid on the bottom of the grave and the corpse is laid on this at full length, but lying on its side with one hand under the head and the other stretched out along the body. The body may lie on either side, the attitude being one of sleep. A second skin mat is then put over the body to keep off contact with the earth.

If the deceased was wealthy a bull is killed and the fresh skin is put at the bottom of the grave, the meat being eaten by those who have dug the grave and otherwise assisted at the funeral. The excavated earth is then thrown into the grave and pounded down with a wooden rammer, water being thrown on to harden the surface which is finally sanded.

After a month the grave mound is beaten down again to reduce it to ground-level and once more the surface is treated with sand. The grave is now inconspicuous in the clean sanded floor that is maintained in all Anuak *hoshes*.

Sometimes before death a person expresses a wish to be buried on the site (usually a *dabba*) of some old family village and this would then be done. Also in rare cases when a man has lost all his relations or children, with what is probably a sense of depression, he may desire

to be buried at his death on a raised wooden platform far away in the forest ; and in this case his body is simply covered with branches of thorn bushes.

No articles of food, utensils or weapons etc. of any kind are placed in or near the grave for the use of the deceased person. A burial feast is usually held in memory of the deceased when the new dura is available for making merissa.

Murder.

If a person has been seriously wronged then he may either perform the curse of *atshini* (*see below*) or commit murder.

If his case is good and every one knows he has been wronged the murderer has nothing to fear and his act is held justified by Anuak law : the deed accomplished he tells his Sheikh and remains unmolested in his village. If however there is any public doubt as to the justification of a murder the perpetrator flees his village and goes far away.

If a murderer remains in his village and his victim belongs to a different village, then both Sheikhs of the villages concerned hold a combined meeting with their old men and if it is decided that the murderer was justified in his action nothing more is done. If however it is considered that the murder was committed without justifiable cause the decision will be that the murderer must give some one of his own family to the family of the murdered man, or failing the provision of such a substitute he must surrender himself to his victim's family. In the latter case certain formalities are gone through in the handing over of the murderer's sleeping mat, some spear heads and *dumoy* beads and the blade of a hunting spear is blunted on a stone and put into the house of the murdered man's family. These rites having been duly observed all rancour and desire for revenge on the part of the victim's family ceases.

Should a murderer flee to another place and no meeting be held or agreement arrived at, then the victim's relations will kill the murderer at the first opportunity.

Thus it will be seen that murder is nearly always premeditated and practically never arises through a sudden fit of anger or without what was thought to be a reason justified by custom.

If one member of a family kills another member no action is taken or required beyond making a present to the Sheikh of the village. It

is taken for granted that such a murder was justifiable, as otherwise it could not have happened.

For instance, according to Anuak law, a brother may kill a sister who has become a regular prostitute or who marries a poor man who can pay no dowry contrary to the wish of her family.

Some years ago a case of murder occurred at old Akobo a father killing his son who was guilty of adultery with one of his fathers' wives. In this case, by Anuak custom, the father acted entirely within his rights and was liable to no punishment. It is rather sad to recall that the case having been reported to the District Administrator the murderer, who voluntarily submitted himself as for a Sheikhs' meeting was sentenced to penal servitude and died in prison at Malakal.

Did the Anuak view this as an act of justice? With their limited knowledge they must have thought that the Anuak law was universal. It may be mentioned however that cases of murder are very rare now-a-days.

A case of manslaughter such as occurs when a man is killed in open inter-village warfare, is usually dealt with, when both villages are agreeable, by the surrender of a person to the deceased man's family as mentioned elsewhere in this article. Where no such agreement takes place the feud continues.

Suicide.

Old people of both sexes who are suffering under a heavy grievance sometimes commit suicide. In these cases it would be presumed that they had called down the curse of *atshini* on the head of their oppressor before death.

The would-be suicide goes far away into the forest and selects a large tree. Then having tied a rope round his neck he climbs the tree, fastens the rope round a branch and launches himself into space. If the body is found it is cut down and buried as usual in front of the deceased's house. Cases of suicide are rare.

Religion, Magic, Superstitions.

The Anuak believe in an all powerful and omnipresent Spirit whom they call *Gwok*, but no particular form or place is assigned to him. In cases of illness the relatives of the sick person sometimes slay a bull or sheep as a sacrifice to *Gwok* for the recovery of the sick person; the flesh is eaten by everybody except those closely related to the sick person. An individual also sometimes sacrifices an animal to *Gwok*

when he wishes to bring down his wrath on another person from whom he has suffered some grievous wrong.

But it is difficult to understand at present where the line is drawn between *Gwok* and the inanimate objects, such as trees, that they hold in great reverence.

Kujur.

This is a large subject with many ramifications, but the following items have come under notice in addition to the *kujur* treatment in the case of *atshini*.

(a) Trees are frequently objects of reverence credited with supernatural powers. They are found both in inhabited and uninhabited places. In the village area round Akobo Post there are the following four sacred trees and probably more exist:

A basham bush at Dimma called *Ūtiri*.

An heglig tree at Otili called *Banga*.

An heglig tree at the mouth of K. Agwei called *Urick*.

A dabka tree at Oubeir called *Nekwangi*.

These trees appear connected with child birth and the giving of names to children. The Anuak say that anyone damaging these sacred trees would die and their children also.

Formerly people regularly offered food and tobacco to these trees, but this custom seems to be observed now by the older men only : the young men are content to put a few beads into the ground at the foot of them.

At Ukadi on the Upper Akobo I saw in 1921 an Albino girl whose skin was white : she had weak watery eyes and their colour could not be properly observed as she kept them practically closed during the day, but was said to open them at night and see well. This freak was attributed to the fact that her father, before her birth, had on occasion sat down to eat and smoke at a local sacred spot, in this case a small hill called Abola near Chamchar, and had failed to make the customary offering of a little food and tobacco. There was also a sacred *gemeiza* tree on the Upper Akobo near Neum. In 1922 I camped under this tree and as it harboured cobras and snakes, one of the former of which came down in a rain storm and got into the grass mattress I had laid down beneath my blankets, my servant lit a fire in a hollow at the base of the tree to keep the others at home. This fire had apparently consumed the shaft of an old spear called *cham* and caused the blade to fall somewhere where it could not be found. On the spear head was

hung a bunch of human ears and ears of buffalo and leopard. It was an ancient offering to the local spirit and when the rain failed to materialize this year as early as usual, I received pressing requests from the Annak to take steps to bring rain, as the loss of the spear head had offended their *kujur* and he was holding back the rain.

I have known the Anuak on another occasion when rain was desired to go down to the Akobo river and in a body put their hands into the river. But what other rites were performed was not ascertained. The living Anuak *kujurs* who are of both sexes, but more usually women, are really concerned with the treatment of illness by patent medicines and rites rather than dealing with all manners of cases by mystic performances.

The treatment for *atshini* is entirely performed by the female *kujur*. They apparently employ a number of herbs and tree bark in connection with their medicines. Wounds are treated with a solution made by boiling the bark of the *nabak* tree.

The roots of the *kuk* tree are used in the treatment of *atshini*. For snake bites they use the bark of a small *heglig* tree which after immersing in water they rub on the place of the bite and the bark produces a thick froth like soap-suds : this treatment is continued for perhaps two or three days. But they recognize that certain snake bites are so virulent that death occurs if speedy recourse to the *kujur* cannot be obtained. They also make a medicine from a certain kind of grass to prevent children vomiting or to act as a laxative.

In the case of illness or when about to make a raid the Anuak frequently consult the female *kujurs* as to whether the sick person will survive or whether the intended attack is proceeded by suspicious omens.

A small sandal of skin is tossed in the air and allowed to fall on a skin mat. If it falls with the sole upwards it is a bad sign but if the proper way up the omen is good. There seems to be no limit to the number of throws and I fancy they generally go on throwing until a favourable result can be shown although the decision might at times be rather delayed.

Atshini.

A very common superstition, partaking of the nature of witchcraft, is that known as *atshini*. It may be likened to the witchcraft that flourished in England in years gone past when various rites and curses were practised in secret aiming at the death or illness of the intended

victim. But apparently it has this great difference that it is not wantonly or maliciously used, but only when a person is suffering under a real grievance or wrong. It would seem to have a distinctly restraining influence on injustice and the effect of its application when not due to normal sickness and accident is probably owing to the mental state of guilty conscience. The practice is widespread among the Anuak. If a person has been seriously wronged and is in consequence very angry with the oppressor he or she puts a curse on the oppressor, but such curse does not operate until the wronged person has died. This curse is called *atshini*.

There is no particular rite or formula for it, and the fact of its having been perpetrated is kept secret. This seems to prove that the person on whom it has been placed must have a guilty conscience and know he has committed an injustice or offended against the Anuak laws and customs.

As an example, an old Sheikh who is in the last stage of tuberculosis recently complained that he was suffering from *atshini*. When asked if his "heart was clean" or by what act in his life he could have incurred a curse from a fellow being he replied: "Many years ago whilst my wife was pregnant she apparently went near to another woman's house wherein was a sick child. This child died and the mother accused my wife of having crossed the forbidden circle thereby causing the sick child to die, and demanded a child of mine in place of her dead infant. But I refused as I did not believe my wife had violated the custom in question. After about three months the mother of the deceased child died also, and before she died she must have put *atshini* on me because within a year my newly born child died, then three months later my wife died and after that my married daughter died. And now I am ill myself," (He is about 50 years old.)

The custom that his wife was accused of breaking is as follows:—

If a child is ill a rope is placed around the house at a distance of about 5 paces from it and it is strictly against Anuak custom for a pregnant woman or her husband to come within this rope circle. If he or she does do so then the sick child will die and in accordance with the custom for murder or manslaughter an equivalent must be provided by the breaker of the law.

In cursing a person the wronged individual usually, when in a lonely place, repeats to himself or herself "I have done nothing wrong and you (the oppressor) have done such and such a thing, God will surely

kill you." These curses are as a rule only inflicted by the old people of both sexes. If a young person is wronged, especially in the case of a young man, he does not have recourse to *atshini*, but promptly commits murder.

There are two types of this curse. In the first, death comes to the oppressor instantaneously, and may be the result of an accident or through the agency of a crocodile, lion, snake etc. as well as from other natural causes. Or secondly, the person cursed may develop an illness of the body in which pain seizes the victim in varying parts of his body now in his head, now in his legs etc.

When suffering from *atshini* of the latter type the victim has recourse to the nearest *kujur* and the following operation usually takes place. The *kujur* causes a large fire to be lit and fills a gourd $\frac{1}{3}$ full of water. The patient then lies down at full length a few paces away from the fire and the *kujur* places the gourd over the place where the pain is, holding the gourd with his left hand while he stirs the water with his right. He then suddenly grasps the gourd with his right hand and with his left hand seizes the painful place and with a quick motion extracts the *atshini*, which can be likened to a fly or worm, thrusts it upwards through the bottom of the gourd into the water whence it is removed by the right hand and hurriedly thrust into the fire. It may be necessary to have this operation repeated several times at intervals.

Although this treatment may be efficacious, yet it does not rob *atshini* of its terrors, as the victim might be seized with the curse when on a journey or when no *kujur* was handy.

A small species of onion called by the Anuak *tome* is much in request by a person suffering from *atshini* as it is supposed to have the power of locating the otherwise perambulating pain and this location enables the victim to indicate definitely to the *kujur* the place upon which to operate.

If a married woman is under the curse of *atshini* his wife will either not bear him children or they will die soon after birth. Redress for a wrong does not appear to be possible as the curse, as mentioned above, only comes into play after the death of the wronged person.

With our curious superstitions that survive even in these days of civilization it does not behove us to ridicule these native customs which are clearly defined and have definite penalties attached to any infringement. These customs are universally known and apparently all are practised with the ultimate view of compelling individuals of the human species to observe certain social laws.

THE SOUTHERN ROUTE TO KUFRA.

FROM EL FASHER TO THE SENUSSI AND BACK WITH
ALI DINAR'S CARAVAN. 1915—16.

TOLD BY BIDI AWDI, THE GUIDE.

The Chronicler, while not knowing the value of this tale which he has extracted through the medium of Arabic not faultlessly spoken by either himself or his informant, whose native tongue is Zaghawa, apologises to the active old Bedai of the twinkling eyes for any misstatement which may be the result of a misunderstanding. At the same time, if his readers feel but a fraction of the interest that the tale has had for himself—an interest that must be akin to that felt long ago by Herodotus, the first and best of all chroniclers, in the tales he heard in Ancient Egypt from the priests and guides about this very part of the world—his purpose will have been served.

A few days before the beginning of Ramadan 1333, as I was living with my family in the Bedeyat feriq in Wadi Melit, there came to me one of Ali Dinar's soldiers, who said 'The Sultan wants you in El Fasher'. So I saddled my horse and left Melit that afternoon with the soldier, who took me straight to the house of Mahbub Kowri (1), a Bedai and one of the chief of the Sultan's *mulasimin*. Mahbub sent me to Ramadan Burra, the Sultan's Minister, who lived in a mud house near the mosque. Here I left my horse, and followed Ramadan, who appeared to be awaiting me, on foot to the Sultan's Palace, where Savile Pasha the Governor now lives. When we arrived at the inner courtyard, we both went down on our hands and knees, and crawled in. As soon as we had entered the palace, Ramadan put both his hands palm downwards on the ground before him, and remained motionless, his head bowed on his hands. I did likewise. Then I heard the Sultan say 'Approach', and we crawled a few steps towards him, and then remained prostrated as before. Again the Sultan gave us leave to approach, and we drew a little nearer. The Sultan was reclining on an angarib in the inner apartment. There was only Wad El Sheikh Simawi, his ambassador, with him. The Sultan said to me 'I am told that you know the land of the Senussi. How came you

(1) Mahbub Kowri lives at Fata Burno, near Kultum.

to know?' I explained that in the days of my youth I had gone with four other Zaghawa and raided sixteen camels from Kufra. Said the Sultan: 'I am going to send a caravan there. Do you know how to show them the way?' Bowed and motionless, I intimated my readiness to fulfil his commands. So he gave me fifty rials 'raḍina' ⁽¹⁾, and commanded Wad El Sheikh to see that I was provided with a camel and a change of raiment. Then he said: 'The day you bring my caravan back, I will give you ten cows'. *Shaib Bidi*, '*inta tayib*?' To which I replied '*Allah yinsarak, Sidi, ana tayib*'. Then we withdrew, crawling out of his presence as we had entered it.

I returned to Mahbub's house, and stayed there three days. Then early on the fourth day the Sultan summoned me, and told me that the caravan was leaving that day. We were to take with us one hundred and fifty she-camels which we were to sell, and with the money they fetched we were to buy Carambal rifles. We were also to take three hundred rials majidi, with a hundred of which we were to buy silver, and with a hundred red gold, and with a hundred magazine rifles. Also he gave us four slaves and four slave girls, and charged us to give one each as a present to Sidi Sereif El Sherifi, one of the Akhwan, to whom he also sent in addition thirty she-camels. The other slaves we were to sell. Having ordered us further to buy long silk robes if we found them, he dismissed us.

That afternoon we set out. Ahmed Chukam El Bedai was in charge of the caravan, which consisted of thirty six men besides myself. Twelve of these were soldiers of the Sultan, each one armed with a rifle; and there were two Zayadia Arabs sent by Guma' Gadain. Each of us had the camel he rode on—we took no spare riding camels. After two days we came to Melit, where Adam Tamim, the Nazir of the Berti, entertained us; and the next day we reached the wells at Sayah; and the next Madu, where Shaib Hasan, who was a Bey in the days of the First Government, when Slatin Pasha was Governor of Darfur, supplied us with meat and drink. Then we left, and passing right through the northernmost of the Tagabo Hills, we rode all day across the wide sandy stretch that comes before Jebel El Meidob; and that night we camped near the Jebel. The next day we were at Malha, where we watered the camels at the lake in the old volcano crater. We stayed four days

(1) i.e. 'we are willing'. So called on the *lucus a non lucendo* principle. They were copper, and people only accepted them against their will.

at Malha, while Melik Gami' Kheir brought us 50 waterskins, and Melik Mansur Suliman 50 likewise. Melik Gami' gave us 12 camels to carry water, but Mansur only brought us six. Mansur also only supplied 10 sheep, whereas Gami' brought the 30 that we asked for. So Chukam wrote a letter to the Sultan to complain, and warned Mansur that all would not go well with him, should the caravan return in safety. After that, as I heard, the Sultan sent for Melik Mansur, but he dared not face his displeasure, and ran away to Kordofan.

From Malha we went Northwest to Wadi Kirra, where some rain fell. From Kirra we struck due North for Bir Natrun. The rocky plateau of Teiga was away on our left for two days: after that there were no more hills--nothing but sand. After riding for five days we camped for the night in Wadi Sho, which runs S.W. into the Wadi Howar. But by this time all our waterskins were dry. So I did not stop: I rode on hard all that night with two of the soldiers, one out on each side of me: and next day we got to Bir Natrun, where we filled 12 waterskins. Then we rode back to meet the caravan. We found that they had not gone far from Wadi Sho. All the men had allowed the camels to scatter about in the *khala*, and were all lying about on the ground jibbering with madness. Two soldiers, one slave and one slave-girl were dead. We gave the rest water to drink, and bathed their faces and bodies, so that they all recovered. Then we collected all the camels, and started on again.

Seven days after leaving Wadi Kirra we arrived at Bir Natrun, where we stayed for three days in the huts that the Government built for the Camel Corps post there. Then we set out, and after riding for four days, always going due North, we reached the oasis of Tamr El Qusar (? Tamr El Bedai), where there is open water, round which grow numerous date-palms.

Hitherto there had been plenty of grass for the camels to eat, but North of Tamr el Qusar there was very little. The going all the way to Kufra was sandy, with here and there a patch of stones. Henceforward we gave up riding only by day, and instead we rode all the night long, camping for the heat of the day about two hours after sunrise. I led the way, always keeping my right shoulder on Jedi the Pole Star, and with a man riding out on each side of me. It only took us two days to reach a well, which the

people call Bir Bidi. It is so called, because when I was on that raid, I saw where a gazelle had been digging in the ground. So I scooped out the sand, and at a depth less than the height of a man, I found plenty of water. When I left, my friends and I put a large stone over the place. This time too, when we moved the stone, we found water with ease.

From here it took us nine days to reach Jebel Anuar, which is a large jebel like Meidob, and has four springs within a radius of 3 or 4 miles, so that there is plenty of water. Here we found about a hundred Goraan living, and about a hundred and sixty Feizan. The melik of the Goraan was called Bellu, and he was living with the Akhwan at Kufra, to whom both the Goraan and Feizan at Anuar own allegiance. Rain falls at Anuar, but the people there do practically nothing but look after their camels. The Goraan camels are large like the Darfur ones, but the Feizan camels are stumpy and red in colour. We stayed at Anuar eight days to rest; and were told by the people there that if anyone came to interfere with them, they would kill them all.

Then we set out again, and from there another seven days brought us to Hajar Kowal, a fairly tall solitary jebel, where there is a well, the work of the Goraan and Feizan of those parts. Here we just filled up our waterskins and set out again, and on the eighth night we reached Wadi Gerat, which is full of palms, and gets its name from the bitterness of some of the dates.

Next morning I rode on with a Bedai called Ibrahim to the house of a Feizani called El Khei, which was situated in Tallaf, another wadi full of palms. El Khei is now living in El Fasher. At that time he had been living at Kufra for some years with his mother and wife. I think he had gone to visit his mother from El Fasher, where he had left all the rest of his family, and had stayed to trade. He rode with us up on to a rocky plateau, formed like Jebel Teiga, on which the Akhwan live.

The Akhwan have wells up on this plateau, and they live in large mudbuilt houses. Even the under-side of the roofs of their houses is plastered with mud; and from the beams ornaments of red gold hang down. We met Sidi Sereif and Sidi Ali in a large house about the size of Ali Dinar's palace at El Fasher: and we told them that the Sultan had sent us with a caravan. They told us to bring the caravan in; and directed us to live in Tallaf,

where there is an oasis that is difficult to cross unless you know the way. Round the oasis are many mud hut villages. So we rode out to the caravan, and brought it in to the house of El Khei. Then we took the 26 she-camels (four had died on the way. Altogether we lost 20 camels on the journey) and the two slaves, and we rode to the palace of the Akhwan. Here we formed into two ranks; and as we advanced the front rank fired a volley in salute and then retired to a flank behind the rear rank, which in its turn became the front rank and fired a volley, until each man had fired three shots. Then two of the Akhwan came out, and we shook hands with them. They took us into a house, where they brought us tea and meat. Then they told us to go and rest. So we handed over the Sultan's present of camels and slaves, and departed.

We very soon sold the remaining four slaves to the Akhwan for 100 rials each. Then on a Friday, which is the market day there, they gave us sole permission to sell in the market. We sold all the camels: a good one fetched between 80 and 100 French rials (Shenku). They slaughtered all the camels we sold them, for as there is no grass there for cattle to eat, meat is a great luxury. With all that money we brought 130 Carambal rifles. Every man in the market seemed to have a rifle for sale. I have never seen anything like it. A poor man at Kufra had about a hundred rifles in his house, all stacked like firewood. Besides the Carambals, we bought eighteen magazine rifles and twelve revolvers. We also bought twelve 'burnus' of thick black cloth with gold on the sleeves and round the waist, three robes of silk such as the Sultan specially asked us to buy, twenty gold necklaces and ten extra large ones with breast plates and large centre ornaments: also ten large silk rugs.

At Kufra El Sherifi, Sidi Mahadi, was sole ruler. I never saw him myself, but I met five of his sons, Sidi Sereif, Sidi Ali, Sidi Ahmed, Sidi Mohamed and Sidi Mohamed Abid. When I was at Kufra, the Senussi told us that they did not want anyone to have anything to do with them, nor did they want to have anything to do with anyone else.

No rain ever falls at Kufra, but they grow some dukhn, dura and wheat in gardens in the oasis. There are very few animals there. What bulls, donkeys and camels there are have to graze off the palms, for there is no grass at all. The Senussi who possess

camels send them far away to such places as Anuar, where there is grass.

We stayed at Kufra three months; and, when we were about to depart, the Akhwan gave us a grey horse and six magazine rifles to take as a present to the Sultan. And they gave us thirty four heads of sugar to drink on the journey, and to each man a change of raiment.

There accompanied us back from Kufra 22 Feizan merchants, some of whom are still in El Fasher, so that, as none of us died on the road—though we lost six more camels—we were fifty eight persons who got back to El Fasher. We returned by the same road, but as our camels were heavily loaded, the journey took us longer, ten days to Hajar Kowal and eleven more to Jebel Anuar. There we stayed four days, and then we reached Bir Hamra after eight days, Bir Bidi after seven more, Tamr el Qusar after four more, and Natrun after five more. Then on the ninth day after leaving Natrun, we arrived at Duani in Dar Unti, Jebel el Meidob, where we stayed three days. We then moved south to the house of Melik Gami', who feasted us for four days. Thence back to Melit, who Nazir Adam Tamim killed twelve rams and four bulls for us, and Guma' Gadain twenty rams and four bulls.

So we approached El Fasher, and were met by two horsemen from the Sultan, who directed us to move by night into a large tent, which had been pitched for us in a village just East of El Fasher. Here we were kept well supplied with food and drink for two days. Then on the Friday the Sultan assembled all the omdas and meliks, including three important men from Dar Sila, and at noon we made a triumphal entry into El Fasher and went to the Sultans' Palace. We stayed in El Fasher six days, and the Sultan killed for us many animals, and gave each man fifteen rials and a change of clothes and to me in addition he gave two cows and two bulls. So I returned to Kuttum.

And after two months we heard that the Government's Army was at Nahud. The Sultan wanted someone to go and spy out their dispositions, so that he might attack them by surprise. He summoned me to El Fasher again; and told me that I was to go to spy out the Government's position, and he gave me six rials and promised me twenty cows should his attack be a success. But while I was still waiting for orders to start, came the news that

the Government was at Jebel Hilla; then at Abiad; and finally on a Friday the aeroplane appeared (1) over El Fasher. That settled it. My younger brother who had just come from Omdurman had been warning me what the Government would do to any spy they caught. So I ran away to Melit and made arrangements for the safety of my family. Everyone was moving out of Melit northwards. So I swore an oath with Adam Tamim, and went with three other men to meet the Government forces: and as we got past Kuma we met Kelly Pasha and Macmic Bey (2) to whom we surrendered, advancing with our *'immas* tied to our spears which we held aloft...

What? Will I go with you again to Kufra? No. I am now an old man. I will go with you as far as Tamr El Qusar, but I do not want to attempt another journey to the land of the Senussi.

A. J. A.

(1) The chronicler sees in Lieut. Slessor, M.C. and his B.E. 2 C. the modern counterpart of the owl, which flew across the arena just before the fall of that Herod who was eaten of worms, and other strange birds whose appearance foretold the downfall of despots and tyrants in the days of the classics.

(2) Mr. H. A. MacMichael, D. S. O.



NOTES ON THE HISTORY, RELIGION, AND CUSTOMS OF THE NUBA.

BY J. W. SAGAR.

Sudan Civil Service.

This paper was written more than ten years ago, but so little has appeared since, especially about the Dilling Nuba with whom Mr. Sagar is mainly concerned, that it has seemed to the editors well worth publishing in Sudan Notes and Records. More information about the Nuba, particularly those in the Talodi district, will be found in the article Nuba contributed by Dr. C. G. Seligman to Hastings' Encyclopedia of Religion and Ethics.

[Ed.]

The following account is compiled from notes which I made during my period of service in Southern Kordofan, extending from the beginning of 1906 to the beginning of 1909. It is necessarily very incomplete, and must not be accepted as applying to the whole of the Nuba. In the first place, I was handicapped by my own ignorance of the correct methods of investigation. In the second place, the Nuba have such a variety of languages and have been so isolated one from the other by the nature of the country, by their custom of keeping as far as possible to their own hills, and by the dangers of travelling through a country full of internecine feuds between hill and hill, that each community has tended to develop on its own lines and to produce its own customs. This is so much the case that the Nuba of the extreme south have, in many ways, as much in common with the Shilluk and Dinka, as with the Nuba of Northern Dar Nuba, who undoubtedly owe some of their ideas to the Arabs who have settled around them. I have attempted to discard everything, therefore, which can be traced directly to Arab influence, and, with a few digressions, I shall confine my remarks to the Nuba living between the 13th and 11th parallels of latitude, and especially to the inhabitants of the hills in the vicinity of Dilling. Finally, it should not be forgotten that there are several non-Nuba tribes, such as the Shawabna, Tagalawis, and people of Shatt, occupying hills in the

midst of Dar Nuba. My remarks in no way apply to these interlopers, although some of them have adopted a number of Nuba customs.

1. *History*.—On arrival in Southern Kordofan my curiosity was first aroused by the peculiar distribution of the Nuba communities speaking the same language, and by the fact that there are three distinct Nuba languages in the Dilling district alone. I found that the hills speaking the same language were Kudr, Ghulfan, Watta, Morun, Debri, Kadaro, Sabei, Wali, and the Karko group. A glance at the map will show how these are distributed, but the most noticeable points are that the Morun Nuba live on the same range of hills as the Gulud, Temain, and Katla communities, who speak a language quite unintelligible to them (Morun), and that the Wali and Karko group are divided from Dilling and Sabei by the Nyima and Mandel groups, who have an entirely distinct language of their own. The natural deduction is that some of these communities have not always occupied their present positions. I turned to the Nuba themselves for an explanation, which is as follows :

The communities speaking the same language as Dilling originally lived in the North, spreading over the country from Central Kordofan to Halfa. The Ghulfan Nuba actually have a legend that they once lived in Dongola. As the Arabs conquered the Northern Sudan the Nuba were either killed, enslaved or driven into Kordofan, where they remained until the invasion of the Fung and their kindred tribes (1). Those who escaped from the Fung took refuge either in the Northern Kordofan Hills such as Kaja, Katul, Haraza, and Abu Dereg, or in the Southern Kordofan Jebels. In the latter case some of them occupied uninhabited jebels, while others drove out weaker communities from their old homes and occupied them themselves.

