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السودان في برساته ومردونه

Sudan Notes and Records.

Vol. XXIX, 1948.

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SUDAN NOTES AND RECORDS

FOUNDED 1918.

السودان في رسائل ومدونات

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Contributions are welcomed and should be addressed to the Editorial Secretary. Any views expressed in any contribution published are those of the contributor alone. The Committee restricts itself to approving any material for publication as a contribution to knowledge in the Sudan. Correspondence regarding any item published is welcomed.

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An Index of the first twenty volumes, compiled by Mr. F. Addison, is printed at the end of Vol. XXI (1938) Part II.

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EDITORIAL NOTES

THIS number of *Sudan Notes and Records* marks the thirtieth anniversary of the founding of the journal in 1918. It marks also a development in the journal's editorial policy which it is hoped is in keeping with the progress of the Sudan, but yet will in no way involve a departure from the principles which the journal has always endeavoured to uphold. A circular explaining this development of policy has already been addressed to a wide circle of potential or actual subscribers and contributors in the Sudan, but it may be desirable to summarise it here.

Rightly or wrongly the impression seems to have grown up that *Sudan Notes and Records* concerns itself largely with archaeological, historical and anthropological studies to the neglect of the natural sciences and of matter of more speculative nature. The Committee has agreed that the scope of the journal shall be as wide as possible, to cover all branches of the natural and the social sciences, such as agriculture, economics and statistics, administration, education and so on. As the only "learned" journal published in the Sudan, it should represent all activities other than strictly technical researches for which publication in a specialized technical journal is more appropriate. It may even happen that matter published in a technical journal is of sufficient general interest to warrant publication to a different circle of readers through this journal also. Further it is hoped that in this way the rapidly growing number of Sudanese with advanced education will be increasingly led to take their share in the study of their country's history, institutions and natural features.

It can also be mentioned that agreement has been reached with the Philosophical Society of the Sudan to publish some of the papers read before that Society which seem suitable for this journal. It is hoped that this will promote the interests of the Society and assure a wider public for the valuable material produced by its members, whilst at the same time furthering the policy of widening this journal's scope, which was mentioned above.

We record with regret the resignation of the Editorial Secretary, Mr. A. J. Arkell, on retirement from the post of Commissioner for Archaeology and Anthropology in the Sudan Government to take up a lectureship in Egyptology at London University. Mr. Arkell has been a

valued contributor for many years on a wide range of historical and archaeological subjects and will continue to assist us when he can. The editorial burden is now shared by Mr. R. A. Hodgkin of the Publications Bureau, and Mr. T. H. B. Mynors of the School of Administration and Law, Gordon College. It seems not unsuitable that with the growth of educational institutions in the Sudan, this journal should now tend to find a home under their wing rather than in the busy headquarters of the administration which have housed it so long. But this certainly does not imply that the journal should take no interest in practical problems or should endeavour to impose unrealistically exalted standards.

The post of Commissioner for Archaeology has been filled by Mr. P. L. Shinnie, who has been assisting Mr. Arkell for a year. The Anthropological Board at its first and second meetings, which have been held in the past year, has recorded its opinion that the demands of archaeological work are more than enough for one man and that there is urgent need for a separate Commissioner for Anthropology. He would not only direct and coordinate the carrying out of researches in the field by anthropological workers employed by the Sudan Government or any outside body, but would also be available to interpret the results of research work and to advise the Government on the sociological implications of any proposed course of action. With the rapid economic, social and political developments taking place in both the northern and southern Sudan, and with the growth of sociological knowledge and techniques in general, the need for such advice is indeed great, but so far it has been impossible to make provision for the post owing to the present heavy demands on the country's resources.

Meanwhile the Sudan Government has employed Mr. R. G. Lienhardt, who graduated in Anthropology in the Cambridge Tripos, on a short contract to investigate the Dinka, and he is successfully engaged in the task near Gogrial in the Bahr el Ghazal.

The attention of our readers is drawn to an article appearing in this number from a Mr. Carl Schuster of New York, on the subject of tattoo marks. If any reader can throw any light on the question, will they please write to the Editorial Secretary.