Legend adds that the Nyima and Koalib communities then occupied Dilling, Dering, Kulur, and Shiama (the latter three of which are now uninhabited), as well as the present Nyima and

(1) Prof. Meinhof who also believes in the Northern origin of some of the Nuba places their first migration into Southern Kordofan at a much earlier date than the Arab invasion. (*See Sudan Notes and Records vol. III., p. 288*). [Ed.]

Koalib ranges. They were driven out from the four former jebels, by the fugitives from the north, who at Dilling and Ghulfan established themselves like a wedge between Nyima and Koalib.

This is confirmed by a certain present-day similarity in the language, customs, and appearance of the Nyima and Koalib Nuba. Unfortunately I have not any examples of Koalib words at hand, but I know it as a fact that a Koalib Nuba can understand a certain amount of the Nyima language, though not all of it. This rather points to an original similarity of languages but a present-day difference in dialects, due to an entire lack of communication during the last 300 years.

The Arab conquest of the Northern Sudan and the Fung conquest of Kordofan would thus appear to have closely resembled the Anglo-Saxon conquest of Britain, during which the Britons were killed, enslaved, or driven into the fastnesses of Wales and Cornwall. Confirmation of this general theory may be found in the facts :— (1) That there are still Nuba living in the jebels of Northern Kordofan, *e.g.*, Haraza, Kaja, &c. (2) That the uninhabited jebels in Central Kordofan show undoubted traces of having been occupied, *e.g.*, holes in the rocks hollowed out in the process of making sesame oil, &c. (3) That the Dilling Group Nuba language has many words in common with the Danagla language, *e.g.*, *ika*, fire ; *tey*, cow ; *ogud*, sheep ; *wey*, grain ; *kundo*, I don't know ; while the Danagla say that the Nuba at one time lived at Argo.

During the period when the Fung, and subsequently the Fur, held sway in Kordofan, the Nuba were left very much to themselves. Undoubtedly there were periodical raids, especially to the Tagale hills, but no attempts at permanent occupation seem to have been made by either of those ruling races. There followed a time of plenty for the Nuba. Vast tracts of land surrounding all the jebels were cultivated, so that when eventually the Baggara Arabs, searching for pasture and water for their rapidly increasing herds, arrived in Kordofan from the west some 120 years ago, they naturally turned southwards into this prosperous country and divided it amongst themselves. Meeting with no opposition in the plains, they drove the Nuba up into their hills and occupied all the best watering places. Stories told by present-day Baggara, passed from father to son, tell of a country "yellow with grain," and names given by the inhabitants to hills and khors suggest

that places which are now mere wastes were then inhabited and cultivated. An instance in point is Jebel Simasim, some 10 miles north of Jebel Ghulfan, where the Arabs found vast piles of Simsim stored, showing that then the Nuba of Ghulfan could cultivate unmolested at such a distance from their own homes. Many other interesting names occur, such as Hagg El Kheil (the share of the horses), where the booty was given over to the horsemen of the invaders.

In the division of the country almost the whole of the Nuba country fell to the Hawazma, a few jebels only being taken by the Homr. Sub-division then took place, each sub-tribe taking its own zone of hills and watering-places. Slave raiding began at once, and the Nuba were cooped up in the hills. The usual procedure was that each sub-tribe of Baggara protected, as far as possible, the hills in its own zone, in return for supplies of grain and slaves, and raided, as far as they could, hills belonging to other sub-tribes. Cultivation in the plains consequently ceased, for fear of the sudden onset of the dreaded horsemen. The Nuba's description of these raids is dramatic, and children are still frightened by imitation of galloping horses.

To grow their grain the Nuba set to work and terraced their hills, and so kept themselves from starvation. But crops grown in such barren soil were poor and often failed, so that in bad times they were compelled to sell their own slaves and often their own children to the Arabs for grain. During the occupation of the country by the Egyptian Government much the same state of affairs continued. A few of the smaller jebels were attacked and wiped out of existence, a few such as Dilling, Kadaro, Kudr, and Ghulfan paid tribute for some time in recruits for the army, while the remainder were left to the Baggara, who, in return, paid a heavy tribute, and provided recruits taken by force from the Nuba to the army.

Under the Dervish régime, most of the hills were attacked by the Dervish armies ; some, as Jebel Nyima, beat off the attacks with heavy losses, and some were conquered by force, as Jebel Ghulfan, or by treachery, as Jebel Miri ; the favourite method of Dervish procedure in the latter case was to induce the elders of the hill to enter the Dervish camp to treat for terms and then to kill or

capture them and attack the hill whilst disorganised by their absence. From some hills the whole population was taken off and driven to Omdurman, where they remained till released and sent back to their old homes after the battle of Omdurman; instances of this are Ghulfan, Debri, and parts of Kadaro. Those who succeeded in holding out owed their successes chiefly to the fact that their hills were honeycombed with caves, and to the large number of rifles of which they managed to possess themselves after the Dervish outbreak. Thousands of these, captured by the Arabs from the garrisons in Kordofan and from General Hicks's army were sold to the Nuba for slaves. This process went on during the whole of the Dervish period, and in the interval between the battle of Omdurman and the occupation of Southern Kordofan by the Anglo-Egyptian Government. Many rifles were taken from the Dervishes during their unsuccessful attacks on the larger hills, and many more were taken from deserters from the Khalifa's army during the flight from Gedir to Sherkeila after the battle of Omdurman. Armourers employed by the Egyptian Government and deserters from the Dervishes taught the Nuba to make their own ammunition and to repair their rifles, and then the Baggara began to learn that by selling rifles to the Nuba, they had provided them with weapons which made their slave raids a matter of considerable danger.

Nevertheless, when the Anglo-Egyptian Government occupied Southern Kordofan small raids continued to occur, and the chief work for the first few years was to stop them. This done, attention was turned to the Nuba who had grown arrogant, confident in the possession of their rifles and in the fastnesses of their hills. Apart from the religious aspect, which I shall refer to later on, the chief difficulties met with were, (1) the distrust of the Nuba of all outsiders, bred of their dealings with the Arabs, and the treachery of the Dervishes, (2) the belief of the Nuba that their hills were impregnable to attack.

At first it was almost impossible to induce the headmen either to visit a Government station or even to meet an official escorted by two or three policemen, so imbued were they with the fear of treachery. Years of patience and straight dealing have, however, almost entirely eradicated this feeling of distrust.

The second difficulty mentioned above was an even greater

obstacle to progress. The grace extended to ignorance during the first years of occupation was construed as weakness, and fighting and raiding amongst the Nuba themselves began to increase rapidly. This was assisted by the new made safety of the plains. Finding that the Arabs, held back by Government, no longer molested them, the Nuba began to move about in increasing parties to attack one another, and so gradually arose the necessity for sterner measures, and the Nyima patrol resulted.

For the future there is much hope. The Nuba are hard-working and industrious; they have already learnt to produce for the markets, and are realising rapidly that peace means a plenty of everything.

Meanwhile the Arabs, led by the hand by Government, are learning to trade and to carry the Nuba produce on their bulls to market. The two races are necessary to one another, the producer and the carrier. The Arab, at first discontented at the cessation of almost all that seemed worth living for—slave-raiding and hunting—is finding fresh fields for his energies, and the more he finds to do the easier will he be to control. I can best conclude this sketch of the history of the country in the words of a prominent Nuba Mek, "Government has taught "the leopard and the lamb (*i.e.*, the Arab and the Nuba) to sleep side by side."

2. *Religion*.—As far as I was able to ascertain the Nuba have no knowledge or legends of the origin of their religion. They, however, trace their descent back to Adam and Hawa, who had seven brown children and seven black, of whom six were men and one a woman in each case. The names of the black children were Tinhor, Shuli, Manda Nakala, Tinikaia, Masut, and the woman Shiri. A dispute arose when Adam wished to shave the heads of all his children. Hawa refused to let him shave the black children and hid them from him. Later Tinhor laughed at his father, who made the black children slaves to the brown. They made their escape, however, and flying to other lands founded the black races.

My informant added that owing to the curse of Adam the black races must always remain subservient to the lighter-coloured races.

Whether this curious jumble is derived from the Arabs or is the remains of what they learnt in the north before ever they came into contact with the Arabs, it is difficult to say. The names of

Adam's children, however, seem to point to the latter theory (1). Unable to quote anything further in the way of legend I must turn to their present-day religion.

They believe in one supreme almighty god, called in the Dilling language Bail (almost Baal), who exists in some vague realm above. Apart from the giving and taking of life, Bail does not himself directly guide the lives and affairs of mortals. He intrusts this work to a number of spirits (called Arro). It is here necessary to explain that each community, village or hill has its own separate religious organisation, its own Arro, its own priests, and its own appointed place in the next world. From the spirits of the first inhabitants of each community Bail chose a number of Arro, to act as his agents. The number chosen varies according to the size of the community, includes in every case one or two female spirits, and cannot be increased. Each of these Arro is known by name to the Nuba. They dwell in the next world, but for each a house is built in the village which he represents, where food and drink are always kept for him. They act as a council with one chief, or Sultan, Arro at their head. Their duties are to control the affairs of their community in the next world, and to look after the welfare of mortals in this. They bring prosperity or plagues to reward or punish mortals for their good or evil deeds. When they wish to act in one of these ways they send the Sultan Arro to Bail to

(1) Versions of this legend about the children of Eve are current amongst the Arabs and in European folklore. The Arab tale, related at Omdurman runs as follows:—

We have heard old people relate that once upon a time the Lord God went to see Our Mother Eve and asked her to show Him her children. She consented readily, but as some of her children were beautiful and the others, ugly she went into the house and hid the beautiful ones under the *doka*. Then she brought out the ugly ones for God to look at. The Lord noticed that there were so few of them and asked her if those were all her children. She replied Yes. But God said no, these are not all, you have hidden some of them under the *doka*, and for this reason I will make the children whom you have hidden the slaves of these ugly ones. Then He went on his way, and when Eve brought the children out of their hiding place she found that they had turned black, and they have remained black—or slaves—until this day.

The *doka* is the stone slab used in making *kisra*. In the German version found in Grimm's Fairy tales Eve is ashamed of her ugly children and shows only the beautiful ones. These are blessed by God and become the ancestors of kings and lords and rich men, while the descendants of the ugly children are artisans, peasants, beggars etc. The Sudan version supplies a typically Oriental touch: Eve hides her beautiful children for the same reason which causes the Oriental to hide his wealth from the eyes of others—fear of the evil eye and fear of being robbed by those in power. [Ed.]

obtain his permission, and then set themselves to the carrying out of their designs, if approved by him. Their rewards for good deeds are happiness, good crops, fecundity, success in war and long life. Their punishments consist of misfortune, bad crops through bad rains or plagues of locusts, sterility, plagues on men and cattle, defeat in war, and death.

Each Arro is represented on earth by a priest (called by the Arabs Kujur, plural Kujara) or a priestess (Kujuria) as the case may be; the representative of the Sultan Arro being the chief Kujur or Kujuria. On the death of one of the Kujurs his successor is chosen by the Arro concerned, the position being in no sense hereditary. The person chosen goes into a trance and the Arro takes possession of his body and speaks through him to the people, who are called together by a series of eerie shrieks. The Arro, speaking through the mouth of his unconscious agent, informs the people that he has chosen him as his representative, and exhorts them to obey him. The new Kujur is then received as such, unless it is subsequently shown that he is an impostor and was feigning his trance. As an instance of imposture, a case which happened in Jebel Nyima some years ago is interesting. In this case a man apparently went into a trance and announced that he had been chosen to replace the chief Kujur who was still alive. In spite of the protests of the latter, the people were inclined to believe the impostor, and gave him offerings to induce him to bring good rains. The original Kujur then declared that no rains should fall until the impostor was deposed. As the rainy season drew near great excitement prevailed in the jebel as to the issue of the contest. Unfortunately for the impostor the rains were late, and the people grew more and more anxious and sceptical. At last, terrified by the fear of famine, as still no rain fell, the people went back to their old chief priest and gave him gifts to bring the rain. Immediately afterwards the rain fell, and so the impostor was shown up. The whole of his possessions were then seized by the people and handed over to the original Kujur, whose prestige was never again attacked.

This brings me to the powers and duties of the priests. They are, in the first place, mediators and intercessors between the people and the Arro. They use their powers to induce the Arro to give the people the blessings, or the punishments, which I have enumerated above. If they do not receive the usual offerings of

grain before the rains, they naturally use their influence for evil. In their trances they act as channels of communication between the Arro and the people, so that the Arro may tell how the people may amend their ways or bring success to their undertakings.

How their trances are brought on it is difficult to say, but I think partly by starvation, by drink, and by concentration of will. Such a position naturally carries with it great executive power, to which I shall refer later on when describing the Nuba system of administration. In appearance Kujurs grow to resemble one another in many ways. They almost all have the same far-away detached look, and, as a rule, they seem to take life too seriously to admit of a sense of humour. It is only on the rarest occasions that one meets a contented-looking, jolly Kujur. They wear numbers of iron bracelets round their arms and many rings on their fingers and toes. They carry staves or long-handed axes, with iron rings round the handles. They smoke long-stemmed pipes with innumerable rings round the stems. When meeting one another the Kujurs go through a weird process of clapping one another's hands, shoulders, and knees. When an ordinary Nuba meets a Kujur he leans slightly forward towards him and offers his shoulder or upper arm to be touched by the Kujur's right hand, the latter, at the same time, spitting on his chest to signify a blessing. The Kujur never eats in public, but always alone in the privacy of his house, though when others eat in his presence he touches the food to bless it. Many of them have never eaten away from their own hills, and nothing will induce them to do so, which makes it impossible to get them away from their hills to meet Government officials, or for any other purpose. They also act as medicine men; the usual idea of curing sickness being to spit upon the sick person.

As far as I have been able to ascertain, the Nuba have no forms of prayer; their only communications are addressed to the Arro through the Kujur when in his trances, and their only act of submission and devotion is their respectful greeting of the Kujur. Their sins are all punished during their lives, so that there is no punishment in their world to come.

In most cases they obtain absolution by making restitution in one form or another, but if they do not do so they believe that misfortune will follow them until they are repaid for their misdeeds. Whether repaid or not, however, death is the final expiation of all sins.

Their cardinal sins are murder and theft. In cases of murder the relatives of the murdered man kill the murderer if they can catch him, and in this case all is square and the affair finished. But in most cases the murderer succeeds in making his escape to some neighbouring hill, where he finds sanctuary. He then communicates with his relatives, who begin to collect the seven head of cattle required as blood-money. In some cases this is quickly collected and paid to the relatives of the deceased, the Kujur, and in some cases the Mek, or king, taking his share. In some hills, the relatives will not touch the blood money, but hand it all over to the Kujur. The murderer is then free to return to his home after the lapse of a period of one year from the date of the crime. A poor man often takes years to collect his blood money, and cannot return to his home till it is all paid. Meanwhile the whole of the murderer's property is confiscated as having "blood on it." His house and furniture are burnt, and his grain given to the Mek if there is one, unless he happens to be a relative of the murderer, in which case he must not touch it. If the Mek cannot take it, it is given to any strangers, such as Arabs, or is destroyed.

When the proceedings are finished, the sin is considered as expiated, and the murderer makes a new start in life. Of course it is no sin, but rather a virtue, to murder any inhabitant of a hostile jebel. I shall refer to this later on, when describing the process of feuds. In the same way theft is no sin when practised against enemies, and it is very uncommon indeed as between the inhabitants of the same village. When a man finds that any of his property has been stolen he takes gifts to the Kujur and asks him to recover what has been stolen. The Kujur then summons the people and curses the thief, threatening him with every kind of evil if the stolen property is not restored. In almost every case the thief will then return by stealth what he has stolen to the place from which he has stolen it, or will leave it by night outside the Kujur's or Arro's house. I can quote rather an interesting example of this. Some merchants, when resting at night near a jebel, were robbed of a considerable quantity of merchandise. They awoke in time to see the thieves disappearing in the darkness, and noticed that there were three of them. They then reported the matter to me. Knowing the Nuba procedure in such cases, I sent orders to the head Kujur of the village nearest to the place where the theft had occurred, to recover

the stolen goods. He recovered about one-third and replied that he could not find the remainder. Shortly after I visited the hills taking the merchants concerned with me. The Kujur there reported to me that he had gone through the usual methods of cursing the thieves, and that as a result the portion recovered by him had been left outside his house during the night. As there were two villages in the near neighbourhood I concluded that the two other thieves must probably live in these. I sent for the other two Kujurs concerned and put pressure to bear on them, with the result that each subsequently recovered a further third of the property. In Jebels, however, which have come much in contact with Government, or other outsiders, the Kujurs have lost much of their influence, and this method does not always work. Adultery, except in cases where Kujurs' wives are concerned, is not considered as a sin. To commit adultery with a Kujur's wife, however, is to bring misfortune on the whole village.

When asking my informer if he could explain why adultery was not considered a sin, I was answered that it was man's affair to look after his own wife, and not God's concern. I then asked him what a man would do should he discover that his wife had not been faithful. "If he heard it, he said, 'he would not believe it. All gossip and scandal is evil, and we Nuba will have nothing to do with scandal-mongers. But if a young man should find his wife in the act of committing adultery, he would kill the man.'" "And would not an old man do the same?" I asked. "Ah, no!" he replied; "we older men have lived long enough to learn that there is not a woman in the whole world who is worth the life of a man. They are all wicked at heart. We would send the man about his business and beat the erring wife."

Having given this rough sketch of the rules which regulate the lives of the Nuba in this world (called Twai in the Dilling Nuba language), I must now attempt to give some account of their life, as they expect to find it in the next world (Twala). After death all Nuba pass to Twala, where they appear in the flesh, and in the form of young men or women in the prime of life. Twala is described as somewhere "underneath." As I have said above, each community has its own place and organisation there, and there seems to be no intercourse with other communities. Arrived there they find, or are eventually joined by their families and relations, and all live together.

They live with the wives they had in this world and have sexual intercourse with them, though no more children can be born to them. Ruled by the council of Arro, their life is one of uninterrupted happiness, for all are perfect. Their cattle, horses, sheep, goats, and dogs all join their owners, but they again do not increase. No one ever gets any older, and they exist for ever in a condition of perfect bliss. I asked if a boy, who died unmarried, would be allowed to marry a girl who had died unmarried, and was told by my informer that they thought so. But they appeared vague on this and many other points, and I did not like to press my inquiries too far for fear of appearing to cast ridicule on their beliefs.

During a visit to Jebel Um Heitan, the chief Kujur on one occasion complained to me that he had lost his influence over some of his villages owing to the teachings of a Kujuria or priestess, who had gained prestige by proclaiming that she could raise the dead and that the Nuba were Englishmen in their second existence.

Where she got hold of these ideas I could not discover, as, when I saw her, she denied having said anything of the kind.

3. *Customs and Superstitions.*—Nuba customs arise almost entirely out of their religion, and I am only placing them under a separate heading for the sake of convenience in arrangement.

Baptism.—The naming ceremony or baptism takes place 15 days after the birth of a child. In the early morning the relatives and Kujurs are assembled. The chief Kujur kills a chicken and dips it in a bowl of water. He then sprinkles the child and its relatives with water from the chicken. After this he takes the child into his Arro's house, spits on it by way of blessing it, and gives it its name, which has been chosen by the father. Nuba children are not circumcised, except in a few cases where the custom has been copied from the Arabs.

After a woman has given birth to a child, her husband may not have connection with her for eight weeks if the child is a girl, and for ten weeks if the child is a boy.

Marriage.—On wishing to marry, a Nuba approaches the father of the girl whom he has chosen, and makes inquiries as to the number of cattle required for her, an average price being eight head of cattle. On payment of two head of cattle the bridegroom is permitted to begin conjugal relations with his bride, who, however, continues to live in her mother's house until she bears a child.

The husband then completes half of the payment for his wife, and takes her to his own house. The remaining half is usually paid when the offspring of the marriage grow up out of the marriage payments made for the daughters, or if there are no daughters the sons are responsible for it. If the wife dies childless, half the cattle paid for her are returned to her husband. If on the other hand the husband dies without children, the wife is either taken by one of his brothers, the eldest having first choice, or she is returned to her father, who repays the cattle paid for her to her husband's brothers. If there are children the wife is taken by his brother, who takes her as a wife if he so desires, and who brings up the children, receiving in return the marriage payments made for the daughters, if any. If the wife dies leaving children, the husband keeps the children, and the wife's father keeps the cattle paid for her. The marriage payment is made in all cases to the father of the girl, if he is alive when she is married. If not, it is paid to the eldest surviving brother of the girl's father. If there are no uncles on the father's side alive, the eldest surviving male cousin on the father's side takes it. In some hills, by mutual arrangement between the two villages, the men from one village marry girls from the other village, and *vice versa*.

The Nuba table of affinity is the same as our own except in one particular. A man may not marry the daughter of his father's brother. He may, however, marry the daughter of his father's sister, or any cousin on his mother's side. This is very interesting, as showing that the Nuba considers relationship through the male as stronger than through the female.

Polygamy is permitted, in fact a Nuba may marry as many wives as he can afford to keep.

Divorce.—Divorce rules vary slightly in different hills, and it is advisable, before settling a divorce case, to enquire if there are any local variations of the general custom. The general principles, however, are as follows: When the husband wants a divorce he sends his wife back to her father, or guardian (*i.e.* uncle on her father's side). If the wife is childless he gets his cattle back when she marries again, from the second husband direct. If, on the other hand, there are children of the marriage, the husband has the choice of keeping the children and forfeiting the cattle, or of taking back his cattle and letting the children go with their mother. If, on the other hand, the woman wants a divorce, she runs away to

her father's house, taking her children, if she has any with her. If she absolutely refuses to return to her husband, her father is responsible to return to her husband the cattle paid for her, in which case she keeps the children. In some hills divorce is not possible for a woman, but I rather think that this may be copied from the Arabs.

Death and Mourning.—After death a Nuba is buried as soon as possible, but always by daylight. The people of the village collect, and incessant wailing goes on from the time of death until the completion of the burial. Then all the relations assemble in a house and remain there for three or four days, oblivious of what is going on around them. During this period they feast on mutton and merissa. The spirit of the deceased returns and takes possession of one of his (or her) female relations, addresses the company through her mouth, exhorting them to lead good lives and to be warned by his death. In some hills, as Dilling, corpses are buried in a recumbent position on the right side; in others, as Nyima, in a standing position.

Laws of Inheritance.—No woman may inherit property. When the deceased leaves sons, the eldest takes half the property, and the remainder is divided in equal shares between his younger brothers. When there is only one son he takes all the estate if he is married, if unmarried he gives one-fifth to the Kujur. When there are no sons, the eldest brother of the deceased takes the property, giving one-fifth to the Kujur. Failing the existence of brothers, the eldest son of the eldest brother becomes the heir, subject to the Kujur's rights, and so on, the heir being a male and connected through males.

As I have stated above, however, the brother has no rights over his sisters, and cannot touch marriage payments made for them. These go to the eldest uncle on the father's side, and, failing the existence of uncles, to the eldest surviving son of the eldest uncle. The brother is eventually repaid by receiving the cattle paid for his nieces or cousins.

I can quote an interesting case with which I had to deal. A young Nuba left his hill and became a Mohammedan. After a time, hearing that his sisters were married, he sent me a petition claiming the cattle paid for them. On inquiry I discovered that two of the sisters had married in Dervish times before petitioner left the hill, the third and last only having married after his departure. The

whole of the marriage payments had been taken by the only surviving uncle on his father's side. I decided that he had no claim on the cattle paid for his first two sisters, as these had been paid while he was still a Nuba, and subject to Nuba customs. I then asked the Nuba what the result would be if I allowed him to break the custom as regards the last sister. They replied that he could do so if he wished, but that he would then forfeit the right to the cattle which would be eventually paid for his uncle's daughters, the uncle having no surviving brothers, and he (the petitioner) being his natural heir. Petitioner therefore decided to withdraw his claim to his sister's marriage payment and wait for the payments for his cousins.

Vendetta Feuds.—Most jebels have long-standing feuds with the majority of their neighbours, and many villages with other villages in the same jebel. These feuds generally arise over women or theft of cattle, and are always conducted on the same lines. For example, a Nuba marries a woman from another hill, his wife runs away, and her father either refuses, or is unable, to return the marriage payment. The aggrieved husband collects a few friends, and, in order to recoup himself, attempts to steal cattle from anyone in the hill where his runaway wife lives. Perchance he or one of his party is killed while attempting to carry off the cattle. His relations must then avenge him. A small party of them creep through the bush and lie up near the enemy's hill till some unsuspecting person, man, woman, or child, passes by. This unfortunate is then shot down, or more often, in order to avoid arousing his friends by the sound of a rifle, is seized, gagged, and his or her throat is cut. Two women are regarded as equal to one man, so if women happen to be the victims two must be killed before one man is avenged. Then it is the other hill's turn to take vengeance, and the quarrel goes on, in some cases for generations. The feud is complicated and aggravated by the fact that avenging parties are not content with shedding blood for blood, but while making their raids kill all of their enemies on whom they may happen to chance. Open fights on a large scale very seldom occur.

When both parties desire to make peace, which is not often when they are left to themselves, representatives meet and blood money is paid for all murders which have not been avenged during the course of the feud—at the rate of seven head of cattle for a

man and four for a woman. Captives taken during the feud are kept till their relatives ransom them, the amount of ransom accepted being in accordance with the wealth and fighting reputation of the captive.

Finally when all obstacles to peace have been removed, the Kujurs of both hills meet, and after swearing on one another's bracelets ⁽¹⁾ to keep the peace, slaughter a pig as ratification.

Tse-tse or Um Bogani Fly.—The Um Bogani fly is said to have been wilfully introduced into the Koalib hills in order to keep off the Arabs. In Dar Nuba there is no Um Bogani fly except in Koalib, where it is restricted to the vicinity of the villages, so that it is quite safe to camp about half a mile away from a village and have water carried out. In 1906, when a patrol was in Koalib, there was no fly on a *saraf* or watering place about a mile west of J. Nying Nying, and none on another good *saraf* about two miles west of Jebel Ambri. At both of these *sarafs* there was sufficient water for at least 100 camels.

The Koalib Nuba have a method of introducing the fly wherever they wish. They half fill a *bukhsa* or gourd, with blood, and leave it in a place where there is a lot of fly. The fly swarm in to get the blood, and the Nuba creeps up and blocks up the exit. The *bukhsa* is then carried at night in amongst the animals of the attacking force, opened, and left.

Festivals.—There are three main festivals in the Nuba year: at the sowing of the crops, at the ripening of the crops, and for the fertility of animals. When the rains begin to fall, each Nuba takes a measure of the last year's grain to the Kujur, and on a given day all assemble. The Kujur chooses a small patch of ground and surrounds it with a fence. He then sows a few handfuls of last year's grain, and sprinkles over it the blood of a lamb, the blood of a cock, and some merissa made from last year's grain. After this all feast for several days, and then wait till the shoots of the seed thus planted show about a hand's breadth above the ground.

If the seed grows well and plentifully it is taken as an augury that the crops will be good, and all sow as much seed as possible. If, on the other hand, the Kujur's seed grows badly, it is taken for granted that the crops will be poor, and a minimum of grain is sown, as much as possible being kept as a reserve for the next year.

(1) Swearing on the Kujur's bracelets is equivalent to our Bible oath.

At the beginning of the crops each Nuba takes four heads of his new grown dura to the Kujur, who, after consultation with his Arro, announces that the crops are ripe, and may be harvested. Then, again, feasting goes on for several days.

Before the cattle-breeding season commences, all the children turn out to collect ants' eggs. They are taken by the Kujurs, who throw them over all the cattle of the village as they are driven past them. Then once more the usual feasting takes place, and the Nuba are happy in the belief that their cows will all calve during the year. They, however, consider it very unlucky for a cow to give birth to two calves at a time. Whenever this happens the cow and her calves are turned out of the herd and disposed of by gift, sale, or exchange at the earliest opportunity.

Method of Cultivation and Ownership of Lands.—Each jebel has its own lands divided from those of other jebels by natural boundaries such as khors, rocks, or trees. This holds good even when jebels are twenty miles or more apart, probably indicating that the Nuba at one time foresaw the possibility of their cultivating all their available lands. Each head of a family has his own piece of land, which is regarded as his own property, and passes to his heirs on his death. When the family becomes so numerous that the land cannot support them, they have only to clear the bush from further tracts of the jebel land in order to establish their right to it.

At the times of sowing and harvesting the inhabitants of villages help one another, doing a day on each man's land in turn, the owner of the land providing merissa and meat for the party. All the inhabitants turn out to work on the Kujur's land when required.

The crops usually consist of dura, simsim, ful-sudani, and occasionally cotton, whilst tobacco for local consumption is grown in patches of soil among the rocks on the hills.

Sports.—The chief sports indulged in by the Nuba are shooting, hunting, fishing, beagling, wrestling and dancing.

With their old Remington rifles they shoot all sorts of game and birds, such as guinea fowl, which they eat in great numbers during their festivals. They hunt with spears, knives and clubs, as a rule in large parties in the shape of a crescent. Driving large tracts of country, they kill leopards, gazelle, oribi, dik-dik, hares, and occasionally, bigger game.

In northern Dar Nuba little or no fishing is done, but in the

central and southern jebels enormous numbers of fish (Abu Shanab) are caught or speared in the khors and lakes. The usual method of procedure is as follows:—In a lake three or four hundred Nuba spread themselves out in two lines, one a few yards in front of the other, those in the front lines armed with fishing spears, those in the rear line with nets. They go into the water in the early morning and move slowly in a given direction, spearing and netting as they go along. When they at last emerge in the evening each man on an average will have twenty or thirty fish. This, of course, can only be done towards the end of the dry season when the lakes are shallow. In the khors they build weirs of stone at frequent intervals. As the khors subside after the floods the fish are confined between the weirs, and are speared or simply picked out. All fish caught are dried in the sun and stored or sold.

Hares abound in the country, and the young Nuba train their dogs to hunt them, which they learn to do more by sight than by scent. The kill is by no means always left to the hounds—the main idea being to kill for the pot. The Nuba knocks the hare over with a stick whenever he can cut her off. I have met parties returning having bagged five or six hares in an afternoon in this manner.

Wrestling, as an organised sport, is confined to the southern jebels, where all the strongest young men are regularly trained, and develop magnificent physique. Villages challenge other villages, each putting into the field some ten or twenty wrestlers, while the remainder of the population turn out to watch the result. The style is catch-as-catch-can, and the contests are usually fought out with scrupulous fairness and in a very sporting spirit. The various forms of dances are too numerous to describe. The Nuba are very fond of dancing and frequently keep their dances going all night. The songs, with which they accompany their dances, are full of cadences and are much more musical than those of the Arabs.

Clothes.—In hills which have not come much in contact with civilising influences, the Nuba men and unmarried girls wear no clothes at all, except, in some cases, a few beads round the neck and waist. In the north a narrow strip of cloth is worn by the married women, and in the south a bunch of leaves or grass in front and behind. In many hills, however, the Nuba are beginning to adopt Arab styles of dress.

Food.—In addition to the various food stuffs, made from dura and ful-sudani, the Nuba eat the flesh of bulls, sheep, goats, pigs, camels (when available), dogs, monkeys, and all sorts of game and wild beasts; also fowls, guinea fowls, rock pheasants, and almost any birds.

They eat the liver and kidneys raw and while still warm. They do not object to eating the meat of dead animals, and will always carry away any they may find. Locusts and honey, and a species of hard-backed fly, which is found chiefly in cracks in the rocks and is eaten alive, are considered as luxuries.

They drink merissa almost entirely (men, women and children), only occasionally milk or water.

Blood Brotherhood.—This is practised amongst the Nuba, generally between Nuba of different jebels; the usual procedure, as amongst other tribes, being the mixing of blood obtained from cuts in the arms.

Signal Fires.—The Nuba signal to one another from hill to hill on the approach of a common enemy. A fire is lighted high up on the hill-side, and bundles of burning grass are waved till the signal is acknowledged from the next hill.

Marriage Customs in Jebel Nyima.—Until comparatively recently no woman in Jebel Nyima would marry a man until he had killed someone—but whether the killing was done in fair fight or in the form of murder did not matter. The unfortunate victims were, as a rule, waylaid either on the roads or in the vicinity of other jebels. In many cases, however, they were guests, for although the laws of hospitality forbade a host to kill his own guest, nothing prevented him from giving the hint to some friend that his guest was departing at a certain time and could easily be killed as he was leaving the village.

Hospitality.—The hospitality of the Nuba is quite remarkable. In addition to furnishing a guest with food and shelter for as long a period as he cares to stay, they are always ready to offer a sanctuary to any criminal from another hill, and consider it a disgrace to hand him over either to his enemies or even to impartial justice, for even if a criminal is tracked down, a matter of no inconsiderable difficulty in so vast a country, his hosts, while denying any knowledge of his whereabouts, will quietly assist him to escape elsewhere, or, in some cases, will be prepared to take up arms in his defence.

Should a guest be killed or robbed, his hosts will start a feud to avenge him, just as though he had been one of their own number.

Executive Administration.—The executive administration of the Nuba is in the hands of the Meks, or kings, supported by councils consisting of the old men, among whom all Kujurs find places *ex-officio*. In the hills where there are no Meks the Kujur adds the functions of king to those of priest.

The king with his council is in the first place responsible for the administration of outside affairs, such as relationship with Government and with other jebels; in the second place, he decides internal disputes which do not come under the laws of religion. In many cases, however, the Mek is completely under the thumb of the Kujur, who occupies a position comparable to that of the High Priest of the Old Testament. Such jebels are always the most difficult to administer, as, though the Mek continues to be the recognised go-between, his promises are always liable to be broken by his people on the advice of the Kujur, who himself takes great care to remain in the background. Almost equal difficulties present themselves in dealing with jebels where there are no Meks and which are directly administered by Kujurs, who see that as outside influence increases among their people so will their own decline. As has always been the case in priest-ridden countries, this will affect them in pocket as well as in prestige. They receive as their due a share in the ransom paid for all captives taken in war a share in all loot, as well as the offerings made to the Arro, and the first-fruits on all crops. These latter must be paid before the newly threshed grain is removed from the threshing floor, so that should a Government official demand the tribute in grain before the Kujur has received his dues, he finds considerable difficulty in getting it.

The Mek, on his part, receives a contribution for his support which corresponds somewhat to the Arab *futr*, and also, in times of war a share in all spoil such as slaves and cattle.

Bearing in mind, then, the history and religion of the Nuba, the power of their priests, their customs and their system of administration, it is not difficult to understand their point of view when they say, as they have said: "We will willingly pay you "a tribute to insure ourselves against Arab raids, but we are not "willing that you should interfere in our internal administration "or in our quarrels with our enemies." The priests are responsible for the policy. To avoid incessant trouble, therefore this power, in the first place at any rate, should be tempered and used, but not completely broken.

THE FOUNDATION OF KHARTOUM.

BY F. A. EDWARDS, F.R.G.S.

Khartoum, the capital of the Anglo-Egyptian Sudan, has as yet existed for something less than a hundred years ; yet, although it has played a prominent part in the history of inner Africa, having been visited by hundreds of travellers and long formed, as it were, the jumping off place into the unknown, little seems to be definitely known as to its origin ; and different writers not only give various dates for its foundation, but attribute the selection of its site for the chief town of the conquered territory to different individuals.

The Encyclopædia Britannica, 11th edition, 1911, Vol. XV, p. 773, informs us : "In 1822 the Egyptians established a permanent camp here, and out of this grew the city which in 1830 was chosen as the capital of the Sudanese possessions of Egypt". The late A. H. Keane wrote (Stanford's Compendium of Geography and Travel, Africa, Vol. I, 1895, p. 416) : "The conquest of Nubia and the foundation of Khartum at the confluence of both Niles (1820—22) prepared the way for the successive annexation of Kordofan and Dar Fur". This would make the foundation of Khartoum precede the conquest of Kordofan, which took place in 1821, the decisive battle being fought in August of that year.

Captain J. A. Grant, one of the pioneers of African exploration, who in the famous Nile expedition with Captain Speke, reached Khartoum in 1863, wrote (A Walk across Africa, 1864, p. 401) : "The origin of Khartoom forty-four years ago was a military post on the Egyptian frontier. Previous to annexation it belonged to Abyssinia". Three mistakes in two short sentences ! Khartoum was not in existence forty-four years before Grants' time ; it was not on the Egyptian "frontier" ; and it did not previously belong to Abyssinia. Probably Grant's explanation of the origin of the name of the town is equally far-fetched. "The derivation of Khartoom is most probably from the safflower (*Carthamus tinctorius*, L.), called here 'Gartocm', cultivated all over Egypt for its oil, used in burning".

Demetrius C. Boulger, (The Life of Gordon, 1896, I, 141) writes : "Ibrahim, son of Mehemet Ali, selected Khartoum as the capital

of the new province, in preference to Shendy, which had formerly been regarded as the principal place in the country". (Ibrahim Pasha, who arrived in Sennar in October 1821, took a subsidiary part in the conquest of the country, and returned to Egypt within about three months.) Sydney Low (Egypt in Transition, 1914, p. 18) writes: Khartum was founded by Mehemet Ali in 1834"—obviously a wrong date.

Sir E. A. Wallis Budge, who has given us several valuable books on Egypt and the Sudan but is not always careful to verify his dates, gives somewhat discrepant accounts in some of his books. In "Cook's Handbook for Egypt and the Sûdân", second edition, 1906, p. 739, he writes: "In 1822, the modern town of Khartoum was founded". On page 785 of the same book he tells us a little more fully, but more vaguely as to date: "Khartûm was founded by the sons (*sic*) of Muhammad Ali between 1820 and 1823, by their father's orders, for he quickly realised the importance of the site on which it stands as a commercial centre for the trade of the Gezira (the grain-producing land between the Blue and White Niles) and of the remote regions of the Blue and White Niles". In his larger work, "The Egyptian Sudan: its History and Monuments", 1907, II, 213, which inaccurate though it often is, is the best and most comprehensive work on the Anglo-Egyptian Sudan, he says: "In 1825 Osman Bey was appointed Governor of the Sudan, and he made the recently founded city of Khartum his headquarters".

Bayard Taylor, a well-known American writer, who visited Khartoum in 1852, writes (A Journey to Central Africa, 1856, p. 275):—"Its foundation, I believe, was due to Ismail Pasha (son of Mohammed Ali), who, during the conquest of the kingdom of Shendy 1821—2, recognised the importance, in a military and commercial sense of establishing a post at the confluence of the two Niles. Mohammed Bey Defterdar, who succeeded him, seconded his plans, and ere long it was determined to make Khartoum, on account of its central position, the capital of the Egyptian pashalik of Sudan".

Charles Didier, a Frenchman who visited Khartoum in 1854, says it was founded in 1823 (Nouvelles Annales des Voyages, 1858, II, 58). Dr. Wilhelm Junker, the well-known Russian traveller—a thorough explorer and careful writer—informs us ("Travels in Africa during the years 1875—1878", London 1890, p. 173):—"A small fishing village stood at the confluence of the two Niles in a favourable

strategical and commercial position. In 1823 a permanent camp was formed a little higher up, the ordinary tents being replaced by the native *tûqûl*, round huts terminating in conical straw roofs. But these huts being rapidly destroyed by fire, they were succeeded by the more substantial *murabb'at* or *tânagat*, houses of sun-dried bricks with flat roofs, and some better structures for officers. Then a mosque sprang up, rapidly followed by a bazaar and other buildings, the rising town receiving the name of Khartum from the tongue of land between the two rivers, which from its form was known as the Ras el Khartûm, 'Point of the elephant's trunk'. Fully alive to its advantageous position, Mehemet Ali soon made Khartoum the seat of Government for the 'province of Sennar', and in a short time it became the chief emporium for the whole of north-east Africa. It was also the natural starting-point for the succession of epoch-making exploring expeditions, and will thus always hold a prominent place in the history of African geographical research". Arthur Silva White, (*The Expansion of Egypt*, 1899, p. 50) tersely states:—"Khartum was founded, and the surrounding country subjugated, in 1823".

Many of the travellers who have explored Central Africa during the last century have made incidental reference to the foundation of the town, and it may be interesting to put together and compare their different accounts. The expedition for the conquest of Nubia and Sennar was despatched by Mohammed Ali Pasha in 1820 under his son Ismail Pasha, who, after reducing Nubia and Shendy with comparatively little opposition, reached the junction of the Blue and White rivers in May 1821. This expedition was accompanied by a Frenchman, Frédéric Caillaud, and an American in Egyptian service, G. B. English, both of whom wrote full accounts of it. Caillaud tells us (*Voyage à Meroë*, 1826, II, 197) that the army camped at Omdurmân, on the west bank of the White river, and from there crossed the White river into the territory immediately ruled by the Mek (King) of Sennar (May 28—30). The point of land which formed the extremity of the peninsula between the two rivers and on which the army camped was called Ras el Gartoom or el Khartoum (*Ibid.*, p. 201). The country was flat and uncultivated, especially on the banks of the White river. After the submission of Sennar and an expedition as far as Fazokl, Ismail returned to Shendy, where, in retaliation for his high-handed treatment of the

inhabitants, he and his people were massacred by Mek Nimr in October 1822. (This event has been wrongly dated in 1821 by nearly all writers on the subject.)

There was in 1821 no "town" of Khartoum. A Frenchman, Brun Rollet, who lived many years in the Sudan, however tells us (*Le Nil Blanc et le Soudan*, 1855, p. 103):— Carthum was already a considerable town in former times; the Chelouk entered it one night 83 years ago, massacred the inhabitants and reduced it to nothing. When the Turks came there 34 years ago they found only three huts and a large cemetery. To-day it possesses a population of 40 or 50 thousand".

Adolphe Linant, a Belgian who travelled under the auspices of the African Association and who subsequently became Linant Bey, was at "Hartoum" in December 1826, and again in the following year, and says that there was then a Sangiak (Turkish governor) there (*Journal of the Royal Geographical Society*, II, 1832, 173). Lord Prudhoe, afterwards 4th Duke of Northumberland, who visited Khartoum in the early part of 1829, wrote (10 March 1829):—"Kartoom has only sprung up into a town within four or five years, in consequence of being fixed upon as the residence of the Sandjar or governor, who is lodged in a tolerable house of mud". (*Journal of the Royal Geographical Society*, V, 1835, 38). There were about 30 other mud houses in the town; the rest being built of dourah or millet stalks. Prince Pückler-Muskau, who visited Khartoum in 1837, says it was only within the last ten years that this capital of Soudan was raised in the desert, by command of Mehemet Ali (Puckler-Muskau, "Egypt under Mehemet Ali," 1845, II, 293).

It is to Khurshid Pasha, who was Governor-General of the Egyptian Sudan from 1826 to 1838, however, that several writers and travellers give the credit for making Khartoum the capital. A well-known French *savant*, Edm. François Jomard, states (*Etudes Géographiques et Historiques sur l'Arabie*, Paris, 1839, p. 255) that El-Khartoum was formerly a hamlet of five tents or of ten houses built of brick. The Governor of the negro provinces, Khourchyd Pacha, finding the place healthy and temperate, had a palace built there, and a mosque and gardens, and induced the people to build houses. When the Viceroy visited it in 1838, el-Khartoum contained a *caserne*, a hospital, and 400 or 500 houses.

Ferdinand Werne, who spent many years in the Sudan, says that in

1822 a military camp of a permanent character was installed at Khartoum. In 1830 the governor, Churchid Pacha, fixed his residence there, and from that time Khartoum became the official capital of the Sudan. (Werner, *Expedition zur Entdeckung der Quellen des Weissen Nils*, pp. 44—5; quoted in Henri Dehérain's "*Le Soudan Egyptien sous Méhémet Ali*", 1898, p. 117). In the English translation of Werne's book ("*Expedition to discover the Sources of the White Nile*", 1849, I; 55) we read:— "Khurdshid Basha is, properly speaking, the founder of Khartûm, for he fixed his residence here, erected more public buildings, and soon established a dock on the White and another on the Blue stream".

Lieutenant-Colonel E. Kovalevsky, a Russian, wrote in 1848 that after the re-conquest by the Defterdar, a general administration of the eastern Soudan was created, with the town of Sennâr as the chief place. Later, Ouad Medina was substituted. At last Khoroud Pacha, having been appointed Governor-General, founded the town of Khartoum, which he definitely made the centre of his administration (*Nouvelles Annales des Voyages*, 1850, III, 131). P. Trémaux, a French architect who accompanied Kovalevsky, says that at the time of the conquest Sennâr was the residence of the Governor-General of the Egyptian Soudan. The insalubrity of the climate made him prefer Ouâd Medina. Later, about 1830, Khoroud Pacha, who had just been appointed Governor-General, determined to instal his troops and his government at the confluence of the two Niles, and thus founded Khartoum (P. Trémaux, *Voyage en Ethiopie*, 1862, II, 21 and 210).

James Hamilton, who visited Khartoum in 1854, writes ("*Sinai, the Hedjaz, and Soudan*" 1857 p. 320):— "Twenty years ago Chartum was a mere assemblage of leathern huts. Its position on a tongue of land at the confluence of the Blue and White rivers pointed it out as a seat of government. Halfayah, a few hours farther down on the right bank, was abandoned, and the Governor-General fixed his residence here".

Guillaume Lejean, a Frenchman who visited Khartoum in 1860, writes:—"In 1830 there was a fisherman's hut there" ("*Voyage aux Deux Nils*," 1865, p. 31). Farther on (p. 115) he informs us that the headquarters of the Soudan were for some years at Oued-Medeni, a point well chosen to command at once Sennâr, Kordofan and Guedaref. But Mehemet Ali's eagle eye was on the "elephant's trunk," and about 1835 Ouéd-Medeni, shorn of its grandeur by the withdrawal of the

civil and military functionaries, saw its population decrease and Khartoum inherit its spoils. Henry Russel ("The Ruin of the Soudan" 1892, p. 4) tells us that Kurshid Pasha "was the first governor who induced the people of Khartoum to abandon their huts of skins and reeds, and to build their houses with bricks".

Dr. Abbate Pasha wrote (in the *Bulletin de la Société Khédiviale de Géographie*, Cairo, 5 série, No. 3, November 1898, p. 171), that in 1822 a permanent military camp was installed at Khartoum. In 1830 the Governor, Kurchid Pasha, fixed his residence there, and from that time Khartoum became the official capital of the Soudan. Later however, Dr. Abbate wrote in the same periodical (6 série, No. 11, 1906, p. 560), with less accuracy, that Khartoum was the capital of the peninsula of Sennar and the centre of Egyptian power in this region from its foundation by Mohamed Aly in 1822.

Finally, Charles Pierre, in "*La Géographie*," the organ of the Geographical Society of Paris, (XXVI, 1912, pp. 115—116) says:—"En 1830 le Khédive fonda Khartoum, qui devint la capitale du Soudan égyptien".

From all this it appears that a permanent military camp was established on the spot when Ismail Pasha first entered the peninsula of Sennar in 1821 either by him or his immediate successor, and that in or about 1830 it was adopted by the Governor, Khurshid Pasha, as the official capital. It is possible that some more definite information may have been preserved by less accessible authorities than that given in the above quotations, but there is little probability of any authentic records being kept in the archives of Egypt, for the Turks are by no means systematic in this respect, and all official documents at Khartoum perished on the capture of that town by the Mahdists in 1885. In any case, it should not be without interest to clear up the beginnings of the capital of the Anglo-Egyptian Sudan.



PROVINCE NOTES.

BAHR EL GHAZAL.

THE HOLY LAKE OF THE DINKA.

(Compiled from reports rendered by Capt. V. H. FERGUSSON O. B. E.).

In March 1921 a pool appeared near Khor Lait in the country of the Iyat Agar Dinka (E. Long, 30°, N. Lat. 6°30') in the Eastern District of Bahr El Ghazal Province. The incident was invested with religious significance and caused great excitement which rapidly spread to the other Dinka tribes and appeared to affect the Mandari and Nuer as well. Pilgrims flocked to the spot, sacrifices were offered and there was much talk of signs and wonders and a general feeling that the miracle boded good to the Dinka and ill to the 'Foreigners.' Subsequent investigation brought to light the following story of Dinka mythology.

About the year 1700 a woman called Quay, the wife of Cheng, an Iyat Agar of the Akorbil clan, visited a pool at Korather close to Shambe which is believed to have been the home of Desheik, the ancestor of the Dinka. Here Quay mysteriously became pregnant without any human agency, and after a few days' pregnancy gave birth to a boy called Kejok who grew up to man's estate in a few months, and performed miracles. He had a brother called Menyang whose son, Lual, happened to lose the sight of one eye, whereupon Kejok replaced it by the eye of a hartebeeste which he had extracted and thus restored his sight. Shortly afterwards a cow called Iyar, the property of Menyang, died and the carcase was cut up and divided amongst the people, but Kejok reassembled the skin and flesh and brought the cow to life again. It is also said that Kejok had the power of producing water from the ground by tapping it with his hand whence he was called Tom Pieu (*tom* = to tap, *pieu* = water).

It appears that Menyang was filled with jealousy at the powers possessed by his younger brother and accused him of having witchcraft,

and owing to the quarrel which ensued Kejok left his people declaring that he would return to God his father, but that he would again appear at some future time.

Kejok was never seen again, but his memory is held sacred amongst the tribe. Quay and Menyang migrated to Marah Fayok which is close to the Bahr El Na'am and there Quay died. After her death the place was deserted and has never been inhabited since.

When the pool appeared at Khor Lait it was believed to be inhabited by Kejok, and the messianic expectation arose that he was about to manifest himself again to his people and to bring them untold wealth and happiness. The Dinka were thrown into a state of vague unrest and this state of mind was exploited by two chiefs, Dio Alam and Attar a Wal, the former of the Afak Atwot and the latter of the Iyat Agar tribe. Though not *kujurs* (Dinka *tūt*) they succeeded in bringing themselves into prominence and took it upon themselves to act as interpreters of the divine will in order to further their scheme of organising a revolt against the Government. Attar a Wal announced that God had appeared to him at Khor Lait and that he had communed with him for several days at the bottom of the pool instructing him to act as his representative with the people. It was God's will that the Foreigners should leave the country and that the Dinka should no longer serve the Government. Dio Alam, who was nursing a private grudge against the powers that be, attached himself to Attar a Wal and preached the gospel of the latter's divine mission. He taught at first that the Foreigners would depart without fighting and that, when they had gone, the aged would regain their youth while many of the dead would rise to life again. At the same time the two chiefs proceeded to make preparations for an armed rising, and endeavoured to settle inter-tribal feuds in order to present a united front to the forces of the Government. They gave out that rifles fired in the vicinity of the sacred pool would not go off, that the Government would be powerless to arrest anyone in that neighbourhood, and that those arrested anywhere else would not come to any harm.

When the District Commissioner, Capt. V. H. Fergusson O.B.E., became aware of the threatened rising he decided to counteract the danger by endeavouring to convince the people of the falseness of Dio Alam and Attar a Wal's teaching. He visited Khor Lait in October 1921 with the object of proving that the God of the Pool, far from

the friendly attitude they now adopted it was clear that the change in manner was not sincere.

'I then went to the Atwot side of the pool and by means of some tobacco and a gallabia induced Chief Dio Alam and his religious assistant to come with me to the pool and show me how to offer my sacrifice. At three p.m. I entered the pool accompanied by Dio Alam and about twenty others. I noticed that instead of making for the open water, as I had done in the morning, they went amongst the reeds at the side, and after a short preliminary the man holding my sheep ducked under the water with the animal and forced it under the reeds so that it could not come up again. My sacrifice therefore was accepted and our return to dry land was the signal for much dancing and singing, and it was apparent that the unexpected had happened. That night for the first time the pool was deserted save for myself and my following, and on the following day I left for Acot Rest House and Nyjong.'

At Nyjong Dio Alam collected some of the chiefs and about 300 men, and a big dance was held on the occasion of the District Commissioner offering another sheep to Nyalich. Much comment was caused by the fact, that though the day had been cloudless and no rain had fallen for about a month, there was a heavy downpour lasting about half an hour while the dance was taking place. The rain fell only within a radius of about 200 yards of Captain Fergusson's house. On the following day the Afak held religious dances attended by about 700 people. Dio Alam announced that the next morning he would kill a sheep whereupon rain would fall on his people. Though he did not kill the sheep there was heavy rain in the place occupied by Dio Alam's people and nowhere else.

It appeared presently that preparations for a rising continued, but the prompt arrest of Dio Alam and Attar a Wal and other ringleaders and the arrival of troops averted all danger, and at the end of October Captain Fergusson was able to report that the holy lake was deserted and that all idea of resisting the Government had disappeared.

There seems to be no definite precedent amongst the Dinka for the association of a pool with a manifestation of Nyalich or Kejok. About the year 1880 a similar pool appeared in the Zande country near Meridi, and was visited by many Dinka who did not however derive any benefit from it. It is said that they were not well received by the Zande and many died of starvation.

DARFUR.

Omens at Jebel Mun.

Jebel Mûn lies in the region of Long. $22^{\circ}45'$ Lat. $14^{\circ}10'$ and gives its name, Dar Jebel, to the northernmost of the three areas subject to the Sultan of the Masalit. It consists of a large number of massifs and peaks, of which some ten are named, the highest being probably rather more than 4000 feet above sea level. Among the heights are extensive patches of cultivable *gos*-land, supporting numerous small villages; and in two of the Khors which drain the system there are wells, one of which has still an excellent water-supply, though the other has less water than in former years and shows signs of drying up altogether. The area of J. Mûn is perhaps twenty-five square miles.

Some eight generations ago, the original population of the jebel was overlaid by, and has since become much mixed with, Messiria Arabs from Darfur, but its language still survives and is spoken by all the present inhabitants, of whom there are still some who cannot speak Arabic. Three sections of the aborigines, the Lingāri, Nyingāri and Ginwāri, survive as fairly distinct entities. They stick to their mountain villages, while the tendency of the rest of the population is to spread over the surrounding plain. The language of the jebel is a variant of the Erenga language.

The annual taking of omens here described dates, of course, from the pre-Arab period. It survives only in the Lingāri, though the other two sections practised it in fairly recent times (1). It is called in the vernacular *Gâlid Lîi*, the Watering of Gâlid, which is the proper name of a particular rock near J. Selka, one of the most northerly peaks of J. Mûn. This boulder is described as having various potholes in it.

The ceremony is performed by the senior member, who may be of either sex, of a particular family, in which the office is hereditary. At the present time, a woman called Mariôma Isagha, styled *Sitt el Jebel*, officiates: she succeeded her brother at his death.

Immediately after the first fall of rain, Mariôma sprinkles the rock Galid with merisa and with a mixture of flour and water, also slaughtering a ram or a goat. No one may be present except her relations and she may speak to no one on her way to the rock. She

(1) After the paper had gone to press a note was received from Mr. Davies to the effect that the rites here described ceased about ten years ago, as the people of the Mountain were afraid of being accused of idolatry by the Masalit.

recites no formula and may perform the ceremony at any hour. The meat of the sacrifice and the remainder of the merisa are afterwards distributed as *karāma* to all and sundry. It is said that in ancestral times a bull used to appear of its own accord to be slaughtered, no one knowing whence it came ; but this miracle has long been withheld.

Next morning at dawn Mariōma goes again to the rock and there finds a snake, which has deposited in the hollows of the rock omens of the fortune of the jebel population for the coming year. The tradition is that the omens are brought by the snake from Jebel Nyeiri, in Dar Tama. This jebel was, until recently, the residence of the Sultans of Tama, who are said never to have left it after accession to the Sultanate. It is described as a male jebel and J. Mûn as a female.

The following are the omens which may be found, with their interpretations. A head or heads of grain means plenty ; a few grains of dura, famine ; red soil, death ; a frayed rag, nakedness ; much water, plentiful rains ; little water, drought.

The snake has no special name. It is described as of a reddish-yellow colour, about four feet long and thick as a man's arm. It crawls all over Mariōma and returns with her to a specially swept and sanded house, where it remains for seven days, living on merisa which is placed for it in a *burma*. Mariōma denies that her family is descended from, or otherwise related to, the snake, but states that it will not injure them.

Firsha Ali Abukr, the head man of Dar Jebel, claims to have seen the snake twice. Once, thirteen years ago, he and a party saw it a few miles to the west of J. Mûn, coming to the mountain with three heads of dukhn in its mouth. It was startled and dropped one, which the Firsha picked up. Three times the snake reappeared looking for the lost *gandûl*, before proceeding to the jebel without it. Firsha Ali then took the dukhn to the *Sîd el Jebel*, Mariōma's brother, who told him to sow it. This he did, securing a magnificent crop. He has also seen the snake in the prepared house.

The foregoing account of the omen-bringing snake was given by Mariōma herself, who obviously believed in what she was saying ; and the Firsha's corroboration was offered in complete good faith.

R. DAVIES,
Resident Dar Masalit.

A ZAGHAWA CUSTOM.

Recently the Wakil of the Melik of the Agaba Section of the Zaghawa came in to Kuttum and reported to the District Commissioner that a man of that Section had committed suicide and that he had taken the customary fine of a cow from the suicide's relatives. On enquiry the District Commissioner discovered that this is the custom in the Zaghawa.

It would be interesting to know if a similar custom exists in other tribes.

R. V. SAVILE.

SOBAT PIBOR DISTRICT.

(Extract from Monthly Intelligence Report March 1922).

The Ujang Tribe.

The following information has been supplied about a tribe known to the Anuak as Ujang, but is not yet corroborated:—

"They live around Jebel Masango (Majango) (Lat. $7^{\circ} 30'$, Long $34^{\circ} 45'$) and to the south and east in Abyssinian territory. The area they inhabit is covered with dense forest—so dense is it that my informants say the people go crouching and creeping through it. There are no paths, and it is seldom that they ever cut a way through anywhere. The sun never penetrates the forests, and Anuak say the Ujang would die if they had to live outside in the open air and winds of the plains, exposed to the sun. There is no grass in these forests and therefore they have no grass huts, but build shelters by drawing down and interlacing tree branches—covering them no doubt with weeds and leaves. Clearings are made in the forests for the cultivation of dura and Indian corn.

They own no cattle as there is no grazing for them; they cannot keep sheep or goats partly for the same reason and also because they could not protect them from the large apes that abound in the forest. They eat chiefly dura flour (*balila*) with meat and fish procured by hunting; they also keep and eat fowls, but do not eat their eggs. Fish and hippo are procurable from the Gila River which passes through their country. The area appears to be fairly well watered by streams off the Abyssinian mountains which join the Gila and Akobo Rivers.

The Anuak say that in physique the Ujang are similar to themselves, but usually of a somewhat lighter colour. The Ujang wear no

clothes or skins, but both men and women often wear small "fore and afts" made of bark. They take out the three centre teeth in their lower jaws. Instead of using skins for sleeping mats etc., they strip large pieces of bark from trees and make mats from these, probably pounding the bark until it become soft and pliable as is done elsewhere in East Africa.

They own a number of hunting dogs by means of which they hunt and kill wild pig that abound in the forests. They are armed with spears and also have a certain number of rifles which they have captured from the Galla, but they seem to make little use of these rifles. They apparently do not own bows and arrows. Elephant roam through the forest and are slain by means of heavily weighted spears thrown or dropped from trees. They formerly had no use for ivory but now buy honey and salt with it from the Anuak. The Abyssinians also now try to get an ivory tribute from them. The Galla leave both the Ujang and elephant undisturbed as they dislike the former for throwing spears from tree-tops and the latter for charging them at very close quarters in dense forest.

They possess no canoes, probably because all the streams are rocky torrents. They swim well, but for crossing rivers they often put over long creepers and then swim across holding on to the creeper as they would a rope. The country is free of mosquitos.

The Chief, who is also an important *kujur*, is called Balochai son of Aduba and he lives in a large village not far from Olang and to the west of Jebel Majango.

The Ujang people occupy the low country at the foot of the mountains between Olam (Lat. $6^{\circ} 40'$, Long $34^{\circ} 55'$) northwards to within one day of Gambeila. They are reported to be a numerous and peaceful people but when necessary they can protect themselves from the Galla. They have a distinct language of their own. Their largest village which extends for some 5 to 6 miles is called Odari and is situated on a river of this name which later becomes, in the Anuak country, the Gila River.

Anuak from the Gog District on the Gila River are closely in touch with them; Anuak women visit the chief and *kujur* Balochai for a herb that assists in child production, whilst Anuak men used to obtain from him charms for elephant hunting.

Ujang women use the skin of a small gazelle (akin probably to the Mongalla gazelle) in which to carry round their waist a new-born child.

Wild coffee grows profusely in the Ujang forests. The Ujang themselves make no use of the coffee berry, but drink a concoction made by boiling the leaves of the coffee shrub mixed with a little salt. The Anuak of Gog District, however, collect a large quantity of coffee berries from the Ujang District and also buy them from the Ujang in exchange for salt.

CORRESPONDENCE.

A FELLATA CUSTOM

Hofrat el Nahas

Western Bahr el Ghazal

June 16. 1922.

Last night I dropped on an item of interest. I was in a camp of Fellata on the banks of the Umbelasha when the river came down in flood. A few men ran out in front of the water and seemed to be washing with it. Later I asked for details. I was told that the first water of the flood each year is good for bad eyes and for the stomach when taken internally. Naturally it is the filthiest water possible taking down all the accumulated rubbish of the dry season. It is said to be good for all, men, women and children, and any river possesses this miraculous quality not only the Umbelasha. These Fellata come from Gedad near Buram (Southern Darfur) and left the Bauchi country in Northern Nigeria 15 or 20 years ago. The belief is traditional with them, but is not held by all the Fellata even in Nigeria. The eyes of the men I saw washing were said a few days later to be a little bit better.

J. G. BOWER

THE NYANGBARA LANGUAGE.

In Vol. II p. 148 of Sudan Notes and Records a correspondent (Rev. W. A. Crabtree) in drawing attention to the Logo language remarks on the fact that it appears to be closely related to Agambi, Ngyang-Bara, Madi, Avukaya and Lugbwari, all of which, though perhaps not quite mutually intelligible, are merely dialects of one original. I know nothing of Logo and Agambi, but can confirm the identity of the three last mentioned languages to which may be added the dialects spoken by the Kaliko and the Moru as belonging to the

same group, It is puzzling however to find Ngyang-Bara (i. e. Nyangbara) mentioned in this connection, as there seems to be no doubt that apart from dialectical variations, the Nyangbara speak the same language as the Bari, Fajelu and Kakwa i. e. an idiom belonging to the Masai-Turkana group and showing no trace of resemblance to Madi and its kindred dialects.

The solution of the puzzle appears to be as follows : Mr. Crabtree's information about the alleged Nyangbara words is derived from the *Kleines Vokabular der Sprache der Ngyang-Bara* collected by Morlang in 1859 and attached as an appendix to Mitternuth's *Sprache der Bari* (Brixen 1867). Now the words given in this vocabulary are undoubtedly Madi or something closely akin to it, and one is driven to the inference, either that Morlang when collecting his vocabulary was mistaken or deceived about the tribe of his informants, or that when writing his *Reisebericht* he had forgotten the origin of the vocabulary and assigned it to Nyangbara in error.

There is of course the possibility that the Nyangbara did speak Madi, and only adopted their present speech from their Bari neighbours in recent times, but this in the absence of all evidence, appears to be exceedingly remote.

S. HILLELSON



SUDAN NOTES AND RECORDS

Volume V.

No. 4.

THE PYRAMIDS OF MEROE AND THE CANDACES OF ETHIOPIA⁽¹⁾.

BY PROF. G. A. REISNER.

In Vol. II of the *Sudan Notes and Records*, the outline of the ancient history of the Sudan was left unfinished from the reign of Nastasan, about 300 B. C. onwards. At that time I had promised the editors a fifth part dealing with the Kingdom of Meroe, 300 B. C. to 300 A. D. but was simply unable to go further for lack of historical material. During 1919 and 1920, the Harvard-Boston Expedition was pre-occupied with the excavation of the royal tombs of the Egyptian XXVth Dynasty at El Kur'uw and the temples at Gebel Barkal, all near Napata, the old capital of Ethiopia, and the discoveries of those years were utilized to fill the gaps in the more ancient periods—the New Empire and the early centuries of the Ethiopian Kingdom. So it was not till 1920—1922 that the Expedition was able to begin the work of recovering from the royal pyramids of Meroe the knowledge needed to permit a reconstruction of the history of the later southern Kingdom of Ethiopia.

To the ancients, the country of the Upper Nile was an important subject which stirred the imagination, but little has survived of their writings which give any real knowledge of the country. Of all the ancient writers, Strabo has handed down the best account of Ethiopia in Book xvii of his *Geography*, and he relates much which I now see

(1) In 1920—21 the excavations were supervised and recorded with the assistance of Mr. Ashton Sanborn, Mr. H. L. Story and Mrs. Reisner. In 1921—22 Mr. Dunham was in charge for the greater part of the season, assisted by Mrs. Dunham, when the work was taken over by myself and Mr. Amory Goddard.

is based on an accurate knowledge of the country. But he mentions only one ruler, the famous one-eyed queen whom he calls by her title, Candace, not by her name. Pliny, in his *Natural History*, has written more fully, but with a great mixture of fantastic reports which only serve to obscure the truth. Other writers give us even less of value and only Diodorus Siculus mentions the name of the single ruler — Ergamenes. There was one historian, Simonides the Younger, who according to Pliny, (*N. H.* VI. xxxv 6) lived five years in Meroe "When he was writing concerning Ethiopia", and another, Dalion, who on the same authority, passed beyond Meroe. But the writings of both have been lost. Lost also are the books of a number of other authors on Ethiopia whom Pliny mentions.

The contemporary Egyptian inscriptions of the Ptolemaic period are practically silent on Meroe. The demotic inscriptions of the late Ptolemaic and the Roman periods at Philae record the visits of Ethiopians, and some of these mention Meroe. One gives us the name of a king, Bauw-en-Qash, and another that of one named Tereramani, the latter being dated to the year 254 B.C.

It has long been clear that the history of Meroitic Ethiopia could only be recovered by modern researches, and since the early part of last century, when Ethiopia was opened up by Mohamed Ali to European travel, interest has centred round the capital city of Meroe. The Frenchman, Cailliaud, was the first to identify the site of Meroe with the great mounds and the pyramids found at a place called variously from adjacent modern villages Begarawiyah, Kabushiyah or As-Sur (which is only the local name of the town wall and not a place name at all). These ruins lie on the east bank of the Nile in the district known to us as the Island of Meroe. The pyramids lie in three groups,—one near the city in the desert plain (the Western Cemetery) and the other two on the first hills of the higher desert about two miles away (the Southern and the Northern Cemeteries). Other sites were also known with buildings in the same style as those of Meroe, such as Naga, Wad ben Naga, and Musawwarat (*see* Crowfoot, *The Island of Meroe*), but none of these contained royal tombs. Thus hope of recovering the history has rested on the ruins of the capital city and its royal pyramids.

The early surveys were made by the Frenchman, Cailliaud, the Englishman Hoskins and the German, Lepsius. Their plans, de-

scriptions and especially the squeezes and drawings of Lepsius, are our only record of much that has been destroyed since their time, and these records are now of irreplaceable value. From them the names of a number of kings and queens had become known, but their order and their dates (except for Ergamenes) were only conjectural. In 1909 — 1914, Prof. Garstang, representing Liverpool University, excavated the most considerable of the buildings in the city and found a number of very important inscriptions and several royal names, among them one new family group of three (king, queen and crown prince); but little further was accomplished in recovering the chronology.

The most important work of all for the history of Meroe has been that done by Prof. Griffith towards the decipherment of the Meroitic writing. From the records of Lepsius, it became clear that while some of the kings of Meroe used in their inscriptions a debased form of Egyptian written in Egyptian hieroglyphics, most of them employed an unknown language, sometimes in hieroglyphics which appeared to imitate approximately the Egyptian hieroglyphic alphabet and sometimes in a cursive script unlike anything hitherto known. It has been Prof. Griffith's great service to human knowledge that he has determined the alphabetic character of both the Meroitic hieroglyphic writing and the cursive, has fixed the sound values of the letters of these two scripts and has made some progress with the translation of the texts. The language has not been identified and no considerable bi-lingual texts have been found to assist in establishing a vocabulary. The enormous difficulties presented by the decipherment under these circumstances will be made clear when the decipherment of the Babylonian cuneiform and the Egyptian hieroglyphic inscriptions is recalled. Both were made possible by the use of great bi-lingual or rather tri-lingual inscriptions of which one language was known. And progress in the decipherment of the Egyptian was made especially fast because of the use of picture signs. In the case of Meroitic no long bi-linguals are, as yet, available and the language is of an unidentified group written in alphabetic script. The present decipherment, though far from complete, makes it possible for almost any scholar to read the sound values of the Meroitic script and to understand approximately something like fifty words. Of especial importance is the ability to read the royal names and titles. All this knowledge has been won bit by bit with great labour by one man.

Prof. Griffith, by his work on the Meroitic writing, has recovered for us the names of several kings and identified the tombs of two of them at Meroe. His work has also enabled me to read the names of four or five more kings and identify their pyramids. But with all this the basis of the history of Meroe was not recovered, — the chronological order of the rulers, on which alone it is possible to build a reasoned reconstruction of the course of events and their causes.

Taught by the manner in which the excavation of the royal pyramids at Nuri and El-Kur'uw had yielded the chronology of the older Napatan Kingdom of Ethiopia, the Harvard-Boston Expedition selected the royal pyramids of Meroe as probably containing the solution of the chronology of the later Meroitic Kingdom of Ethiopia. The principle on which the solution was to be based is quite simple. The kings of Meroe lived in succession and died about a generation apart. They were buried in the same order as that in which they reigned and were laid in pyramids in the official royal cemetery. Archaeologically, the excavation of the series of tombs each approximately a generation apart and the determination of the chronological order of these tombs presents no unusual difficulties. Once the order of the royal tombs is known, the chronological order of the kings buried in them follows, and the only difficulty which may arise is the fixing of the names of the kings buried in the pyramids. Now, at Meroe there are, as I have already said, three cemeteries of pyramids and therefore of royal tombs, — the Western (called hereafter W Cem.), the Northern (N Cem.) and the Southern S Cem.). The character and the order in time of these three cemeteries are of great importance for the larger chronological question, but to make that clear it will be necessary to recall the outline of the history of the Northern Kingdom as recovered from the Nuri and el Kur'uw pyramids at Napata.

The royal family of Ethiopia was by origin of the Southern Libyans, the tribe of the Temehuw, whose ancestors in the western desert are mentioned by the leaders of the first Egyptian trading caravans who, about 2500 B. C., "opened" the western roads into the Sudan. These desert men had pushed into Ethiopia and settled at Napata some time about 900 B.C. while their relations, the Northern Libyans, ruled over Egypt as the XXII Egyptian Dynasty. The first of the Napatan Temehuw of whom we now know was buried on the top of the hill at El-Kur'uw and began the cemetery in which were buried the first six generations of the family. Kashta was also buried here, — the

first of the family whom we know to have borne the title of king ; and inscriptions at Thebes prove that he had gained control of Upper Egypt as far as that city. Thus the old family cemetery at El-Kur'uw became the first royal cemetery of Ethiopia. In it, in turn, Piankhy, the conqueror of Lower Egypt, and his successors, Shabaka and Shabataka, were also laid in their pyramids. The following king, Tirhaqa, could find no place in the old cemetery for the great pyramid he had planned, — the greatest in Ethiopia, — and he began a new cemetery at Nuri, 5 miles further up the river. The sovereignty of Tirhaqa over Egypt had been challenged by the Assyrian king, Assurbanipal, ruler of one of the greatest of the predatory empires of antiquity, and Tirhaqa had been forced to retire to Upper Egypt. The struggle lasted for about ten years, as the Assyrians had many other wars on their hands. But the armies of Mesopotamia won all but the first battle and, in the end, Tirhaqa's nephew and successor, Tanutamon, was utterly beaten and driven back into Ethiopia (about 661 B.C.). A new dynasty of Egyptians was set up by the Assyrians at Sais in the Delta (the Egyptian XXVIth Dynasty) which soon became independent through the break-up of the Assyrian Empire. Tanutamon, with his dominions reduced to Ethiopia proper, never recovered from the blow to his fortunes and was buried in a very small pyramid close beside his father Shabaka at El Kur'uw.

But after the death of Tanutamon the prosperity of Ethiopia revived and for about 350 years (to about 300 B.C.) his successors ruled the whole of that country from the swamps of the White Nile to the frontier of Egypt near the First Cataract. All these kings, 20 in number, were buried with one exception in Tirhaqa's cemetery at Nuri. The one exception was a late king, about 350 B.C., who built his pyramid at El Kur'uw.

There are two points of special interest in the history of the Napatan kings of the monarchy which I call the Napatan Kingdom of Ethiopia (750 — 300 B.C. approximately). Ethiopia had been thoroughly Egyptianized in the time of the viceroys of the Egyptian New Empire, 1550—1100 B.C., and the Libyan family which became the royal family of Ethiopia had naturally been also Egyptianized by their surroundings at Napata, with its temple and priesthood. When they had added Egypt to Ethiopia, the Ethiopian kings imported a number of Egyptian craftsmen, especially for the building and the decoration of the great temple of Amon at the Holy Mountain (Gebel

Barkal). These included masons, sculptors in relief and in the round, scribes, jewellers, faience workers and other craftsmen, all of the highest standing. Thus a school of crafts was established at Napata in the persons of these Egyptian craftsmen, and the traditions of Egypt became fixed as the traditions of Ethiopia. This is the basis on which rests the whole history of the culture of Ethiopia. The civilisation was Egyptian, not native, and the subsequent history is one of loss, not of gain, — of the gradual fading of the tradition of the arts and crafts and of the knowledge of the Egyptian language and the sacred texts. For a century or so the degeneration was hardly noticeable. After three hundred years, the losses, especially in forms, in skill and in knowledge of Egyptian had become striking, but the main features of the old culture, although blurred, were still discernible. Then the sovereignty passed to Meroe and the development of the Meroitic culture begins with this Ethiopian version of the Egyptian culture,—all being based on Egypt.

The second point is that of the material resources of the Napatan Kingdom of Ethiopia. The power of the early kings of Ethiopia, those who conquered Egypt, was founded on the caravan traffic between Egypt and the South and on the exploitation of the gold mines of the Eastern desert. Northern Ethiopia, the seat of the first monarchy, is agriculturally and otherwise one of the most poverty-stricken lands of the world. In itself a narrow river-channel between two deserts, there was no support for more than a scanty population. But southwards lay the inexhaustible supplies of Abyssinia and Central Africa, — slaves, gold, ivory, ebony, ostrich feathers, resins and incense, leopard skins and other things desired by the Egyptians, and all the trade in these materials must pass through Ethiopia either by river or by the land roads which were supported by the river. And in the eastern desert lay that long series of gold mines which had supplied Egypt so abundantly with gold during the New Empire. The Libyan tribesmen who seized Napata seized the control of the trade routes and the roads to the gold mines of Egypt. On the exploitation of this control they built the material power of their monarchy until they had taken Egypt; and on this exploitation rested the material power of the twenty kings who ruled Ethiopia after the defeat by the Assyrians. Northern Ethiopia was a rainless desert, a land of caravan routes. But Southern Ethiopia, falling within the region of tropical rains, was of any entirely different character (*see* Crowfoot *The Island of Meroe*,

p. 9). It was also crossed and recrossed by caravan routes and supported a number of great trading centres. But more than this, the rain fertilized vast tracts of land suitable for cultivation and pasture. Abundant supplies of grain were obtainable with little labour, and enormous herds of domestic cattle bred and increased on the pasturage with still less trouble. Forests of ebony grew in the south, and resin-producing trees flourished in much the same provinces where they grow to-day. And the vegetation sheltered numbers of wild animals and birds whose products formed part of the trade supplies for Egypt. On the south, again, there was contact with the black populations which yielded slaves. Thus Southern Ethiopia was self-supporting even without the profits of the carrying trade. And it is clear that if, for any reason, trade declined or the gold-mines ceased to yield their wonted supplies, Southern Ethiopia would be less affected and would become the chief source of the material power of the monarchy. The shift in power, about 300 B.C., from Napata, the capital of Northern Ethiopia, to Meroe, the capital of Southern Ethiopia, was no doubt due to some such change in the relative importance of the resources of the two divisions of the country.

Thus the Meroitic Kingdom of Ethiopia is culturally and politically merely a continuation of the Napatan Kingdom of Ethiopia. It was therefore to be expected that the first king's tomb at Meroe would approximate in its structure, reliefs, inscriptions, burial chambers and funerary furniture the last preceding king's tomb at Napata, that is, the tomb of Nastasan at Nuri. By a superficial examination, I selected for preliminary excavation two pyramids of the Southern Cemetery, Beg. S. VI. and S. V, as nearest like the pyramid of Nastasan and, therefore, the earliest royal tombs at Meroe. Their excavation proved that this conclusion was correct, for the burial chambers and the objects found were also similar to those of Nastasan. Subsequent excavations showed that six other pyramids near these were the burial places of other kings of the same period and of five queens related to the three kings. A ninth pyramid, belonging to a queen (Khennuwa), was later found in the plain, north-west of the southern hill and proved to belong to the same royal family. These nine tombs repeated at Meroe the chief characteristics of the last royal tombs at Nuri thus linking the two cemeteries archaeologically and forming a chronological basis for the examination of the other tombs at Meroe. Now eight of these tombs, standing in a row along the bank of a

ravine which bounds the hill, were built on the lowest part of the hill on which lies the S. Cem. After they were built the S. Cem. was full and this is the reason that the ninth tomb — that of Queen Khennuwa — had to be built by itself in the plain. But above the eight tombs on the bank of the ravine, the southern hill rises eastwards to a flat top about 30 feet above the bank of the ravine. The whole of its eastern slope, a northern extension and the top were covered with small tombs. Their excavation proved that the S. Cem. was a family cemetery which had been begun on the top of the hill about the time of the reign of Piankhy and continued during the reigns of the succeeding kings down to the time of Nastasan. The types of the graves began with the queen's type of Piankhy's time and continued in the style of the minor types used for the less important members of the royal family at El Kur'uw and Nuri. The objects they contained were the same as those found at Napata and some of them were even dated to the reigns of known kings of Napata. Several of the graves belonged, moreover, as was proved by Egyptian inscriptions to members of the royal family of Napata. Thus the S. Cem. repeated the circumstances under which the old family cemetery at El Kur'uw became the first royal cemetery of Napata. Here, the S. Cem. was the old family cemetery of that branch of the royal family which had settled at Meroe and, when members of the family became kings, the family cemetery became the first royal cemetery of Meroe. For it is clear that in the reign of Piankhy the kingdom had been extended southwards, probably to the swamps of the White Nile, as well as northwards to the Mediterranean. Just as members of the royal family, among whom was Tirhaqa, still a young man, had been sent to Egypt to govern in the king's name, so also others had been sent to Southern Ethiopia. Thus a branch of the royal family was established at Meroe, and it was from members of this branch that Nastasan had been selected to become king of Ethiopia. His stela, found at Barkal (Napata), narrates his accession and his coronation at Napata, and his tomb is No. N. XV. the last built at Nuri.

The parallelism between the cemeteries of Napata and those of Meroe was continued by the N. Cem. at Meroe. Just as Nuri had been begun when the field at El Kur'uw was exhausted, so at Meroe the N. Cem. was begun when the S. Cem. was exhausted by the eight royal tombs mentioned above. The N. Cem. is on a fine ridge of sandstone north of the southern hill across the Wady et-Tarabil but

only about 250 yards away, in full sight of the old cemetery. The three earliest tombs were similar to the royal pyramids of the S. Cem. but the rest showed varying departures from the older types down to brick pyramids which were manifestly of the Christian period. Thus it is clear that the N. Cem. was the royal cemetery of Meroe in historical succession to the S. Cem. There are 41 pyramids in the N. Cem. of which two are the tombs of crown princes, five of queens and the rest — or almost all the rest — of kings. The queens appear to have been of unusual power and it may be stated that the N. Cem. was practically reserved for kings, queen — regents and two especially favoured heirs to the throne.

In almost all these tombs evidences were found of *sâti*-burial, that is, the burial of the hareem and of servants with the king in order that their spirits might serve him in the other world. But it is clear that queens of the blood-royal and members of collateral branches of the family would not suffer *sâti*-burial. At el-Kur'uw and Nuri, about two queens for every king received burial in separate small pyramids of their own. Thus at Meroe, according to previous custom, about 50—60 queens should have been buried in separate pyramids. The absence of queens' pyramids was a continual source of wonder to me until a few months ago we began the systematic examination of the W. Cem. This is the Cemetery of the other members of the royal family who were not buried in the N. Cem. If any king be hereafter found in the W. Cem. he will certainly be later in date than the last king buried in the N. Cem.

Thus the three cemeteries of Meroe are historically significant, as follows: —

- (1) The S. Cem. was the old family cemetery of the Meroitic branch of the royal family of Ethiopia and extends in time from about 720 B.C. to 300 B.C. The last 9 tombs of the cemetery are the first royal tombs made at Meroe and exhausted the field.
- (2) The N. Cem. was begun as the royal cemetery of Meroe in succession to the S. Cem. and contains only the tombs of sovereigns and acting sovereigns from the close of the S. Cem. down to about 350 A.D.
- (3) The W. Cem. was begun about the same time as the N. Cem. and was the family cemetery, as distinguished from the kings' cemetery of the royal family of Meroe. It is thus practically contemporaneous with the N. Cem. but may have continued in use longer.

From the foregoing it becomes plain that the chronological basis of the history of the Sudan for the six centuries and a half from about 300 B.C. to about 350 A.D. must be recovered from the series of 50 tombs of kings and queens presented by the two royal cemeteries at Meroe, the older S. Cem. with its 9 tombs and the later N. Cem. with its 41. The period is a long one and to the layman the effort to fix the order of 50 royal tombs situated in apparent confusion on two separate hills may appear at first blush almost hopeless, but the procedure is easily explained and may have some interest as an example of archaeological methods. The three most useful principles are these :—

- (a) *Physical Contacts.* In a few cases the relative order in time of adjacent pyramids will be shown by *physical contacts*. For example, Pyr. Beg. S. V. was built so that its foundation course rests on the foundation course of S. VI. and S. IV. and therefore S. V. was built after both S. VI. and S. IV.
- (b) *Order of Suitability of Sites.* If we consider the point of view of the selector of the site for the individual pyramid, and arrange the sites in *order of suitability* a principle is found which guides along the *line of growth of the cemetery* to the chronological order of the pyramids. For example, taking the N. Cem., the earliest pyramids will be in the broad middle part of the main ridge, the primary building sites. Then the next pyramids will be built at easy distances north and south of these along the ridge, but in general, because the ridge grows narrow to the south, the line of growth will be northwards. Thus the high ridge will be established as the proper place for pyramids and the eastern slope will not be used until the ridge is completely exhausted. The tombs on the slope will begin on the higher and most desirable part and spread down the slope. All these statements are borne out by the conditions found at El Kur'uw, Nuri, and the old family cemetery at Meroe (S. Cem.)
- (c) *Archaeological Groups.* Each pyramid and its contents were made by a different set of men following traditional forms, using traditional methods and employing similar materials. But some of the same men who worked on one pyramid may have lived to help with another, so that similar forms, the work of the same man, may appear in two groups. On the other hand, the traditions change with time and new forms are introduced by new men or because of changes in the material prosperity of the royal family. *The whole*

body of objects and facts which can be connected together by association say, with one tomb, forms what is called "*an archaeological group*". For example, at Nuri, a complete set of archaeological groups, each one representing one pyramid, was recovered, and these by comparison, were arranged in a chronological series which gave the chronological order of the kings buried in the pyramids.

These are simple and obvious general principles which apply to the investigation of any great cemetery. In the S. Cem. the order of three kings was perfectly plain both from physical contacts and from the order of suitability of their tomb sites. Thus we begin our list of the kings of Meroitic Ethiopia with

- (1) Beg. S. VI. King Arikaman.
- (2) " S. V. " Yesruwaman.
- (3) " S. X. " Kaltaly.

The tombs of these three kings and their queens give us the characteristics of the first Meroitic archaeological group. In order to simplify the exposition I will take only part of these characteristics and designate them by the letter *a*, so that

- aP* means pyramid of the late Nuri type with stepped faces and plain corners.
- aB* " burial apartments underground, also of the Nuri type, while *aB₃* means three chambers and *aB₂* means two chambers.
- aC* " a chapel with the traditional Nuri reliefs and Egyptian inscriptions.
- aF* " the absence of foundation deposits which were disappearing at the end of the Nuri period.

Passing now to the succeeding cemetery, N. Cem., the Pyramids Beg. N III, N IV and N LIII are on the most desirable part of the main ridge and present practically the same peculiarities as the S group :

- N IV.....*aP*, *aB₂*, *aC* and *aF*.
- N III.....*aP*, *aB₁*, uninscribed chapel, and *aF*
- N LIII..... (pyramid destroyed by builders of N VI) *aB₃*, *aC* (from scattered stones) and *aF*.

No other tombs have all these characteristics, but the next two pyramids in the line of growth, Beg. N VII and N IX share in the most important of the *a* characteristics, the type of the pyramid, and may be designated as follows :—

- N VII.....*aP*, *bB₃*, *aC*, *bF*, and *bX*
- N IX.....*aP*, *bB₃*, uninscribed chapel, *bF* and *bX*.

No other pyramid in the cemetery is of the aP-type and we are justified in placing these two in succession to groups i and ii. The order of these two is given by variations in the details and by the relative positions. The new characteristics are as follows : —

bB₃..... three chambers underground of which the roofs of the first two are supported by pillars. In N VII, the proportions of these chambers approximate those of the last tombs of the a-group while in N IX, the third chamber is very small.

aC..... a special design in the chapel made by an Egyptian scribe and taken largely from the Book of the Dead.

bF..... a form of the old type of foundation deposit consisting of thin uninscribed tablets and a lump of lead ore.

bX..... a masonry coffin bench decorated with reliefs and Egyptian inscriptions (from the Book of the Dead), made by an Egyptian scribe.

Next in the line of growth, actually between N VII and N IX is N VIII which introduces a new type of pyramid, bP, but it has many of the characteristics of N IX : —

N VIII...bP, bB₃ (with small third chamber), bC, bF and bX (without inscriptions).

The types are as for N IX, except that

bC.....means chapel scenes which were a modification of the scenes of the chapels of the a type and thereafter became traditional.

The reliefs on the coffin-bench are still taken from the Book of the Dead but are manifestly local work and have no Egyptian inscriptions. N VII, IX and VIII are the only royal tombs in Ethiopia which had such decorated coffin-benches and by this fact, as well as by the bF deposits, these three tombs are especially closely connected.

North of N VIII, in the natural line of growth of the cemetery, stand three great and very similar pyramids proved by physical contacts to have been built in the order, N XI, N XII and N XIII. Their characteristics are :—

N XI.....bP, bB₃ (with small third chamber), bC, cF and cX.

N XII.....bP, bB₃ („ „ „ „) bC, bF and cX.

N XIII....bP, bB₃ („ „ „ „) bC, bF and cX.(?)

The pyramid-type, the burial chamber-type and the chapel-type are those of N VIII. No other tombs in the cemetery show the bB3-type of burial chambers. Thus there is no room for doubt as to the fact that these three succeeded N VIII in time. Now they introduce a new type of foundation deposit, a single ring of gold wire under each corner, which I mark *cF*. They are further connected together by the presence of a stone coffin in the third underground room. These coffins have in relief on the lid, the figure of Osiris *en face* with Isis on one side and Nephthys on the other. These are the only three tombs in the cemetery with a stone coffin.

Following the line of growth northwards, we come to N XX with the following characteristics : —

N XX.....bP, bB2, bC, *cF* and dX.

The types of pyramid, chapel and foundation deposits are the same as the last mentioned group of three. The burial chambers are however reduced from three to two with the roof of the outer room still supported by pillars cut in the rock. Now, pillared chambers are not found in any further tomb in the whole site. With this tomb, pillars went out of use and, at the same time, it is to be noted that the three-room type of underground chamber ceased with N XIII, the immediately preceding pyramid. This cessation of the use of the three-chamber type is significant. The type was introduced by king Senkamanseken of Napata about 600 B.C. The first room of the three was a small ante-chamber on the walls of which were inscribed the paragraphs of the 125th Chapter of the Book of the Dead ; the second room was very wide across the axis of the pyramid and bore the "Negative Confession", also from the Book of the Dead ; the third room, a long one, contained the actual burial. The greater part of the offerings were in the third room but they also over-flowed into the other two. This three-room type continued in use as the traditional form of the king's tomb for five centuries (600—100 B.C.). In the course of time the relative forms and proportions had been modified, and with N VII pillars had been introduced to support the roof of the wider rooms of this later period (about 200 B.C.). The pillared form continued the use of the traditional type for another hundred years. But the walls for several centuries had no longer been inscribed with the texts from the Book of the Dead ; many types of funerary furniture had gone out of use ; and the great floor areas of the three-room apartment had become entirely superfluous. Nevertheless, the in-

fluence of traditional ostentation was so great that the type was retained until the time of N XX (about 100 B.C.). The significant point is this, that the abandonment of so long established a tradition must have had some especially cogent reason, and this reason could hardly have been anything else than the impoverishment of the royal family. That the reason was a decline in the royal fortunes is quite clearly shown by the fact that at this point Ethiopia became divided into two kingdoms, one with its centre of Government at Meroe and the other at Napata. And with divided resources, the tombs of both capitals show a marked decrease in size and costliness.

After N XX, four pyramids take the following order by their positions and the details of their types :

N XXI bP, cB2, bC, cF and dX.

N XIV.....bP, cB2, bC, cF and eX.

N II... bP, cB2, bC, cF, eX and xS.

N VI......bP, cB2, bC, cF, fX and xS.

The most marked change is in the type of burial chambers which I call cB2. This type was formed from the pillared type by leaving the rock-cut pillars attached to the sides in the outer of the two chambers thus producing the effect of pilasters separated by niches. It is a rational development of the bB2 type of N XX. And N XXI is further connected with N XX by the interior details, indicated by the letters dX and by the old type of stairway. I have not mentioned the stairway hitherto, but with N II and VI, a new type of stairway comes in, a rough and irregular stair beginning with an incline,—a very cheap form which immediately came into general use for all tombs. The details indicated by dX, eX and fX, it will be noted, connect N XX and N XXI, N XIV and N II, and, it may be added, N VI and N I, while the xS stairway connects N II and N VI.—all of which confirms the order given by the positions of the pyramids. This process of lacing one small group of pyramids to another by similarities of the type-forms was continued until the whole 50 royal tombs of the N and S cemeteries had been arranged in a chronological series. But I omit further recital of the details which I fear have already become wearisome.

Now there is one other cemetery of royal tombs of the Meroitic period which I have not yet mentioned. These are the 18 pyramids at Gebel Barkal (Napata) which the Harvard-Boston Expedition excavated in 1916. At that time the paucity of the evidence obtained made

it difficult to draw general conclusions, and the detailed records, the note-books, diaries, drawings and photographs were set aside for future consideration. When the chronological order of the pyramids of Meroe had been established, the records of the Napatan pyramids of the same period were at last taken out for examination. The remarkable fact was at once apparent that the same type-forms occurred at Napata as at Meroe and *in exactly the same chronological order*. The Napatan series showed, however, a gap between the type forms of Barkal VIII and those of Barkal V and came to an end about the time of pyramid Beg. N VI, the 23rd of the pyramids at Meroe, or about half way through the Meroe list. This showed that there were two periods, each about 80 years long, when royal tombs were being built contemporaneously at Napata and at Meroe,— in other words, periods in which Ethiopia was divided into two independent kingdoms. The type-forms showed again exactly the number of reigns through which each of these two periods of division lasted.

In this manner the tombs of the kings were arranged in chronological order, but the identification of the tombs with the names of the kings and queens buried in them remains a matter of great difficulty. The names of 23 of the 41 persons buried in the N Cem. are still wanting. The rest have been found by the inscriptions in the chapels or on the coffin-benches or on the altars. However, the work of piecing together the fragments of altars is yet incomplete and a few more names may still be connected with their pyramids. In addition there are a number of names which have been found at other sites than the cemetery, on inscribed stones and monuments of various sorts, and now that the types of work of the various pyramids are exactly dated in chronological succession, it will surely be possible to assign some, at any rate, of the extra names to certain pyramids. Thus the work of the identification of the kings promises to reach a fairly satisfactory conclusion.

The chronological order of the pyramids and of the identified kings has been fixed, but there remains to be determined the actual dates of the individual pyramids in the list. In working out the chronological list of the kings of the Napata Kingdom of Ethiopia, the date of the death of Nastasan was set at about 290 B. C. which I concluded was within ± 50 years of the correct date. It now appears that the actual date was between 310 and 300 B.C., well within the wide limit of error set in the first examination. This appears from the identification of

pyramid Beg. N VII as the tomb of Ergamenes, the friend and contemporary of Ptolemy IV. Ptolemy reigned from 225 to 205 B.C. and approximately the same date may be assigned to Ergamenes. According to the chronological list of the pyramids, five kings intervened at Meroe between Nastasan and Ergamenes, and at Barkal there were also five contemporary reigns. Thus we have five generations between Nastasan and Ergamenes. Now, between the death of Tirhaqa in 663 and the accession of Ergamenes, about 225 B.C. there were 21 kings buried at Napata (in the Nuri cemetery) and these five at Meroe giving 26 kings for a period of about 438 years. The average length of reign is thus 16.8 years. The five kings at Meroe would, at the same rate, have reigned 84 years. Adding, therefore, 84 years to 225 B. C., the date of the accession of Ergamenes, we get 309 B. C. as the approximate date of the death of Nastasan. But during the period of these five kings, a rival dynasty was ruling at Napata and it appears probable that their average did not reach that of the great kings of the older period. So the death of Nastasan may have occurred a few years after 309 B.C. In any case, the result is a thorough justification of the method by which I assigned the dates to the earlier kings, a method to be used of course only as a last resort.

After Ergamenes, two hundred years passed before an event occurred which might permit the fixing of another point in our list of the kings of Meroe. In 23 B.C., a Roman army provoked by a raid of the Northern Ethiopians on Assuan, invaded Ethiopia under the Prefect Gaius Petronius, actually took Napata by assault and destroyed the town. Strabo has told the story in the viith book of his *Geography* with great detail and apparent accuracy. He was in Assuan a year or two before the invasion and was a personal friend of Petronius. He says that the ruler of Ethiopia in his day was a one-eyed queen of man-like character whom he calls only by her title, Candace, evidently under the impression that this was her personal name. She was still Candace when the invasion took place. Beaten in every battle, her army was driven back on Napata where her son, as commander-in-chief, took up his position, but the queen retired to a fortress a little further south. After the looting and destruction of Napata, from which the queen's son had made good his escape, Petronius returned to Assuan.

Until now, it has been a hopeless attempt to identify this queen. Prof. Griffith has proved to us that Candace is not a name but merely

a Meroitic title which may be translated "queen". The description of the lady as one-eyed and of masculine character is interesting but gives no present clue to her identity. However, with our present knowledge of the division of the kingdom at certain periods, Strabo's definite statement that Napata was the "proper capital" of the queen, permits us to approach the question from a different angle. Calculating the lengths of reigns as for the earlier period, the Barkal pyramids Nos. I — VI, IX and X which form what I call the Second Meroitic Dynasty of Napata, falls wholly within the first century B.C. This dynasty was of a very unusual character because the first, the second and the fifth rulers were queens, while only the third and fourth were kings. It is clear that as the Candace of Strabo was a queen of Napata and as the queens of Barkal VI, IV and X are the only queens of Napata approaching 23 B.C. in date, one of them, probably the last, must be the Candace who opposed Petronius in vain. This is confirmed by another argument, also based on Strabo's statements. The great temple of Amon at Napata must have been involved in the destruction of Napata by Petronius, although of course it is improbable, in view of the massiveness of the building, that the temple could have been more than seriously damaged. Now, when our expedition had completed the excavation of that temple, we found that only one considerable restoration had been carried out after the time of its construction by Piankhy. This restoration involved the sanctuary and the third hall of columns. The reliefs and inscriptions cut on the restored wall were made by an Egyptian scribe imported for the purpose and bore the name of Netekaman whose throne-name was Kheperkara II. Therefore Netekaman must have repaired the damage done by the Romans and, indeed, not long after the invasion. For it is improbable that the most important temple of Ethiopia, fostered by the endowments of a long line of kings, and dedicated to the great national god of Ethiopia, Amon of Napata, would have been left long in disuse. Fortunately Netekaman is one of the best known kings of Meroe. He was buried in Beg. N XXII; his queen Amantêre in N I, and his son Arihkhärer in N V. His name appears on temples at Naga, Meroe, Napata and Amara, — seven buildings in all. He was very unfortunate in his sons, for two of them died while still crown princes and thus three in succession became heirs to the throne during the life of their father. The second, Arikhatani, was probably buried in N LVI, the pyramid of which was never begun, and the third son, as king, in N X, of which

neither the pyramid nor the burial chamber were finished when he was buried.

Now the list which has been prepared by a comparison of the type-forms, shows that the queen's pyramid, Barkal X, was just previous in time to Netekaman and about contemporaneous with the pyramid N VI of the great queen Amanshàkhetê. Netekaman appears to have been the son-in-law and successor of Amanshàkhetê. She had the greatest and most ostentatious pyramid but one of the whole Meroitic line (that about which Ferlini tells his fantastic story of his finds). Netekaman was apparently the very greatest builder of temples of the same line. This sudden revival of the resources of the monarchs of Meroe after nearly a century of manifest poverty can have only one plausible explanation. In the days of Amanshàkhetê while Ethiopia was still divided and the queen buried in Barkal X was ruling at Napata, the Romans devastated the east bank of the Nile from Assuan to Napata and destroyed that city. The power of the Napatan family was utterly broken by this catastrophe and Amanshàkhetê took advantage of the situation to re-unite the two kingdoms into a kingdom of Meroe. The Napatan family never recovered again, and from that time, as long as kings ruled in Meroe, they claimed the sovereignty over Napata. Bit by bit, in this way, the history may be worked out now that the chronological basis is fixed.

For the chronology, the important fact is that Netekaman must have come to the throne soon after 23 B. C., perhaps as early as 20 B. C. Between Netekaman and Ergamenes, the chronological list shows ten pyramids, two of queens and eight of kings. Five of these pyramids are so large and expensive that it may be concluded that they represent the five *most prosperous reigns* in the history of Meroe. If the period between Ergamenes and Netekaman be taken at 180 years (200—20 B.C.) this gives an average of 18 years per reign. I estimate the five great reigns at 100 years with an average of 20 years, and the remaining five at 80 years with an average of 16 years. One queen regent is included in each period.

After Netekaman, the next point of contact with the outside world which we find is in the reign of King Teraramani. A long Egyptian demotic inscription at Philae records the visit of an embassy sent by him to the Romans which also brought rich gifts to the great gods of Philae. This inscription is dated in the year 4 of the Emperor Gallus, that is 254 A.D. According to an altar found in N Cem., the pyramid

Beg. N XXXVI was the tomb of a king whose name is written Amanterari which would be a normal variant of Teraramani. Now between 20 B. C. and 254 A.D. is a period of 274 years for which my list shows 18 reigns including that of Netekaman and his wife, Amantêre, as one. This gives 15.3. years per reign for this period. But N XXXII is a small queen's tomb, while N XL, and LV have only one-room burial chambers. These represent short reigns which would have materially reduced the average. Indeed N XLI, N XXXVII and N XXXVIII were also very small pyramids of plastered red-brick. Teraramani probably sent this embassy on the occasion of his accession, and we can count 254 as the year of his coronation.

The close of the Kingdom of Meroe is obscure. But certainly the inscription of Azaina, King of Axum, makes it very plausible that the Axumite Abyssinians conquered Meroitic Ethiopia about 350 A. D. The Northern provinces had already been seized by the Blemyes and the Nobatae and the country split up into small principalities. It may be doubted whether the last kings of Meroe held much more than the Island of Meroe alone. Now, after the accession of Teraramani, my list shows six reigns represented by six pyramids, all small and all built of red-brick with the same type-forms of chamber, chapel and pyramid. If we allow 15.3 years per reign, the average for the reigns between Netekaman and Teraramani, these six reigns would cover about 92 years. Thus the last pyramid erected in the N Cem. may be dated to about 346 A.D. But the calculation is, of course, only approximate, and if one or two of the reigns were a little longer than the average the last pyramid in N Cem. (N XXV) may have been built about the time of the Abyssinian conquest of Ethiopia or a few years after. The answer to the question as to whether any other king ruled Meroe after the death of him who was buried in N XXV, must await the completion of the Western Cemetery. In any case, with this king the use of N Cem. as the cemetery of the rulers of Meroe ceased. If the rulers of the province after that time still continued to call themselves kings, they were really only "mekes" in the modern Sudan meaning, a local hereditary chief often selected from the family to which belonged the hereditary right.

Such is the story of the recovery of the chronological basis of six and a half centuries of the history of Ethiopia. It is the whole period of the Kingdom of Meroe which was the centre of the interest of the classical historians and geographers. For the first time, fact may

now be separated from fiction in their accounts. Strabo says (*Geography*, XVII, ii 3) : "It is still the custom in Ethiopia that when the king, by accident or otherwise, has lost the use of a member, or the member itself, all his usual followers who are destined to die at the same time as himself, inflict on themselves a similar mutilation. And that explains the extreme care with which they watch over the person of the king". It seems a bit ludicrous to imagine the household of the Candace of Petronius as consisting of one-eyed servants and one-eyed ladies in waiting ; but the information in the parenthesis is quite true. The household not only died with the king but was actually buried in the same tomb. This custom was practised in Egypt by the pre-dynastic Egyptians as early as the late stone age. Manifest traces of the custom appear in the dynastic age when figures were substituted in the tombs for the bodies of the members of the household. It was revived again by the Egyptian officials who lived at Kerma and held the Ethiopian roads for the King of Egypt during the Middle Empire. The same idea is represented in the sacrifice and burial of the horses of Piankhy when he was buried at El Kur'uw. Here at Meroe, the custom was clearly visible in the tombs from the second century onwards. Finally it may be added that *sati*-burial, as I name this custom, is still practised by certain African tribes.

Pliny (*Nat. Hist.*, VI, XXXV, 8) says that "The buildings of the city (of Meroe) are few. The ruler is a woman, Candace, whose name has now been handed down for many years from queen to queen". The other two references to rulers of Ethiopia in foreign books, - one in Strabo relating to the Roman invasion and the other in the New Testament, Acts VIII, 28, — also speak of the queen Candace as if she were the ruler of Ethiopia. From these sources arose an impression that Ethiopia, especially Meroitic Ethiopia, had been governed by a long line of queens named Candace. Prof. Griffith dispelled the greater part of this delusion by proving that the word "candace" is only a title meaning queen. The excavation of the tombs has served further to make the situation plain. From 750 B.C. to about 160, every ruler of Ethiopia was a male. About 160 B.C., the third generation after Ergamenes, the great queen who was buried in N XI seems to have been queen-regent for her son for perhaps ten years. About 130 years later, Queen Amanshâkhetê whose tomb is N VI and who reunited Ethiopia, appears to have been queen-regent under similar circumstances. Her son-in-law, Netekaman, mentioned above as the great

builder of temples, obviously came to the throne by the hereditary position of his wife and thus she, Queen Amantère (pyramid N I) occupied an unusual position and received burial with the honours of a king; but Amantère appears never to have been queen-regent or, if so, only for a few months. After her, two more queens were buried with the honours of a king, but in the poorly built pyramids of the late time. Thus from the time of Ergamenes until the end of the N Cem., about 575 years, there were 30 kings and 5 queens buried in the official royal cemetery of the kings. This fact proves clearly that there was no long line of queens ruling over Ethiopia. But it also proves that five queens occupied a position of unusual influence, a position that was recognised by burial in the cemetery of the kings. It appears to me that these were, as a rule, women of the blood royal who survived their husbands and acted practically as queens-regent during the minority of their sons. During the earlier period, that of the Napatan kings of Ethiopia, the queens of the direct blood-royal had always enjoyed great consideration during the reigns of their sons and especially costly burial as queen-mothers. Aspalta mentions his mother in all of his known stelae set up at Barkal, and on one he gives her ancestry in the female line through five queens. But none of the great queen-mothers of this older period was buried in the cemetery of the kings or with kingly honours, and I suspect that none of them approached in power the five great queens of Meroe buried in N Cem.

At Napata, in the Meroitic period, or to be more precise, in the first century B.C., the Second Meroitic Dynasty of Napata consisted of three queens and two kings, while all the persons of the direct blood-royal, males and females alike, appear to have been buried with practically equal honours, except for the royal insignia. The rise of this dynasty coincides with the marks of poverty exhibited by the pyramids at Meroe. I imagine that the king buried in N XIII, the last of the great pyramids of Meroitic prosperity, had two queens, one from the Meroitic branch of the family and one from the Napatan branch. When he died, the son of the Meroe queen became king in Meroe and was buried in N XX. The Napatan queen set herself up with her minor son at Napata, thus causing a separation of the kingdom. But her son died without coming of age and was buried in Barkal V, and the queen continued to rule the separated kingdom of Napata until her death, when she was succeeded by her daughter (?), who was buried in Barkal IV. Thus it came about that the first two rulers of the dynasty

were queens. But the third and fourth were kings, and the Candace of Petronius was almost certainly the widow of the fourth ruler and acted as queen-regent for her son.

The history of Meroitic Ethiopia, as far as it is now clear, was briefly as follows :

- (1) On the death of Nastasan, who had been a member of the southern branch of the royal family, each branch of the family set up a king of its own, Arikakaman at Meroe and the unknown king of Barkal XI at Napata. Thus was established the first Meroitic Dynasty of Napata.
- (2) During this first period of divided kingdom, the second king at Meroe, Yesruwaman, must have held Napata for a short time as he inserted his names on a pair of small lion-statues in one of the temples.
- (3) Ethiopia was reunited into one kingdom by Ergamenes about 220 B.C. with the capital at Meroe. The greatest period of Meroitic prosperity is represented by his reign and those of his five successors. Ergamenes brought at least one Egyptian scribe and artist to Meroe, and his successor, Azagraman, also used an Egyptian scribe, perhaps the same man. Both these kings built temples in Lower Nubia, Ergamenes at Dakkeh, and Azagraman at Dabot.
- (4) A separate kingdom was again set up at Napata after the death of the fifth successor (buried in N XIII) of Ergamenes, probably by reason of his marriage with a lady of the Napatan branch of the royal family.
- (5) Owing to the premature death of the Napatan heir of the king of N XIII, the first two rulers of this second Meroitic dynasty of Napata were women.
- (6) The Second Meroitic Dynasty of Napata was broken by the invasion of the Romans under Petronius, and Napata was absorbed finally in the kingdom of Meroe under queen Amanshâkhetê and her son-in-law, Netekaman. Napata was never again a rival of Meroe.
- (7) During the reign of Netekaman, an Egyptian craftsman was again brought to Ethiopia, probably primarily to restore the damage done to the temples at Napata by the Romans. Thus, for the second time, the dying Egyptian traditions were revived. The effect of the teaching of this Egyptian is clearly

seen in the later temples built by Netekaman and in the subsequent forms of the chapel reliefs. During this reign Hellenistic bronze objects in the tombs indicate, either gifts brought back by the embassies to Rome, or objects sent up to Meroe in trade.

- (8) From Netekaman (about 20 B.C. to 10 A.D.) to King Tartenyan (ca. 200—220 A.D.) the fortunes of Meroe were on the wane. The pyramid N X, probably the tomb of Netekaman's son, Sherakarêr, was never finished above the chapel roof. The two following tombs, N XV and XVI, were both small, though of stone. Then followed a brief period of rather better times when pyramids N XVII, N XVIII and N XXXIV were built. The chapel of N XXXIV had even some Egyptian inscriptions in relief. But except for N XIX, these were the last of the stone pyramids, and five reigns intervened between Artanyesbeme, the owner of N XXXIV and Tartenyan, the king of N XIX.
- (9) After the burial of Tartenyan in N XIX, all the pyramids are of plastered brick and of modest size. The effect of the intrusions of the Blemyes and the Nobatae tribes on the prosperity of the kingdom is manifest in those poor tombs. And it may be imagined that the Abyssinians who overwhelmed the kingdom of Meroe in about 350 A.D. required no great force of arms to conquer Ethiopia.

The foregoing exposition of the history of Ethiopia may be summarised very shortly :

About 900 B.C. a Libyan family made a place for themselves at Napata (Barkal) and seized the roads from Egypt to the mines and to the southern markets. They found Ethiopia a province of Egypt; they made it an independent kingdom for the first time in history and made Egypt a province of Ethiopia. But they were not negroes, nor originally members of the mixed brown race which had previously lived in Ethiopia. For the Ethiopian has never been a negro although dark-coloured, but of a mixed race made up of different elements in different ages. From their capital of Napata northwards they dominated Egypt and southwards the whole of the Sudan to the swamps of the White Nile and the borders of Abyssinia. For about 80 years, the Napatan kingdom of Ethiopia was an Empire ruling 3000 miles of the Nile Valley, corresponding with the Assyrian king at Nineveh, and

finally fighting a defensive war against one of the greatest empires of antiquity. Driven back to Ethiopia, the family held its own territory for about 350 years longer, always ruling from Napata and building their pyramids in the royal cemetery of Napata founded by Tirhaqa at Nuri. Then conditions changed; the southern branch of the family which had settled in Meroe became the more powerful. Probably the changed conditions were due to a decline in trade or the exhaustion of the gold-mines in the north, while the south, fed by tropical rains, grew rich on its agricultural produce and its herds of cattle. A king, Nastasan, was selected from Meroe for the throne in Napata. Thereafter, while for two short periods Napata had a monarch of its own and divided the kingdom with Meroe, the Kingdom of Meroe persisted uninterrupted for another 650 years.

It has thus fallen to the lot of the Expedition to trace the history of this great family for over twelve centuries.



A BORNU MAHRAM AND THE PRE-TUNJUR RULERS OF WADAI.

BY H. R. PALMER.

A mahram in Bornu was a charter of privilege and exemption from taxation and other obligations to the *mês* (kings) of Kanem and Bornu.

Self interest has caused the preservation of a good many specimens, the earliest now extant, dated about 580 A. H./1184 A. D. in the reign of Mè Abdalla Bikur, relates how certain Kindin (Tuwareg) youths from Ahir (Agades) stole two daughters of certain *ménas* (princes) of Dirku (Kanwar), and were killed by the angry fathers. As a result the Kindin attacked the oasis of Kanwar (Dirku), and the inhabitants fled to Birni ⁽¹⁾ and put themselves under the protection of the Mè of Kanem, who gave the Kindin "three of his subjects who "were not of noble birth to settle the matter".

A second mahram relating to the same events states that "This 'girgam' (mahram) was written in the time of King (Abdalla) Bikur on account of Amarma (ibn?) bint Bure the daughter of Nâna. It was written herein that because of this document King Gale (the Kindin of Ahir) would not commandeer the camels of Bure in war, for that the people of Dirku had fled and sought protection from King Bikur an event which occurred in the year 588 A.H. (1192 A.D.)"

The Ménas of Kanwar had the title Dikuma, and were evidently descended from chiefs who previously ruled at Zeila (Murzuk), since ancestors of these Dikumas have the title Zeilama.

The particular branch to whom these mahrams were given was apparently called Beni Mukhtar, but it is stated of them that "their original dwelling was among the Tura Beni Habibi", i.e. they were probably of partly Arab descent, but had settled among the Tura (i.e. Northern Teda), being Dibbiri Teda on the fathers side.

It will be apparent then that at the period in question the Mês of Kanem had a certain influence if not control over the 'Kindin of Ahir'

(1) Probably Njimi but possibly a Birni near Lake Fittori.

and on the other that the inhabitants of Kanwar were not Kanuri but Teda—who about 1190 or so *placed themselves* under the protection of the Mè of Kanem.

An account of conditions on the other side of Kanem—in Wadai—which apparently refers to the same period is extant in Bornu, though not in a *maḥram*. In this account it is stated that Umme Jilmi, i.e. the first Muslim Mè of Kanem, sent his nephew Abdullahi Bikur to fight the Kai Bulala—i.e. the Kai Bulala being the mother-stock of the Mès of Kanem, having as a centre of power at that time Wadai.

The name Umme Jilmi is probably a slip, for Abdalla Bikur was in fact the grandson of Mè Biri Dunamami who was himself the grandson of Umme Jilmi—but the reference is obviously to the same Bikur who is mentioned in the '*maḥram*' above. He (Abdalla Bikur) it is stated, fought the Bulala in their "country of Kabila, a fierce battle, in which 770 of the Bulala fell". In the end the Bulala submitted to Abdalla and their leader said "I retire from the contest now, but after 210 years the time for war will again come".

The reference in the last paragraph is to the well known Civil War in Kanem which ended in the Mès being driven out of Kanem into Bornu. The Civil War began in 788 A.H. 1386 A.D.—so that 210 years before that time would be 578 A.H., a date which corresponds very closely with both the date of the *maḥram* and Barth's (1) Chronological Table.

Two interesting points remain (1) Where precisely was 'Kabila' (2) Who precisely were the Bulala. On these points it seems probable that enlightenment may come from the Sudan—and that if they can be finally settled, it will throw a good deal of light on the ethnography of Wadai and Kanem.

In the first place the older name for the Bulala is Kai, Kayi, Kê, or Ki. They were not Teda, but are spoken of in old Bornu Mss. as *اهل درق* — the full expression being presumably *اهل درق الامطية* — i.e. people who carried 'oryx' shields, in contrast to the Teda races who are called *اهل كرا* (i.e. Ahel Gara, i.e. Garamantes).

According to the Kanuri of the present day Kâbila was a town in vicinity of a well, on the route between Abeshe and Dongola, now called Kâbar—a watering place which the Kanuri call Ko Tugundegwa or Ko Annabi Musa. Tugundegwa means "of the four seats",

(1) Barth Vol. II. p. 636.

and it is said that the Arabs also call the place 'Manzil al arba'a'. 'Ko' means 'rock' in Kanuri. A Wadaian states that this Ko Tugundegwa is east of the Annadi country, and five days camel march north of Masrub, the stages from Abeshe being Abeshe—Fada—El Maggàrin thence by desert to Kâbar.

It may be noted that the Bulala in their *nisbas* have the same tradition of having been Christians as the Beli (Bideyat) of Annadi, and it is generally believed in Wadai that the pre-Tunjur ruling Mês of Kanem and Wadai were not Teda but Tuwareg (Kindin).

Yacubi also writing about 891 A.D. speaks of the rulers of Kanem as being Zaghawa—though they must necessarily have been the same kings as those whom Barth calls the 'Dugawa' Kings of Kanem.

There are a good many other factors also which seem to show that the invasion of the Chad basin by the Teda-Kanuri races and their language only dates from about 1050 A.D., and that previous to that the ruling races of Kanem to Wadai were of Tuwareg affinity, and related to the Beli of Annadi, or other races of North East Wadai.

It may be permissible to recall a passage in Edrisi, which though not perhaps conclusive is at least relevant :

"The neighbourhood of this place (Aswan) is sometimes invaded by black cavaliers called Beliin, and it is claimed that they are Greeks and have been Christians since the days of the Egyptians, before Islam. They are heretic Christians—Jacobites. They wander in the desert between Beja and Habash and come as far as Nubia. They are nomads, and do not live in one place—just as do the Lamtuna of the extreme west (1)".

On this R. P. Dozy writes "Ce sont les Blemmyes, que M. Quatremère a identifiés à tort avec les Bodja".

In connection with these passages, it will be useful to remember that the word 'Kanem' in Teda means 'any country to the south of the Teda country'—and that at the time of Mè Bîkur the country now called Wadai was Kanem, the Wârama being the Kanem chief who ruled there.

In a Ms. history of Wadai which has recently come to light the author writes :

"The inhabitants of Wadai are in origin a people of Nubia, and in regard to them the name of each ruling tribe began with the letter 'K' as for instance Kel-Tin, and Kindin, and Kodok, and other similar names".

(1) Edrisi. Dozy p. 21.

NOTES ON THE BAGGARA AND NUBA OF WESTERN KORDOFAN.

BY YUZHASHI NEGIB EFF. YUNIS.

(The following paper consists of extracts from a report rendered by the author on a seven months' medical tour in Western Kordofan. Supplementary information, not contained in the original report, was supplied by the author at the request of the Editors and is likewise embodied in the present paper).

I. BAGGARA.

The cult of bravery. The most shameful thing of which a young man of the Baggara can be guilty is to show cowardice when a courageous act is required. The tribe accepts no excuse in justification of such behaviour, and I am not exaggerating when I say that a Baggara youth would rather meet death willingly and whole-heartedly than act the coward. The following custom accounts for their horror of cowardice. The Baggara girls hold dances like those of other tribes in the Sudan, and I believe more frequently, for even when trekking on Government transport or on their own business, they manage to have such dances very frequently. The Arabic verses which they sing on these occasions are composed by some well-known tribal poetess who is known as the *ḥakkāma*. Foremost among these songs are those composed in praise of valiant deeds performed by the young men, such as the killing of an elephant, a lion or a giraffe, or the pursuit of a defeated enemy or, in the old days, a raid against the Nuba or Dinka for the purpose of carrying off their children as slaves. A young man has no higher ambition than to win the favour of the girls and women of his tribe and a song of praise sung at one of these dances is the best means towards this end, as such songs are handed from one dancing party to another and thus become known all over the tribe. Therefore every man's first aim is to achieve a feat of courage worthy to be the topic of a song of praise.

On the other hand should an act of cowardice be committed by one of the young men, as soon as it becomes known, it is the duty of the *ḥakkāma* to compose a song in which the culprit is reviled and held up to the derision and execration of all, and to put it into circulation

at the first dancing party. This song having become universal in the tribe is supposed to be sung for a whole year as a punishment to the man in question and at the same time as a warning to the rest of the tribe. After the lapse of a year they seem to put an end to it and try to forget it in order to give the man another chance. Needless to say during this year of shame the victim cannot possibly find any favour with the women who look down on him and will have nothing to do with him. Uncherished by them he is naturally reduced to the uttermost depths of misery. Thus the girls inspire courage in the men, and one may safely say that, other circumstances being the same, a man's position with the other sex varies directly with his reputation for courage and the number of brave deeds he has achieved. The following instances may serve as an illustration.

A veteran elephant hunter was out with two other men on a hunting expedition. Arriving at a certain place they spotted an elephant, but the veteran advised his companions not to chase this animal, as he considered it dangerous on account of the thick bush through which he was feeding. The other two, urged on by a desire for the tusks, refused to listen to the advice and chased the elephant, whereupon the veteran left them and went his own way. Soon his forebodings were fulfilled, for the wounded elephant charged the hunters, and as they attempted to escape through the thick forest on their horses, the elephant overtook them and killed the men as well as their horses. News of the incident spread in the tribe and public opinion condemned the veteran for deserting his comrades in the time of danger on the ground, that if he had remained, he might have disabled the elephant and saved his companions by his skill, and in consequence a song was composed to his great discredit.

A party of nine young men were sitting at their leisure near the wells passing the time with story telling, when there was a sudden alarm owing to the approach of an enormous poison snake. Adam, one of the young men whom I know well, looked behind him without rising in order to measure the distance between himself and the snake so as to take steps to kill it, but to his horror he found that it was quite close leaving him no time for attack. So he collected all the nerve he possessed and sat quite still where he was, expecting death at the bite of the snake. He could have jumped up and tried to save himself, but had he done so he would have committed an act of cowardice which would have disgraced him in the tribe. The snake

crept up his back and lay on his shoulder with the head protruding, viewing the surroundings, it then crept downwards over his knees and crossed to his neighbour who happened to be the brother of a girl whom Adam was courting, and insinuated itself under his shirt. Now if the snake had killed the boy, his sister as well as the rest of the tribe would have regarded Adam as a coward for not attempting to save him. He therefore risked his life and seizing the snake by the middle, and pulling it away from the body of the boy he threw it violently on the ground. Luckily a brother of his, who happened to be present, managed to kill the snake by a quick and lucky blow as soon as it touched the ground. Doubtless strong nerve is required to enable a man to behave in this cool manner, which is regarded by the Baggara as the height of bravery and greatly applauded by the singing parties.

Another instance of a different character: While in the village of one of the Nazirs, I saw a boy of about three years of age quarrelling with his sister, and in a moment of anger he threw a stone at her which inflicted a bad bruise on the forehead. I approached him in a threatening manner with a whip in my hand, and to my astonishment he stood perfectly still prepared to receive any corporal punishment. I looked to his mother and said: Your boy does not seem to fear my whip, and she answered: do you think that my boy would disgrace himself by running away? no, he is not a coward. This is the sort of training which parents impart to their children, and this is the brave spirit with which they inspire them.

Marriage. As soon as an Arab lad has attained puberty his father is supposed to choose a wife for him. Sometimes the lad may make the choice himself, but he must gain his father's consent. The girl has no say in the matter, for it is her parents and uncles that make the choice for her. The Baggara favour consanguineous marriages, and young men marry the daughters of their uncles or other relations: they are not supposed to marry outside their *khashm beit*. The mother is supposed to have made ready at the time of the marriage the *khumām* i. e. the saddle and trappings of the riding bull of which there is one set for ordinary use and one for fantasias. It is mostly made of leather and worth from 30 to 40 Pounds. The young man pays the dowry, which may amount to 20 or 30 Pounds, in cash or cattle, and he is expected to buy clothes and silver jewellery for the bride. A special house is built, called *beit el 'iss*, different in shape

from their ordinary houses. It is an oblong-sloping structure about six metres high, eight metres wide and fifteen to twenty metres long, hanging down low on both extremities. During the celebration everybody is eager to know whether the virginity of the bride is intact. If it is found to be so the bridegroom presents the bride's mother with a heifer. If it is otherwise the marriage will take place all the same, but no present is given to the bride's mother.

Where the bride has been circumcised by the 'Pharaonic' method the bridegroom calls in the assistance of the best man in order to be able to consummate the marriage. On the *henna* day all the friends of the bridegroom offer presents of money, cattle or horses, a custom the object of which is to help him in covering the heavy expenses of the wedding.

The cuddling custom : Any unmarried girl or divorced woman is permitted openly to receive the visits of young men in her own house. Parties up to the number of eight men may visit a woman in the evening and anyone who succeeds in winning her favour may be invited to pass the night with her. In the case of an unmarried girl tribal custom demands that the guest should respect her virginity, though this rule is sometimes broken.

Female circumcision. The Baggara whose original home is in the West formerly practised the 'sunna' form of circumcision, but the 'Pharaonic' method gradually came into use through the influence of traders and other inhabitants of the Northern Sudan with whom they came into contact. The Messeria, being the most easterly of the tribes in question, were the first to adopt this practice, and after it had become universal amongst them, they passed it on to their neighbours, the Fellaita section of the Homr, whence it made its way to the Agaira section of the same tribe. At the time of my first visit to Muglad in 1917 I found that the Agaira were still practising the 'sunna' method, and made every effort to convince the Nazir Nimr Ali Gulla of the atrociousness of the 'Pharaonic' custom and the damage and suffering which it inflicts on the women. I earnestly advised him to use all his influence to prevent it from spreading amongst his section. He appeared to be convinced by my arguments and promised to do his best ; I regret to say however that during my next visit in 1918 I found that the 'Pharaonic' custom had made its appearance there and was given a hearty welcome. The reasons given for the adoption of this form of circumcision are (1) that it is sup-

posed to be a protection against untimely pregnancy (2) that it is regarded as rendering the victim more attractive to the men.

Medical beliefs and customs. The *fugara* or religious leaders of the tribes exercise a great influence in general, and are in great request as healers. Their principal method of treatment consists in writing out religious texts on wooden tablets; the ink is then washed off and the patient drinks the water in which the ink has been dissolved. The *fugara* also attempt to effect cures by means of spiritual treatment and by the application of herbs. Herbalists are also frequently applied to for relief and treatment. If a patient is cured the *fagir* gets the credit; if he dies there is no blame upon the *fagir*, as it was Allah who did not permit a cure.

The burma treatment for syphilis. The herbalist collects iron filings and adds some *garad*, *'ardeib*, *'atrūn* and certain herbs. The mixture is boiled in a *burma* for 24 hours, the quantity of water being increased whenever evaporation make this necessary. The patient is admitted into the house of the herbalist and remains under his supervision for 15 successive days. During this time he lives like a hermit: he is not allowed to see anyone and is not permitted any food beyond an exceedingly small quantity of flour in water, but he is given to drink freely of the contents of the *burma*. At the end of the fifteen days he is very weak and emaciated owing to lack of nourishment so that he can hardly move or stand on his feet. He then goes away, but returns a few months later for a similar course of treatment. In the great majority of cases no cure is effected, though in a few instances some sort of improvement is observed.

The sleeping foetus. There is a general belief in Western Kordofan that in some cases of pregnancy the foetus for some reason or other is not delivered and remains 'sleeping' inside the womb for a period of anything up to seven or ten years causing sterility and various other troubles. Again and again I have been consulted by women who believed themselves to be suffering from this complaint with the request to effect delivery by an operation or by means of drugs. In some cases I found that there were uterine tumours of various sizes, in other instances there was some sort of metritis. I have been told of a case in which a women suffering from this condition was divorced by her husband; she subsequently married again and the second husband succeeded to set the foetus in motion whereupon it attained its full growth and was delivered.

II. NUBA.

Dagu mourning celebration at Silikki. Silikki is regarded as the most civilised Dagu community owing to the fact that they are much in touch with the Messeria. It happened during my stay there that one of the leading omdas, called Koko Hamdan, was celebrating the mourning rites observed on the anniversary of the death of his wife, and by a fortunate chance I was able to witness all the details. Great preparations had been made beforehand consisting in the brewing of enormous quantities of merisa and the slaying of four bulls and some sheep and the cooking of the meat. On the day fixed for the celebration all the inhabitants of the hill without exception were invited to the omda's house. Under the shade of a *tebel*di tree standing near the house a party collected for the big dance which they call *kanga*. Music was provided by a drum and five trumpeters, the trumpet being made of a long cylindrical gourd attached by bees' wax to a small round one. Everybody was wearing his cleanest clothes, especially the boys and young men who appear to reserve their clean clothes for such occasions. After forming a big circle round the music they advanced with spears pointed pretending to charge the band with a slow forward run, then running backwards they twice jumped over a log of wood while another log was thrown up into the air. The young men while charging were shaking their spears over the heads of the dancing girls. The latter however took a comparatively small part in the proceedings. After the dance had lasted for an hour the party moved into the *hosh* of the omda, where the dead wife was buried, in order to visit the tomb and honour it with a dance. There were some twelve *kujur* women kneeling about the tomb, their leader occupying a kneeling position over the centre of the mound. The head *kujur* would occasionally break into strange gestures and yawns which were regarded as mysterious manifestations of her superior functions, while the rest of the women were bowing before her and reverently handing her some of the ornaments which Dagu women wear. In addition to these women *kujurs* there were in the *hosh* the dancing party and several groups of men enjoying the merisa and the meat. After half an hour the whole party left the *hosh* and resumed the dance under the *tebel*di tree. When this had gone on for some little time there followed

the most interesting part of the ceremony with which the proceedings closed. The whole party, with the music leading ahead, walked out of the village in a southerly direction and skirted a hill in order to re-enter the village from the West. It was about sunset when they returned each running as hard as he could while those who were riding were galloping at their fastest pace. The traditional custom is that everybody, men and women, should run without stumbling or stopping and without looking backwards. The belief is that when the procession is marching out of the village death is removed from the village and thrown into the forest: when returning they are supposed to run away from death and try to reach their houses as quickly as possible, expecting there to find perfect health. Should anyone have the misfortune to stumble or fall or look backwards he is sure to die during the coming year, an apprehension which throws everyone into great terror.

Dagu Burial Customs. The Dagu bury their dead in the yards of their houses each man in his own *hosh*. An exception is made in the case of their sultan whose body is buried in the forest far away from the village. The reason given for this is that the sultan oppresses his subjects by heavy fines and exactions, and if he were buried inside the village the seeds of his evildoing might spring up and settle on his successors.

Succession to the throne. At the death of a sultan he is succeeded not by his own sons, but by the sons of his sister. The following is said to be the reason: owing to the frequency of sexual irregularities in the tribe a sultan can never be certain that his wife's children are also his own, and as the wife is a stranger to the royal blood a child of hers born of adulterous intercourse with a commoner would have no trace of the royal blood in his veins. In the case of the sultan's sister the risk of adultery is not eliminated, but as her son must be at least half of her flesh and blood, he is bound to have a certain proportion of the royal blood in his veins. If a sultan's sister has two sons one succeeds to the sultanate while the other inherits all the estate. Succession to the throne is regarded as preferable.

A mourning Tabu. At Kundukeira I was consulted by the leading *kujur* who led me into his most private chamber where he

keeps his charms and the other implements of his dignity, in order that I might treat a complaint from which his youngest wife was suffering. He informed me that during the period of mourning for his dead father, which extended for a year after his death, both himself and his wives were required by their custom to abstain from sexual intercourse; a breach of this prohibition would be visited upon the transgressor by the spirit of the dead man. The nature of the wife's complaint showed that apparently a breach of custom had been committed.



A PRELIMINARY ACCOUNT OF THE DIDINGA.

BY J. H. DRIBERG.

1. Name of the tribe.

Didinga is the name by which members of the tribe describe themselves. On maps and in official papers the spelling Dodinga is frequently found. Their neighbours, the Lorwama, Acholi and Lango call them Karoko, while the Boya refer to them by the name of Toi.

2. Habitat.

The Didinga inhabit mountains, which extending from Lobuli (Boya) in the North to Lothulla in the South form one continuous geographical feature, narrowing in places near the West of Lotuke to an elevated col from which extend at irregular intervals alae of varying lengths: further North the central plateau broadens and the alae lose their independent character and are involved in the general complex which forms the Didinga range. The main geological faults are well defined and run in a general North-Easterly and South-Westerly direction. The range varies considerably in height (e. g. Nagichot 6300': Malala 7100': Lakorechoke 5500': Korau 6350', and probably about 10500' on the highest peak of Lotuke), and is intersected by gorges of great depth and often of a precipitous character. The larger gorges contain flowing water near the source at all seasons of the year, but the water frequently disappears into the sand and gravel, re-appearing it may be a few hundred yards lower down until it finally disappears for good. During the rains several of the gorges are impassable and a vast volume of water is carried to the plains. On the mountains excellent drinking water can be found everywhere, but in the plains, both East and West, long waterless distances have to be traversed. Between Dauda and Kibongarok the country assumes a down-like appearance, rolling plateaus of short couch grass predominating, but notwithstanding this all the higher plateaus and the crest of Lotuke are heavily forested, as are the majority of the gorges, differing only in the nature of the trees, which on the highlands are of a

temperate and semi-temperate variety such as cypress and wellingtonia and beeches whereas in the gorges palm trees predominate and enormous timber trees particularly mahogany and cordia. A large variety of edible fruits, notably a species of cherry and an edible viringia and logan berry canes, abound. Extensive salt deposits exist at Logumeri, near Taala, and at the source of the Uwalen river near Korau, the water of which is noticeably saline during the rains. The rocks of many of the rivers are oxydised, indicating iron deposits, and at Lowiyaperit and Lotyathe surface ore of good and workable quality is extracted by the Nipore. Both black and white mica is universal, but it remains to be seen whether sheets of a sufficient size are obtainable. The volcanic nature of the country is indicated by the presence of lava at Ngorom (Didinga for lava) and between Chairong and Taala on the Eastern escarpment of the Laudo valley. At Ngorom there is a series of caves in the lava, one of them labyrinthine in character and extending far into the mountain. These have long been used for habitation, for storing grain and for quartering goats, but no trace has yet been found of prehistoric occupation; some caves in Taala still remain to be investigated. At the foot of Taala ("the white mountain", owing to the unusually resplendent quartz of which it is formed) runs the river Mamtikaburi, "the boiling water", in the Laudo valley. It is so called from the hot springs which there rise to the surface carrying a large percentage of carburetted hydrogen.

3. Relations with Neighbouring Tribes.

The Didinga have always been at constant feud with the Dodoth, Taposa and Turkana (the last mainly in self-defence). There has been a certain amount of mutual raiding with the Boya, chiefly the Northern Boya, but on the whole their relations have been friendly. They have lived on terms of amity with the Nipore owing to the hoe trade, as being ignorant of metal work they depend entirely on the Nipore for their iron weapons and implements. They used to be hostile to the Lorwama, but came to an understanding with them about 30 years ago and have since been on amicable terms with them and the Ukuti. They are friendly with the Lango of Teretenia and Dongotolo, but treachery on the part of the Kokir people a few years ago over a cattle transaction ruptured their former friendship with the Ikoto's region. During the severe famine close on 20 years ago many Didinga

migrated to the Bira, and till then had lived on the best terms with the Acholi; but while they were there Nono, the Acholi Chief of Muchwini, attacked them with the aid of Abyssinian slavers, and on their return to their own country Ogwok, another powerful Acholi Chief, made more than one successful raid on them, armed as he was with more than 100 rifles obtained from Baker and Emin Pasha. This led to an unceasing feud with the Acholi lasting to the present day.

Apart from the Nipore the Didinga had and have no allies. They intermarry with the Boya, and of recent years since the famine alluded to above with the Nipore and Bira. They do little in the way of trade, but annually export a number of cattle to Dongotolo, where they exchange them for goats; 1 cow for 25 goats and 1 bull for 13 goats. They import hoes, spears and metal ornaments from the Nipore, a large spear or a hoe being bought for 1 goat or 15 large ostrich feathers. One heifer can buy 20 hoes, 5 bells and 3 spears.

4. Language and History.

The Didinga have their language in common with the Boya, Nikoroma and Terna. It is also closely related to the speech of the so-called Beir of the Sobat-Pibor District.

Certain words used by the Didinga are common to Karamojong dialects and the Southern Lango, but these appear to be so few as to suggest that they are merely loan words. Information is however too scanty to permit of a definite pronouncement.

The Didinga have a very strong tradition that they arrived at their present habitat from the S. E., travelling through country now inhabited by Dodoth round the S. Shore of Lake Rudolph. The date of this migration is entirely unknown, but it was probably comparatively recent. In the XVI century this area was inhabited by tribes of the Shilluk cluster until they were dispersed by semi-Hamitic invaders from the East. These gradually tended to extend and drift southwards (vide the Masai), and it is possible that some ancient metal workings traceable in old slag-heaps at Latome, Lotyathe and other parts of the present Didinga country may be attributed to these XVI century invaders. Certainly the Didinga found the East and West side of the mountains deserted and always allude to these slag-heaps as the work of some by-gone inhabitants. Tradition also states that the Nipore and Lorwama reached the Nangiya range shortly before the Didinga and that these tribes came from the same direction and by the same route. That the Nipore migrated to the Nangiya not more

than 150 years ago is certain, and it is accordingly reasonable to date the Didinga migration from 100 to 150 years ago, a date which is to a certain extent confirmed by their scanty clan records. It is worth noting en passant that tradition accounts for their ignorance of metallurgy by a legend that when enjoining this migration God gave to the Didinga each a spear and arrow (though the arrow is not now used except for bleeding cattle), but to the Nipore and Lorwama a smith's hammer. While the Didinga moved round south of Lake Rudolph, compelled by the same disruptive famine, the Nikoroma who also claim the name Didinga, speak the same language and have identical customs, dress and coiffure — moved up the East side of Lake Rudolph and then struck N. W. to their present home on the Abyssinian Frontier beyond the Taposa. Here they lived in isolation and did not meet their compatriots again until about two years ago when a few Nikoroma accompanied some Abyssinian raiders to Didinga, where they were astonished and delighted to find people of their own tribe. These Nikoroma told the Didinga of the Terna who live more westward of them, and it would appear that the Northern section of the tribe stretches from the Agiba in an Easterly direction to the Nikoroma, while the Boya afford a connecting link with Southern Didinga. The Boya themselves participated in the same migration as the Didinga, but quarrelled over the site which they respectively wished to occupy. At the time of their migration the Didinga found the Taposa in occupation of all the Eastern side of the Mountains, and themselves occupied the West and Lotuke on the South. But they ceaselessly harrassed the Taposa, until about three generations ago the latter moved North abandoning the fertile Bokorora and Laudo valleys which the Didinga promptly occupied. Thus it is that for nearly all geographical features on the east side of the Didinga country there are to this day two names, the old Taposa name and the Didinga name.

5. Divisions,

(a) **POLITICAL.** The Didinga are divided into two main groups the Eastern consisting of Bokorora, Laudo and Morukoian, and the Western consisting of Patalado, Thuguro, Kademakuch, Lakorechoke and Lomongole. Within these respective groups there was no inter-village or inter-area fighting, but it was not uncommon for the two groups to make minor raids on each other over a petty quarrel. When a raid on another tribe was contemplated, the two groups used to

amalgamate and the assembled warriors used to be harangued by the eight chiefs of both groups. If the raid was on the Taposa (i. e. to the N. and E.), the Eastern group took all the captured stock, but if it was on a Western or Southern tribe (i. e. Acholi or Dodoth), the captured stock was reserved for the Western group. Only in war did the various chiefs co-operate, there being otherwise little or no political cohesion.

(b) Social : Clans.

Clan Name.	Prohibition.
Chiili or Chilinit	?
Kukuechit	Males and the mothers of twins may not eat the head and feet of cattle, sheep, goats and of all animals except warthog and rhinoceros.
Irinit	No prohibition. ? sub-clan of Buchinit
Buchinit	No prohibition.
Loborokok	Same prohibitions as in Lotuko clan.
Lotuko	Men and women refuse the head and feet of cattle, sheep, goats and of all animals except warthog, rhinoceros, elephant and giant hog. The clan name is taken from the Lotuko ("Latuka") tribe, from which Loperitimoi, the founder of the clan, broke away four generations ago. The clan is not friendly with the Lotuko tribe.
Laranginit	?
Bulani or Bulanech	Same prohibitions as the Lotuko clan. The founder of the clan was a Taposa, by name Akoro, who married a Boya woman and begat a son Mungoya. Mungoya was the father of Loetamoi, now about 30 years old, as testified by his age-grade. Akoro's grave is at Kibon-gadok and sacrifices are still made at it.
Lokuti	?
Kagumi	?
Xukanit	?
Taalach	?

Meelach	Same prohibitions as the Kukuechit, with the addition that the pot in which the head and feet of an animal have been cooked for the consumption of women may not be used for cooking men's food until it has been thoroughly cleansed.
Maijogit	?
Lodyat.	No prohibition.

The clans are exogamous and are dispersed all over the country. There is no definite clan centre or organisation, while the meaning of nearly all the clan names is unknown. It would appear that there are two main divisions, clans which have no prohibitions whatever and those which are forbidden the head and feet of animals. Totemism is either non-existent or so broken down as to be unrecognisable.

ii. AGE-GRADES. Youths are initiated approximately every three years, but the period has been irregular, especially in the earlier years, and it is likely that the intervals were previously longer. The ceremony of initiation is called *nameto*, and the grade last initiated initiates its successor. The pretext of initiation is always some petty tribal offence by an uninitiated youth, about the time when the new grade is ready for the ceremony, i. e. when the youths have grown their first headdress *temedik*. On the day of initiation the youths are soundly thrashed with withies and instructed in the customs and traditions of the tribe. Each initiate has to provide beer and a bull, which is killed and eaten by the grade carrying out the initiation. No uninitiated person may sit on a stool. The word *nameto* and the names of some of the grades suggest a Karamojong source for this ceremony, which is the more probable as among the Karamojong it is much more elaborate than the somewhat emasculate Didinga function. The following are names of the different grades now existing, starting from the oldest:—

Grade-Name.	Remarks.
<i>Ningalemo</i>	"the fierce people"—all dead.
<i>Niwana or Nitome</i>	Elephant — a few left.
<i>Nikothowa or Nibitio</i>	Buffalo or Warthog.
<i>Nikorio</i>	Giraffe.
<i>Nikolonga</i>	Sun.
<i>Merechanit</i>	Grant's Gazelle.
<i>Nitera</i>	Thorn.
<i>Ningatunyo</i>	Lion.

Nitolojore

Warrior—initiated during the 1913 expedition.

Nichumakileng

An old name repeated.

Nithapanamoi

Initiated December 1921.

6. Chiefs.

The paramount Chief is Alukileng son of Lotum Lopungamoi son of Giramoi, Chief of the Southern Boya (who also call themselves Didinga), clan Lobarokok (v. above). Alukileng is a hereditary rain-chief and is in fact the only rainmaker among the Boya and Didinga. Every year he receives offerings of goats from Didinga to ensure rain and in return gives them some sacred water to be used in the local rain ceremonies. Cases which are not satisfactorily decided by the local chiefs are taken by the Didinga to Alukileng for arbitration.

The local rain ceremonies are held independently in the different chieftainships if the rains are late, but the people are not convened to these by their chiefs, but by the old men. Each area has its traditional place of celebration: Patalado, for instance, at the Logutha falls in the Kaidoto river under a large fig tree: Latome under a fig tree at the head of the Kathawa river. The ceremonies do not vary essentially in the different localities. All men attend with spears and withies, but without shields, and a black bull is killed under the fig tree. It is cooked and eaten there and the undigested matter from its intestines is smeared over the bodies of the men, over the withies and trunk and branches of the fig tree. The water obtained from Alukileng is then thrown up into the air from a new calabash, and the rain songs start led by the old men, the young men joining only in the refrains. They sing and dance round the tree till sunset. The person selected to kill the sacrificial bull has to repay the owner one heifer, but receives no tribute or contribution from the rest of the participants.

Chieftainship is hereditary, a son or, in default, a brother's son succeeding a dead chief. Chiefs are the leaders in war and alone may summon the people for an organised raid. In peace they arbitrate in disputes between their own people or with aliens, and generally represent their men when a litigant has a cause to plead before another chief. Their privileges appear, however, to be slight and they have no title to free cultivation or labour. Their control over their people, greater probably than is the case with neighbouring tribes, is never-

theless small except in matters concerning the whole community. As far as it goes, however, it is effective. Thus some years ago when an alien, Longichamoi, came with his numerous cattle to settle in Chief Loriamoi's country his people promptly seized and distributed the cattle. Fearing however that Longichamoi would go to the Abyssinians and raid them in revenge, Loriamoi secured the return of all the stock and arranged that Longichamoi should leave his territory and settle on Lotuke.

The following are the present Didinga Chiefs :—

Timan Lomingamoi,	Chief of Patalado,
Lowath Lopulimoi,	Chief of Kademakuch,
Mechedik Loriamoi,	Chief of Lakorechoke,
Logeramoi,	Chief of Lomongole,
Lokumamoi,	Chief of Bokorora,
Loputhuk Apedongomoi	Chief of Laudo,
Loyom Lochorimoi,	Chief of Morukoian,
Lotyang Lotaparemoi,	Chief of Thuguro,

7. Population.

At a very rough estimate between 25,000 and 30,000 of which some 4,000 to 5,000 are adult males, but it is too early yet to attempt more than a casual approximation, and this may prove to be an underestimate.

8. Economic Life.

I. LIVESTOCK AND AGRICULTURE. The Didinga are both pastoralists and agriculturists, the latter by necessity, the former by inclination. The indigenous type of cattle is small, stocky and humpless, but a larger humped strain is also present, doubtless due to the introduction of new blood from stock raided from the Karamojong and Acholi. Pleuropneumonia is endemic and causes severe mortality if cattle are taken from the mountains to a different altitude and climate. Three or four villages (or, if very large, one village by itself) combine to build a communal kraal in small valleys or at the edge of the forest, well protected from the wind, in the highlands of the mountains. Steers and nearly all the bulls together with heifers and young cows are kept in these mountain kraals, but cows with three calves and over are kept in small village kraals at a lower level together with not more than three bulls to a village. Cows when ready to calve are brought from

the mountain kraals to the villages. They are milked morning and evening, and bled by a plugged arrow shot into the jugular. From 200 to 300 head of cattle are herded together. Cattle are watered at rivers, and where water is scarce or the approach difficult wooden drinking troughs (*Kauxul*) are employed to prevent the water being fouled. Sheep and goats are also numerous and much prized, but are kept in the villages of their respective owners. Sheep are not forbidden to women as is usual among neighbouring tribes, and goatskins are in great demand for making bags and for wearing apparel, whereas the hide of cattle is not utilised at all, but is cut up with the meat. All domestic livestock is named, each animal being given two names, one denoting colour or peculiarity, the other a human name. Chickens and dogs are also kept, but not cats.

At least two grain crops are planted annually, in April and May and again in October; sometimes an intermediate crop of grain is planted towards the end of July. The area cultivated is large and the men do the clearing and the first digging, but the women do the major part of the rest of the cultivation and all the harvesting. If a person starts cultivating in a new vicinity and others follow his example, and if subsequently the cultivation fails, he has to pay each of the others one goat. These are killed there and are eaten by old men and women only. The bones are buried in the cultivation. On the other hand if the cultivation is successful every year he, or his heir is invited to sacrifice a goat, provided by the locality, to bring good luck on the crops and he is in addition given a goat as a present for himself. Metal hoes are still not numerous, and most of the cultivation is done with a paddle-shaped wooden hoe called *Kiboki*. The following are the principal food crops grown:—

Durra, *Labi*, species:— *Nyurulit*, *Nyuratit*, *Ngamani*, *Nakonyen*, *Komolech*.

Dukhn, *Lathik*.

Millet, *Xiro*.

Beans, *Mordo*. (little grown, and intermingled with dukhn crop; small and of poor quality).

Sesame, *Kanyim*. (only a little grown on W. & S. from seed obtained from the Lorwama).

Pumpkin, *Lathatinit*.

Gourd, *Guthuguthoit*.

Cucumber sp. *Xuli*, *Kochokech*.

Tobacco, *Babu*. (universally smoked by both sexes, and also used as snuff).

ii. HUNTING AND FISHING. Neither fire nor nets are used for hunting, but the area to be hunted is surrounded by a large body of men, who gradually narrow the circle towards the centre concentrating the game. Hunters may sleep out as many as three days at a big hunt. No shield is carried, but all available spears are taken and clubs for knocking down small game and for throwing at birds. Trained dogs always accompany the hunters for pulling down wounded game. These dogs are drugged in puppyhood with the essence of a particular grass to improve the scent, and with pounded warrior ants and scorpions to give them courage. Fishing is not practised as fish is a forbidden food.

iii. CRAFTS. There is no metal work and the only basketwork consists of badly fashioned mats used for doors. Skin bags take the place of baskets and a winnowing mat is unknown. Pottery is women's work, but it is a profession practised by comparatively few women, who make earthenware pots for sale, one large pot or four small pots costing one goat. These goats are the property of the potter — the only moveable property a woman may possess — and her husband may not take them without the wife's permission. Well-shaped horn spoons (*Lokolol*) are made by men.

9. Weapons.

i. FOR WAR. *Dila*, spear. (Any number taken, but they are scarce and rarely exceed two).

Nyatubot, short-handled stabbing spear; one carried.

Napel, wrist knife.

Gilip, shield.

Ibakit, stick (used for warding off spears and for walking),

Nyanino, kurbash (used both for fighting and for driving captured stock).

ii. FOR HUNTING. Spear: *Nyathebo*, club (for knocking down oribi or for throwing at birds):

Kabath, knife (for cutting up meat).

10. Social Life.

i. Birth. A woman remains three days in her house after bearing a son, and four days if the infant is a girl. During the period she

is secluded from all except her most intimate relatives, and her portion of the village is lightly fenced off. The umbilical cord is severed before the placenta has been expelled but after all pulsation has ceased. The foetal end of the cord is tightly tied with chewed fig fibre and is anointed with fat. When it shrivels up and drops off, it is buried with the placenta near the house. No one will eat food cooked by a woman who has recently borne a child, as she is in a condition of ceremonial pollution. In the same way the milk of a cow is not drunk till the calf starts to eat grass itself. A woman for some days before parturition may eat rock salt (*Balang*), but is forbidden salt extracted from goats' dung (*Bur*).

Twins are considered lucky, but are in a class apart as something uncanny, though there appear to be no special ceremonials associated with their birth. Triplets are regarded in the same light as twins, but when they are old enough only two are brought up by the mother, the third being fed on cow's milk. Till the twins and triplets have reached the age of puberty, their father is prohibited from eating with others and may not accompany any party going to war or hunting.

A breech presentation (known as *Kibal'e* as opposed to *Okya*, birth') is extremely unlucky and the father is penalized as at the birth of twins.

Ordinary children are named after their grandfathers on either the father's or the mother's side, but a posthumous child is always named *Lokidak*, fem: *Ikidak*, and a child born after a series of infantile deaths is named *Lokure*, fem: *Ikure*, or is given some insulting or depreciatory name in order to cheat fate.

The two lower middle incisors are extracted as soon almost as they grow, and on regrowing are again extracted when the child reaches the age of puberty.

ii. MARRIAGE. Infant marriage or betrothal is not practised. The man and girl are guided entirely by their own feelings and emotions and not till after they have decided to marry does the suitor approach the parents. On the first occasion he goes with three friends to talk over the proposed marriage and they take with them 6 goats and 1 spear and 1 hoe. The mother of the girl keeps the hoe, and the goats and spear are held by her for the girl's younger brother. The suitor has sent a present of food ahead of him, and if the mother is agreeable to the marriage she will accept it and will be ready for the interview. After this visit the suitor gives the paternal uncle five goats and six

spears, and cultivates for his fiancée's mother, and in another month again pays a ceremonial visit taking 32 head of cattle and shortly afterwards a further 16 making a total of 48 head of cattle in all. In addition to the goats and spears already paid he has to pay 35 more goats, 16 spears and 3 hoes. The dowry is apportioned as follows:—

Ten Chi Chyethak, "Cattle of the house" i. e. to provide the mother with milk — 6 head of cattle.

Bride's eldest brother,	3 head of cattle, 5 goats, 1 spear.
„ next „	4 head of cattle, 5 goats, 1 spear.
„ father,	3 head of cattle, 5 goats, 1 spear (1 cow, 1 heifer, 1 bull).
„ paternal uncle,	4 head of cattle.
„ maternal uncle	3 head of cattle, 5 goats, 6 spears.
„ „ grandmother,	2 head of cattle, 2 goats, 1 hoe (1 cow, 1 heifer calf, 1 goat and kid).
„ paternal aunt,	1 heifer, 2 goats, 1 hoe (1 goat and kid).

The other maternal uncles get a bull each, and the balance is kept as a family reserve for any other sons. In addition any clansman of the tribe who asks for something must be presented with a spear, a goat or an axe. After the dowry has been paid in full, the suitor is visited by the bride's girl friends who bring oil and anoint the body, and he then goes with all his friends to the bride's village, where beer has been prepared and a big bull is killed for the wedding feast and where all her clan is assembled. Claims by clansmen or relations for their proportion of the dowry are made at this feast and are settled at once by the girl's family. At the conclusion of the feast the bridegroom goes home with his wife, but she returns to her family next morning to be purified after the consummation of the marriage. A few evenings later she goes definitely to her husband's village, accompanied by girl friends carrying presents of fuel. There is no avoidance by a man of his wife's mother either before or after marriage, but he is bound to cultivate for her every season and to kill a bull for his friends to assist in her cultivation. During the hunting season he must also make her presents of meat from time to time.

Sterility is not a ground for divorce, as it is said that "God ordered it so". Indeed divorce is very rare, as is infidelity after marriage. On divorce however, the woman whether guilty or not has the custody of all her children, who are adopted by her new husband. The dowry—

less 6 heads of cattle for "damages"—is repaid by the new husband through the girl's family, or if there is any delay, the husband more often takes what cattle he can by force from the family and leaves them to try and recover from the new husband. Adultery is nearly always due to the woman and in that case no damages are paid; but if the paramour has made the initial overtures he has to pay 6 head of cattle compensation to the injured husband.

If the wife dies without bearing a child she is replaced by a sister or, failing this, the dowry is repaid. If there is a child living at the time of her death, the husband has no claim for repayment; but the dowry must be paid back if both the woman and child die at childbirth.

There are a few men who absolutely refuse to have anything to do with women or even to hear them discussed. These are called *Buarinit*, a term which is also applied to men who are too poor to marry.

iii. DEATH AND BURIAL. The dead are buried with the head towards the East in deep graves which are outside the village. Both sexes are buried lying on the right side in the embryonic position, not more than one person being buried in the same grave. A woman who is enceinte at the time of her death is cut open, and the embryo is removed, but is buried with her. There is no special ceremonial for the burial of twins. A man's headdress is cut off and buried with him, but nothing else is buried with the dead. A cairn of stones is erected on top of the grave. The deceased is buried by four men of a different clan. One goat is given to the buriers, two of whom stand on opposite sides of the open grave and pass the goat across to each other, three times if the deceased is a male, four times if a female. The goat is then killed in the village and is eaten by the male mourners, while two goats are killed and eaten by the female mourners. The three skins are given, one each to three of the buriers, while the fourth receives a necklet of iron wire. Next day the relations assemble and one bull is killed for the funeral feast. Should all the relations not have arrived, a second bull is given next day to the remainder, who take it away and eat it elsewhere. All houses, pots, granaries etc. are destroyed.

iv. INHERITANCE. is, first, to the son of deceased; second, in default, to the brother; third, in default, to the deceased's daughter's son. Wives are normally inherited by the mother's sister's son, but

if the deceased leaves a young wife who has not borne a child, she is inherited either by his son or his brother. An inheritance fee up to 10 head of cattle must be paid to the woman's relations. This is not however paid by the mother's sister's son, but by the heir to the property of the deceased, who can subsequently claim any children borne by the woman to the mother's sister's son.

v. DRESS. (a) The natural hair is allowed to grow long and is worked into the shape of an inverted basin and often resembles a balmoral in appearance. This is called *Temedik* and on top of it is attached a holder (*Chobechit*) into which are inserted ostrich feathers (*Kauri*), white, black or dyed red. Black feathers however may only be worn by old men, and a young man observed wearing them has to pay a fine of beer and a bull or a goat. The *Temedik* is also ornamented with circular discs worked in beads (*Nyalukan*). Neither the body nor the face is decorated with cicatrization, but after killing an enemy a man has to cut ceremonial cicatrices (*Nyateba*) on his shoulder and chest. The following comprise the ornaments usually worn :— lip-plugs of chalcedony, *Walangi*; brass earrings, *Logumak*; brass ear-clips, *Aramatol*; brass rings worn on helix of ear, *Machiren*; bead necklace, *Kelbena*; iron beads strung into necklace, wristlets or waistlets, *Nataka*; iron necklets, *Nyagalnya* or *Thik*; iron chains worn round neck, *Nyariko*; ivory plaque suspended on breast from neck-chain, *Nyangalitom*; whistle *Leri*; tobacco horn worn on arm, *Nabui*; armlets of ivory or warthog teeth, *Burugech*; leather wristlet, *Olo*; wrist charm, *Lori*; wooden charm on wrist, *Gariyenit*; wristlet of brass wire, *Machiren*; finger-ring, *Digidok*; baboon-skin cloak, *Cherem Chi Lotim*; leopard-skin cloak, *Char*; leather cholera belt, *Kadingo*; dance bells, *Chugurena*; sandals, *Chawa*.

(b) Women's hair is allowed to grow long and is anointed with oil and twisted into ringlets, and when so dressed is called *Xotir*. Their bodies are ornamented with cicatrization (*Lodingoti*), and they share with men the following ornaments :— iron necklets and bracelets, bead necklets and wristlets, chalcedony lip-plugs, ear-rings, finger-rings and brass-wristlets. In addition they wear iron anklets and brass armlets and leglets. They wear goatskins draped toga-wise, and a leather belt (*Bokyo*), from which are suspended over the pudenda metal chains (*Nataka*) or in the case of girls an apron of chipped ostrich egg shell (*Rika*). Cowries (*Thigiriena*) are worn on the neck or wrist by women under possession.

vi. CIRCUMCISION. is not practised.

vii. MUSICAL INSTRUMENTS. Formerly there were two drums (*Kidong*) in the possession of Chief Lopulimoi, but one was destroyed by fire and one was lost in the 1913 expedition. There is a set of six sacred drums, but these were buried two generations ago in the steep bank of the Kaidoto river, for a reason which the Didinga will not divulge. Their position is known, but no one dares remove them as the drums would put him to death. Formerly drums were used to cure certain diseases, especially demoniacal possession, but now that there are no drums, skins stretched over the mouth of an earthenware pot are substituted. Flutes are not known, but the common boat-shaped harp (*Tara*) is used, and another similar harp fashioned of tortoise-shell and called *Bokol*. Girls amuse themselves with a primitive banjo called *Adungu*. No musical instruments are employed at dances.

11. Religion. A definite expression of opinion is as yet impossible. Ancestor worship is probably predominant, as sacrifices are regularly made at graves. There are no permanent shrines, but in the case of demoniacal possession a small shrine is erected in the house of the sufferer and is called *Chyeth Chi Odani* or House of Odani, possibly indicating a spiritual being Odani as the cause of possession. When it is said that "God ordains sterility in women," the word translated by God is *Tamukujen*. It is significant that rain is *Tamu*, and there may be as with the Suk and the Masai an identification of rain with a divine personality. Fish are greatly feared, if not actually revered, and none may touch or kill one. The general name for fish is *Gulugo*, but they are also called the Spirits of the River, *Theret Chī Kido* or *Borogech Chi Kido*. New *Borogech* is one of the names of the rainbow, which tends to confirm the identification of rain with God.



PROVINCE NOTES.

FUNG PROVINCE.

Notes on the Burun.

It has been said that a traveller should record his first impressions of any new tribe he meets, and he can never later see them in so impartial a light. Although speaking a Nilotic language the Burun, who call themselves Meban, remind one in appearance of the Lugwari, except that they are of rather bigger build. They possess several characteristics in common with the latter people, such as the habit of adorning the ears with a number of small brass rings attached to holes bored round the rim. The usual total nudity of the male and partial nudity of the female prevail as amongst other Nilotic people and they observe the widespread custom of smearing the body with a mixture of ochre and oil. The ore used for this purpose (*kaya*) is said to be taken from pits at a place called Elo, reported about an hour and a half to east of north-east of Keya. After burning and pounding it is mixed with an oil prepared from the kernels of the heglig fruit.

The Burun are amongst those Nilotic and semi-Nilotic people who use arrows, like the Acholi, Madi and Lugwari, in contradistinction to the pure spearmen viz. Nuer, Shilluk, Masai. The arrow poison is prepared from the juice of the euphorbia as amongst the Lugwari. The Burun also use a peculiar weapon called *bwom*. This is a flat and slightly curved stick, something like a boomerang, which can be thrown easily to the distance of 100 yards with a flat trajectory, its breadth and flatness supporting it in flight. I have never seen a similar weapon in use, but believe that it is known in the Congo.

The Burun are lavish in the presents they make to strangers and travellers, being in this respect like the extreme southern peoples of the Sudan and unlike their neighbours in this part of the Nile valley. They keep pigs extensively. Their language is closely related to Dinka and Nuer.

As far as I could make out there appear to be two sections of Burun bordering on the Nuer in the locality visited.

1) Mi Boinka who are now living in a group of villages to the North of and on the *chor* variously described as Chifayuka, Yali, Lyenyweni and on the map called Murga and Yungen. The chiefs visited of this clan were Jingul, Falka (of Nyeda or Nyada), Okka and Lunga. There was also a line of villages of this same clan, belonging to the last two chiefs, south of the above-named *chor* from Kaluang towards Boing. Of these only Kaluang remains. Kalukon, Luthu and others have been destroyed by raids or were evacuated in consequence of raids. This group is under Soda Merkaz.

2). Shauwa. These people are the nearest to the Garjak and at present live in a large cluster of villages several miles west of the Yabus (or Sobat as they call this *chor*) near the point where it terminates in a swamp. They appear to be divided into two subsections: Ket Ngwoiyu under Chief Eweda, and Ken Bor under Chief Deng. The former live to the south and west of the latter and are in more immediate contact with the Nuer. These people say that they used to live further south at Ban Majai and Ken Shwaije, just to the north of Khor Daga (called Mok Bar by the Burun and Moi Bar by the Nuer), and that in those days there were no people living at Shoa, the space between their villages and the remainder of the Burun being uninhabited. They were driven northwards by the encroachment of the Nuer. This and the necessity for mutual support accounts for the large accumulation of villages round Shoa. This section is under Kurmuk Merkaz.

There are other sections north of the Shauwa but not immediately bordering on the Nuer. Those through whose country we passed are the Boing under chiefs Toinya, Tika and Anyang, and the Piaka under chiefs Kor and Nyaya.

C.H. STIGAND.

Soap Making in the Sudan.

It is well known that in former times soap making was carried on as a local industry in various centres in the Sudan. It is not indeed one of the old native industries, for Burckhardt who travelled here in 1814 includes soap with sugar among the imports into Shendi and writes: 'The soap which supplies all Egypt and Arabia is manufactured at

Gazé, Yaffa, Hebron and Jerusalem. No good soap has hitherto been made in Egypt itself ; there are several manufactories of it at Siout, but it is of a very inferior kind, the oil which they employ being made from the lettuce instead of the olive. The Pasha of Egypt however, has lately established under the direction of an able Italian, a soap manufactory in the Delta.' (Travels in Nubia p. 300). Thirty years later, in 1844, Lepsius in his account of Kamlin writes. 'A simple, homely German, born in the neighbourhood of Würzburg, by name Bauer, has established a Soap and Brandy Manufactory, of which he takes the management himself. A Sugar and Indigo Factory is conducted by an Arab.' (Egypt, Ethiopia and Sinai, London 1853, p. 163). Soap-making was therefore one of the industries which the country owed to the Europeans who settled here in the early days of the Old Government. The primitive methods employed in those days have now fallen into abeyance, and where the industry still exists it is carried on in a modified form mainly by Armenians and Greeks. At Karkoj however, some ten years ago, we had the opportunity of seeing a native factory run on the old lines, and we believe that it is still working. Karkoj lies on the right bank of the Blue Nile some twenty miles south of Singa, and the population, like that of Kamlin, still contains a good deal of Egyptian blood. The survival of the old industry in that locality is a matter of no little interest. The forty years which elapsed between Bauer's enterprise and the Mahdist rebellion would be enough for the industry to become so firmly rooted that it could survive the subsequent confusion.

The following particulars supplied at the time by Muhammad Abu El Tayib, head merchant of Karkoj and the owner of the factory, may be of interest.

- 1) Limestone is obtained from the river bed ; this is burned and quicklime obtained. (1)
- 2) The ashes of the plant *dalle* — *Trianthema salsoloides* (Broun's Catalogue of Flowering Plants) — is brought from Hillat Wad El Abbas

(1) The process of soap making consists of boiling oil or fat with caustic alkali (not lime) and the first 3 of the following paragraphs describe the method used for preparing the caustic alkali by the action of lime on alkaline carbonates : they deal successively with (1) the preparation of quicklime (2) the preparation of plant ashes rich in alkaline carbonates (3) the interaction of these two whereby caustic alkali (soluble in water) and carbonate of lime (insoluble) result. The filtered liquid thus consists of a solution of caustic alkali *i.e.* sodium and potassium hydroxides.

in the district of Sennar, where it grows as a weed; when ripe the *dalle* is collected, heaped into a stack, burned and the ashes collected.

3) Three *rub'as* of lime and one *rub'a* of *dalle* ashes are thoroughly mixed and filled into two *burmas*. These are placed on tripods and contents washed with water. The filtrate is collected in pails placed underneath, and the washing is continued until the water filters clear.

4) The whole of the resulting filtrate is thoroughly mixed. Then one third of the filtrate (from the original 4 *rub'as*) is taken and mixed with 25 *rotls* of *simsim* oil. This is placed in a shallow circular pan—somewhat like the *tisht* in ordinary use for the washing of clothes—and gently boiled until the whole of the water has been driven off or nearly so. Then a second third of the filtrate is added and boiled gently until the mixture begins to thicken a little, like honey, when a *roll* of salt is added which causes the soap to break out from the solution. The remaining third of the filtrate is now added and boiled gently until the whole thickens. The pan is then taken off the fire and left outside for the night in order to cool. In the morning the soap is cut into cakes and a trade mark usually stamped on each piece. Each pan gives 130 pieces or $37\frac{1}{2}$ *rotls*. From 100 *rotls* of *simsim* seed crushed by the native oil press they reckon to get 35 *rotls* of oil.

When this soap manufacture was carried on at Kamlin and Wad Medani the *dalle* ashes were replaced by *girdiga* from Gezirat Mugrat near Berber, or by *girdiga zerawiya* from Darfur. The *girdiga* is an earth which probably contains a fair amount of sodium and potassium salts. The soap manufactured from Mugrat *girdiga* was said to be rather yellow, but that from *zerawiya* quite white.

W. A. D. and J. W. C.

KHARTOUM PROVINCE.

AHMED PASHA ABU UDAN.

In a recent issue of a Khartoum newspaper it was stated that several Governors General of the Sudan are buried in Khartoum and their tombs in some cases have now been identified.

One of the so called Governors General (for the title is not in all cases accurate) was Ahmed Pasha nicknamed Abu Udan (father of ears)

whose history is not without interest. He was called Abu Udan because he had exceptionally long ears and at the same time the natives found the name appropriate on account of his remarkable faculty of finding out everything that was going on.

He was originally a white slave or mameluke who was brought to Egypt from Turkey and was one of a number of Circassians captured in a raid. As a slave he was the property of Mustapha Pasha, a nephew of Mohammed Ali Pasha's first wife and for some years his barber and valet. Mustapha Pasha made him an officer in the Turkish army and after serving in the Morea and the Hejaz he rose rapidly to high rank during Ibrahim Pasha's campaign in Syria. He rode from Acre to Cairo in record time to inform Mohammed Ali Pasha of the success of his son's army (1). As a result of his exertions he was seized with an illness and effusion of blood after delivering his message which nearly cost him his life. He rapidly rose in favour and became Minister of War to the Pasha of Egypt and assisted him materially in his schemes for independence from Turkey. His efforts were however nullified by his obstinacy and overbearing manners and it is said that he bullied the consuls on behalf of his master to such an extent that Mohammed Ali was obliged to retire him.

After spending some months in retirement he was sent to the Sudan and arrived in Khartoum in 1836 in command of the 8th Regiment of Infantry, then composed of Fellah conscripts. (2) Ahmed Pasha very quickly asserted himself in Khartoum as Commandant of the Forces, and as a result relations between himself and Khurshid Pasha, like himself a veteran of the Greek and Hejaz wars, became impossible. Ahmed Pasha was recalled to Egypt the year of his arrival and sent to Adana where he was appointed the Vali.

Intrigue was however busy and as the result of a very unsuccessful raid on Abyssinia during which the Christian churches were deliberately defiled, Khurshid Pasha was recalled to Egypt. Ahmed Pasha who had married a relative of Mohammed Ali's returned to Khartoum in June 1838; his predecessor who was extremely popular with the better classes receiving a great ovation upon his departure.

(1) Ibrahim Pasha passed as the son of Mohammed Ali Pasha but he was the son of Mohammed Ali Pasha's wife by her first husband, from whom she was divorced. This lady who was very wealthy was the daughter of the Governor of Cavalla, Mohammed Ali Pasha's birthplace.

(2). Few Egyptian conscripts returned to Egypt. They were unsuitable for the climate and neither proper quarters nor medical attention were provided for them.

The new Governor General immediately proceeded to re-organise the government and whatever his personal failings may have been, proved himself an able and capable administrator. The government services were reconstructed and civilians of native origin employed. The abuse of the *corvée* and unauthorised raids by petty army commanders were suppressed by the Governor General who reserved to himself these rights (1). His chief of staff Musa Bey Hamdi was his ex-mameluke and a man of most ferocious character. In 1839 he made a very extensive razzia or raid for slaves on the Beni Shangul country and besides keeping the Sudan army up to more than its requisite strength sent numbers of blacks down to Egypt for enrolment in his master's army. Ahmed Pasha was careful to keep his master refreshed with personal and timely contributions of four or five thousand pounds besides the usual revenue appearing in his accounts. This latter has been variously stated, but it was probably not less than £E. 500,000 annually.

Mohammed Ali Pasha however grew suspicious of his subordinate and in October 1839 left Cairo for Khartoum. Upon his arrival he dismissed the Governor of Kordofan, Mohammed Bey, and replaced him by Yusef Bey. He then proceeded to Fazogli, but in consequence of the hostility shown to him by Sheikh Suleiman, a Hameg of Roseires, and the defiance of a certain Abu Sarrott, he released 300 slaves he had captured. Mohammed Ali returned to Khartoum and left orders for the slaves (4000—5000) to be sent from Kordofan. This was done next year after the Kababish had been given a sop by an increase in the rate of transport for gum, then a government monopoly.

Mohammed Ali Pasha was met at Jebel Royan by the Darfur pretender Abu Maidan to whom he promised his assistance in placing him on the throne of Darfur, then an independent and very rich Sultanate. It is said, that just before his departure from Khartoum, Mohammed Ali Pasha gave orders for the post of Governor General to be abolished and that Ahmed Pasha was to be Governor of Khartoum, Sennar and the Gezireh, but all governors were to communicate with Cairo direct. This was never actually put into effect and it is not to be wondered at when two governors who had tested Ahmed Pasha's powers both died on transfer to other provinces under suspicious circumstances.

(1). These he exercised very freely on all the black races by instituting a series of expeditions which annexed territory and took captives.

Ahmed Pasha's lieutenants at this time appear to have been Musa Bey Hamdi, later Governor General in 1862, and Elias Bey, later Governor of Taka (Kassala). These men with a certain Soleiman Kashif earned a most unenviable reputation in the conquest of Kassala. The operations against Kassala commenced in 1839 on a serious scale. There had been fighting and raids in 1838, but in almost every case the tribes retired with very heavy losses from musketry fire before the Turkish forces and generally re-occupied their grazing grounds. The weaker tribes paid tribute, but the more powerful Hadendoa and Halenga refused to do so.

Taking advantage of tribal feuds, Ahmed Pasha set the Hadendoa against the Halenga and after exterminating a small tribe known as the Sabderat attacked both the Halenga and Hadendoa in turn. The success of his campaign was in a great measure due to a Prussian engineer, Werne. Taking advantage of the fact that the Gash, a large river which only flows for a short period after the rains, could be diverted, all the prisoners were set to work to make a dam. This was successfully constructed and the water supply for thousands of persons and their animals cut off. The Turks were so sure of success, owing to numerous surrenders, that the guard on the dam was reduced to 200 men. This guard was taken by surprise and massacred to a man and the first intimation that the Turks had of the destruction of the dam was the rush of water past their camp. The power of the tribes was however broken and the principal Sheikhs later surrendered. The unfortunate Sheikh of the Hadendoa, Mohamed Din, was made a prisoner and died in prison. His nephew was made the Sheikh of the tribe and held responsible for his people after numerous executions and barbarities had been carried out, which caused the severest comments from Lepsius, the eminent explorer, and Lejean the French diplomatic agent. The latter says that when he visited the country twenty years after there were still many traces of the Turkish methods of the campaigns of Abu Udan and El Menekli Pashas. Owing to the fact that many defenceless captives were executed in the presence of Ahmed Pasha he is now known in Kassala as the Butcher Pasha. Lepsius however says that it was his successor Ahmed Pasha El Menekli who perpetrated the greatest atrocities after a revolt in Kassala in 1844.

After the Kassala campaign and its formal annexation to the Sudan the country was divided into seven provinces viz, Fazogli, Sennar,

Khartoum, Kassala, Berber, Dongola and Kordofan and a military commandant placed over each who was subordinate to Ahmed Pasha, as Governor General. Ahmed Pasha instituted a very strict censorship on all communication with the Sudan. In order to conceal his doings he opened all the letters addressed to or sent by Europeans, and if the contents were not to his taste burned them. In his day the frontiers of the Sudan were extended and pushed towards Equatoria and the territory annexed by him is practically of the same area as the Sudan of today with the exception of Darfur.

One of his most famous razzias or expeditions for slaves for the army is described by Paton. An army of 2000 infantry and 1000 Arab cavalry with four guns and 6000 camels marched to Khor El Sidr in the Dinka country. In five days the cavalry returned with 622 slaves and 1500 oxen. The force now proceeded to the Burun country and took 526 slaves, but so many were wounded that only 75 men were fit for service. The prettier young women with those able to walk were however carried off. The town of Kur was bombarded and finally taken by assault after the Turks had been three times repulsed with heavy losses. The exasperated soldiers who were not used to resistance of any sort butchered most of the blacks before they could be stopped by their officers, who were furious at this destruction of possible slaves. The army then marched to Kurmuk, a town of 1600 houses on the frontier of Abyssinia; the town was burnt and the inhabitants who had fled to the mountain top were attacked.

The Turks received such a warm reception that they broke and fled casting away their arms and it was three days before they could be rallied. Meantime the blacks made terms and although these included the payment of a fine in gold, this was never paid. This expedition was not considered a success as the total number of slaves captured only amounted to 1875 as compared with a previous raid by a Turkish commander who had succeeded in capturing 5000. Practically two thirds of these slaves were drafted into the Turkish army of occupation in the Sudan or sent to the Hejaz armies.

The Governor General avoided going to Egypt under numerous pretexts and in 1843 (September) he sickened with fever in Khartoum, from which he never recovered. The local story is that his power had excited the jealousy of his master and that rumours had reached Cairo that a plot was on foot to render the Sudan independent of Egypt, with the result that death was hastened by poison. He is buried in the same tomb as Musa Pasha Hamdi.

A. E. ROBINSON.

NUBA MOUNTAINS PROVINCE.

Nuba boys at play.

The Nuba seem to have almost as many games and forms of amusement as most white children, and they enter into them with at least equal zest. Some of their games are purely for the sake of amusement, but others have also an eye to the main chance and aim at the satisfying of an everlasting hunger. This article is chiefly about the former kind of games, but I must describe one game from which fun and food seem to be derived in about equal proportions.

First of all several little boys make toy rifles out of dry and hollow dura stalks. These they fit with strong and supple springs of bamboo and load with grass stems pointed with long thorns. Very cleverly made they are too ! Then the troop of boys goes off to look for large grass-hoppers which they shoot with their thorn-pointed gun-arrows. It is exciting and amusing sport but it is only half the game. When each boy has a good handful of fat-legged grass-hoppers they all sit down and with two half peanut shells they gamble at "Two Up" for the grass hoppers. The boy who wins the most has then the largest meal.

Our own school boys, living as they do right in our Compound, give us a splendid opportunity of studying their ordinary games. It always interests us to see them making clay models of whatever appeals to their imaginations. A few days ago all the boys had a craze for modelling and would play at no other games. They made horses and camels, donkeys and cows, camel saddles and waterbags, rifles and men. Some of the models were very well done indeed. When the models are all made there is usually a horse or camel race. Each boy holds his toy horse in front of him and they all gallop about the Compound, whipping themselves the while. Sometimes, instead of racing their models, they ride about on sticks just as one has seen so many other little boys do—and done oneself—in more civilised lands.

A very favourite game at certain seasons of the year is a kind of primitive hockey. Sticks like hockey sticks are used, and a stone or seed of a palm tree is used as a ball. There are no goal posts and no boundary lines and no interrupting referee's whistle. The only rule is to "Hit hard, hit often and if possible keep on hitting." The course may be a mile or two miles long, the idea of each of the opposing sides is to hit the ball in opposite directions. It means a lot of running and is a very good game.

We often see our boys playing a game at night when it is too dark to run about. A number of boys sit facing one another side by side in two rows. A boy on one side then recites in song an invitation to a boy in the opposite row to come across the space between the two rows. While he sings his invitation he bangs one stone on another in time to his song. The invited boy then come across in the funniest manner possible, waddling, crawling, jumping or grimacing and tries to make his opponents laugh. If he succeeds then he takes the two stones and his side offers the invitation to the others. If he does not make them laugh he returns discomfited while his opponents all spit at him !

Then there is a game, one which in various forms seems to be played all over Africa, in which two boys sit on the ground and toss pebbles into small holes in the earth. At first, to the onlooker, it seems utterly meaningless, but by and by one sees that it is quite a good game and that it requires quick mental reckoning to play it well. The form in which I learned to play it was as follows. Into the five little holes in front of me I had to put five pebbles each, and in each of the five opposite holes my opponent put five pebbles. Then from any one of my holes I took all the pebbles and, working either to right or left according to which hole I took them from, I put one pebble in rotation into each hole. Then my opponent did the same, and so we played until the end of the game. If, when I had finished dealing out the stones from any one of my holes, the last hole of my opponent into which I put a stone contained either 2 or 4 pebbles I took those stones as mine, and the winner of the game is the one who secured the greater number of pebbles. The stones in the holes at the end of the rows are known as cows and the other stones are goats. Of course when this is played with pea-nuts for counters instead of stones the winner has a good meal at the end of the game.

In addition to these and many other truly African games the boys are of course fond of football and various other introduced games, but whereas they will play their own games of their own accord they do not seem to play introduced games unless someone tells them to do so and supervises them—though they seem to enjoy them greatly when they are started. Many of our boys rush about the football field with great energy, and just now their one exclamation when they miss the ball or kick a goal is taken from a Harry Lauder gramophone record that has taken their fancy. It seems rather strange to hear

these little black boys shouting out in very Scotch accents, "Maggie, Och Maggie."

But of all the games played none are entered into with such zest as their dances. Night after night, for hours at a time, with the perspiration pouring off them, boys who have been listless and tired all day will jump and run and stamp their feet in the most vigorous dances conceivable. This is especially the game for moonlight nights. Sometimes the dancing is to the accompaniment of rhythmical singing, sometimes without singing but with a stamping of feet on the ground in unison that sounds like galloping horses. Most of these dances are picturesque and graceful and none so far as I have yet seen are objectionable.

Some of the stories we have told the boys in school have also added some new game-ideas to their minds. Little Kundakai was running about the other day with a rope sling in his hand and we said, "What are you doing Kundakai?" At once he replied, "*Nggi gwabupo Goliath.*" (I want Goliath). And then he slung a stone at some imaginary Goliath and ran in to the death. A day or so later the boys were all out felling some trees; it was fairly hard work but they made great fun out of it. Each tree was a goliath and had to be hit with a stone from a sling before a boy could rush in with a tomahawk and cut off its head.

These African children have many disabilities, there are many things lacking from their lives that a child ought to have, but in the matter of games they are rich and need no pity.

D. N. MACDIARMID.

A Nuba superstition.

The following curious piece of superstition was disclosed on the trial of a Nuba from Jebel Morung Juko in Dilling district in the course of criminal proceedings. To explain the cause of the divorce of his daughter the father gave the following evidence: According to our custom a man does not take his wife away until all her price is paid and the girl has given birth to the first child. My daughter duly became pregnant from her husband, but at the time of giving birth she defecated which, according to our belief is likely to cause the death of the husband in the near future, if he does not divorce her. Accordingly I went to my son-in-law and talked the matter over with him and his relations, and we came to the conclusion that it would be best for him to divorce her. We were afraid, that should he die, my girl might be treated as the cause. The accused was willing to abide by this ruling and divorced the girl, but he claimed his right to the child which was a boy. This I told him he was not entitled to by our custom, since he had not paid her price. In such a case the child stays with its mother and in the event of the mother marrying again, the child goes to the new husband, provided he pays the price and takes the girl to live with him.

SCIENTIFIC RESEARCH COMMITTEE.

THE DECLINE OF COTTON YIELD IN EGYPT.

An interesting and important Bulletin has just been received from Egypt entitled "The Basis of Egyptian Agriculture and its Relation to the Decline in the Average Yield per Feddan of Cotton" ⁽¹⁾ by Messrs. McKenzie Taylor and Chamley Burns. In the preface, the authors set forth the following factors which may affect the yield of cotton :—

- (1) The rise in the height of the subsoil water table.
- (2) The lack of drainage in certain areas.
- (3) The deterioration of the land due to salting.
- (4) The reduction in the supply of Nile silt to the land.
- (5) "Soil exhaustion," due to the intensity of cropping.
- (6) The attacks of insect pests.
- (7) Diseases due to fungi.
- (8) The supply of artificial fertilisers.
- (9) The deterioration in the quality of seed.
- (10) Deterioration in the plant.
- (11) The change of the variety of the cotton grown.
- (12) The decrease in number of cattle and hence in the amount of *baladi* manure and the thoroughness of tillage operations.

Their object, however, is to show that the dominant factor in fertility is not any of these but lies in a healthy biological condition of the soil : under the basin system of irrigation this was ensured by the *sharaqi* period to which the authors attribute the maintenance of soil fertility over a very long time. From the chemical and biological examination of the Nile silt, they conclude that the annual deposition of fresh silt is not the main factor, indeed this perhaps is not a factor of any great importance, and that the decline in yield in recent years

(1) Government Press, Cairo 1922, price P.T. 5.

is to be attributed to the modern practice of perennial irrigation, whereby the *sharaqi* period virtually disappears.

The biological significance of *sharaqi* depends on the principle demonstrated by the classical investigations of Russell and Hutchinson who showed that the fertility of a cultivated soil could be greatly increased by such a partial sterilisation as could be brought about by treating with suitable antiseptics, or better, by exposing to such a temperature as would kill part but not all of the soil organisms. It was found that by selecting a suitable temperature the process could be so regulated that the harmful protozoa were almost completely destroyed whilst the beneficial bacteria (of which the nitrogen fixing ones are the most important) survived in sufficient numbers to exercise their functions efficiently.

Egyptian soils are infected with deleterious protozoa which are present in small numbers during the flood season but are probably more numerous in June and July, and the *sharaqi* in Egypt, involving a dry fallow period during the summer months and a high temperature due to the sun, results in the partial sterilisation of the surface layers of the soil (1). Any attempt at a more intensive system of agriculture with a reduction of the time available for killing off the undesirable organisms, is likely to result in a decline in the yield.

Investigators in this country would agree on the great importance of the biological conditions of the soil and of the advantage which must result in this direction from *sharaqi*, but they would also lay stress on some of the other factors which are of particular importance in an area such as the Gezira. The accumulation of soil alkali (soluble sodium salts) and the adverse effect of continued irrigation on texture are questions of special importance in the cultivation of a deep and undrained clay soil, and as far as alkali is concerned, it is difficult to see how *sharaqi* can prevent the ultimate overloading of the soil with toxic salts. These problems are probably less important in Egypt than in the Sudan and the authors of "The Basis of Agriculture" are to be congratulated on having made a contribution of real importance to the subject which should be read by all interested in the development of agriculture within the Nile Valley.

(1) It may be noted that the Sudan rain lands offer an interesting problem since the great heat of the summer insolation must cause very efficient partial sterilisation and as the soils are not subject to infection by river water, an almost complete absence of protozoa may be expected.

NOTICE OF PUBLICATIONS.

The following have appeared since the last list was published in the issue of December 1921 :—

1. Annual Report of the Government Chemist for 1921. (Khartoum, Sudan Printing Press).
2. "Sudan Essential Oils." *Journal of the Society of Chemical Industry*, May 15 and 31 1922. A. F. Joseph and B. W. Whitfield.
3. "The Composition of Cows' Milk in the Sudan." *The Analyst*, October 1922. A. F. Joseph and F. J. Martin.
4. Report of the Scientific Research Committee for 1921. (Khartoum, Sudan Printing Press).
5. "The Asal of Cotton." (*Entomological Bulletin* No. 17). H. W. Bedford.
6. "The Cotton Thrips in the Sudan" (*Entomological Bulletin* No. 18). H. W. Bedford.
7. "Notes on the Bionomics of an Aphidophagous Fly of the Genus *Leucopis* in the Anglo-Egyptian Sudan" *Ent. Mthly. Mag.*, London 3rd Ser., Vol. VIII, No. 87), March 1922 pp. 61—64. R. Cottam.
8. "Observations on the Phyllodromine Cockroach, *Blattella supellectilium*, Serv. in Khartoum." *Ent. Mthly. Mag.* London, (3rd Series Vol. VIII., No. 91) July 1922 pp. 156—158. R. Cottam.



CORRESPONDENCE.

THE PIBOR RIVER.

The article in the September number of the Royal Geographical Society's Journal entitled "The Pibor River" is one that possibly has attracted the attention and interest of Officials and Officers serving in the Sudan. I therefore hope I shall be excused if I venture to trespass upon your space with a few remarks dealing with matters of either opinion or fact expressed in that article in order that readers of it may reconsider or further investigate several of the author's statements.

I think it would have added to clearness when describing the Pibor river if it had been divided into two parts, viz :— The Upper and Lower Pibor. The line of the demarcation between these two parts would come immediately South of the Akobo river mouth.

The Upper Pibor is formed by the junction of three swampy streams as described by Major Thorburn, and also receives the river Agwei which brings down more water than either of the three sources and like one of them, the Kengen river, flows from the Boma plateau.

The Lower Pibor has three important tributaries flowing into its right bank, viz :— The Akobo, Gila, and Mokwai rivers. All these have their sources in the Abyssinian mountains, between Gambeila and the Boma plateau, and the last also receives overflows from the Baro river.

There is then this main distinction between the Upper and Lower parts of the Pibor river in that the former usually becomes bone dry, with the exception of a few pools, towards the end of the dry season, whereas the latter has a perennial flowing stream.

The phenomenon of water flowing up river beds and khors is very common throughout the Sobat river catchment area and possibly elsewhere in the South. The country is so level that a rapid rise of the Sobat river banks up the Pibor and as a result the water flowing in from the latter's tributaries temporarily moves in an upstream direction.

Large khors, such as Makap and Machar, on the right bank of the Baro river annually have distinct periods in relation to the height of the Baro when their water first flows inland from the river and later comes down into the river. The Khor Geni on the left bank of the Pibor also acts more or less in this manner.

The quantity and quality of the surface vegetation on the Pibor and its tributaries vary every year, but I am of opinion that on the whole this vegetation, which is both of a floating and fixed nature but dissimilar to papyrus sudd, has of late years been increasing. In 1912 I went to Pibor Post from Akobo in a propeller tug. I am sure that no such tug could have performed this journey during the past six years as vegetation would have very quickly prevented the working of its propeller. Also navigation up the Akobo river for some 50 to 60 miles used to be easy, but of recent years it has become increasingly difficult to get up it even a short distance.

However, I agree with Major Thorburn that the quantity of this vegetation may depend upon the nature of the rise of the rivers. If heavy rains fall early and produce a big rise then this may drown incipient vegetation and the surface remains clear; but with a late and slow rise the vegetation can hold its own and literally keep its head above water. Bars at the river mouths are also constantly changing in size according to the current which in turn depends upon the height of river level in the Sobat valley.

The author of the article in question has made a few remarks in a general way about the Anuak and Beir, but I think he has failed to make clear to his readers that they refer to the very small number of such that he has come into contact with, and therefore to my mind his conclusions are misleading, if not inaccurate.

On page 215 of the Journal he describes the Anuak as living on part of the Pibor river. This is correct as far as it goes, but he entirely omits to state that he refers to a small settlement numbering about 5,000 souls out of an estimated minimum total of 60,000 who live on both sides of the Sudan-Abyssinian Frontier. As natives whose wants are few I should not describe them as lazy. They are good cultivators of the fertile soil along the Baro and upper waters of the Gila and Akobo rivers and were they able to obtain a market for their produce would become, I believe, of real economic value to the country.

With such an obviously limited acquaintance with these people it seems unfair, if not rash, that the author should describe the Anuak as "on the whole a cowardly race", and it is not understood how he thinks that this tribe has been protected from annihilation by Egyptian Army troops. I fancy that in the official despatches relating to the Anuak patrol of 1912 there would not be found any reference to this tribe being of a cowardly nature; they inflicted quite severe casualties on the troops who lost two British and three Egyptian Officers and some forty other ranks killed. Incidentally the cause of this patrol was the frequent and far reaching (nearly to the Bahr-el-Zaraf) raids carried out by Anuak against various sections of the Nuer people. Also, having on two occasions in 1917 and 1920 had Anuak levies under my command during minor operations I would certainly not describe them as of "a cowardly race", however much I might question their utility in operations in which their usual incentive to fighting, (and we all require an object) viz. subsequent looting, was forbidden.

Again, as regards the Beir, I agree they are an infernally lazy people; but that they are "well made and fine looking" is not my opinion. Their physique is distinctly below that of the Anuak and the majority of the Beir men strike me as either effeminate lads or old men with enlarged testicles (or more accurately scrota).

The photograph of Beir men opposite page 215 of the Journal shows two of the District Interpreters, by name Took and Gerroo, employed at Pibor Post. The former, who is depicted as carrying a small dancing shield, has for many years interpreted the Beir language into an almost unintelligible Arabic and is one of the most childish men I have ever come across, although in a way all natives are children. In 1921 when I required Took to accompany me on trek he started out covered with beads and carrying various playthings, but after a few days became so tired that I had to have him carried for a couple of days on one of my mules. So "gone" was he that he was prepared to discard his playthings, but my escort laughingly carried them for him until he had recovered the use of his legs. I like to think that journey did him a lot of good and besides teaching him something of his own country enabled him to see a little of life and adjust his own position at a more reasonable estimation.

Finally, I think it must have been a slip of the pen when the Author wrote on page 213 that he had seen such numbers of Jackson's

Hartebeest. The only kind of hartebeest he could have seen on the Pibor river would have been the Tiang. Jackson's hartebeest are not to be found in the Pibor District nearer than the foothills of the Boma Plateau, a distance of 200 miles from Akobo Post.

It might also be noted that when the river gauge, which he mentions was put in at Akobo Post its zero mark was 1.5 metre above the actual river bed and thus this amount should be added to gauge readings *to give the depth of the river for navigation or other purposes.

C. R. K. B.

September, 21st. 1922.