Short notes on archaeological work being carried on in the Sudan will be found elsewhere in this number.

In recent years this journal has appeared somewhat irregularly and usually much delayed. The volume for 1947 was no exception to this rule, but it is hoped that from now on it will be possible to publish two parts annually in reasonably good time. But conditions in the printing trade are still difficult, and in particular difficulties in obtaining special type may make it temporarily impossible to reproduce the proper phonetic spelling in some articles. We must therefore beg the indulgence of our readers in this respect until matters become easier.

Principal Contributors to this Number.

- A. C. BEATON : Deputy Governor, Equatoria Province, Formerly Asst. District Commissioner, Western Darfur District in 1935-1938. Has previously contributed articles on the Bari and Fur.
- IBRAHIM BEDRI, M.B.E. : Asst. District Commissioner, Lakes District, Equatoria Province. Has served many years in Dinka areas.
- Fr. S. S. SANT'ANDREA : of the Verona Fathers Mission to Central Africa. Has worked in the Bahr el Ghazal area for many years and published numerous articles on tribal customs and languages in S.N.R., *Anthropos*, *Annali Lateranensi* ; also outline grammars of some languages.
- G. C. SCOTT : Research Lecturer in Educational Method, Gordon Memorial College. Formerly of the Sudan Political Service and Education Department.
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SUDAN NOTES AND RECORDS

Vol. XXIX

Part I.

1948

THE FUR.

By A. C. Beaton.

1. INTRODUCTION.

THIS monograph on the customs of the Fur does not aspire to being a complete anthropological record of the tribe—its deficiencies in that respect will be only too patent to the reader—but it presents in a brief and, it is hoped, readable compass observations and researches made during the pre-war years of 1936-1938 in the district of Western Darfur. Since a government's main function is to regulate public life and to satisfy the legitimate desires of the people, it requires a knowledge of not only the acts but also the motives of the public, and since the sanctions of conduct lie both in past tradition and present practice, it is at least of interest, if not of value, to know what beliefs are held and what customs are current among the various tribes that inhabit the Sudan.

2. GEOGRAPHICAL.

The Western District of Darfur, with its headquarters at Zalingei, 135 miles southwest of the province capital of El Fasher, is a pearshaped area lying between 13°30' and 10°45' north and 22°30' and 24°30' east. This 15,340 square miles of country lying athwart the Nile-Chad watershed, rises from all sides to the towering peak of Jebel Marra (10,130 feet), one of the highest mountains in the Sudan, which, with its two salt lakes in a cup near the top, forms the northern part of the district. A subsidiary ridge of high ground runs north through Jebel Si practically to Kuttum and a secondary hill mass rising to 4,730 feet lies to the south of Zalingei. To the east, south and west the land falls away rapidly to sandy plains clothed with thin bush, except where rich streaks of heavy loam follow the many rivers that carve beds for themselves in all directions from the high ground. The Wadi Azum, flowing in flood from July to September and fed by numerous important

affluents, pours southward from Jebel Marra along the west of the district and finally turns west to drain towards lake Chad ; its headwaters run perennially and water may be found a few inches down for most of its length even in the dry weather. At Nzili on the French Equatorial border the Wadi Seirgilong holds pools well-stocked with fish and crocodiles. Other watercourses flow south and southeast towards Nyala and two flow north towards El Fasher. The perennial waters of the mountain are diverted by the hill Fur to irrigate dry-weather crops on the hill sides and some of the streams being saltbearing provide the Fur with a valuable local industry. Light showers fall in May and June, heavy rains are usual in July and August, and spasmodic but at times heavy falls come in September and early October ; bitter cold with ice on the mountain sets in for the winter ; February to April is pleasantly warm, and hot weather precedes the early rains. In the period from 1930 to 1938 the rainfall varied between 555 and 650 millimetres with one bad year as low as 432 millimetres ; an average day maximum would be 94°F and an average minimum about 58°F by night.

The Azum valley soil is light and sandy mixed with silt with small areas of very good clay ; all is of a kindly nature with a good humus content ; to the east, south and southwest a bigger percentage of sand is found although rich streaks of good soil persist along river sides. The country is very well wooded with the usual acacias (especially *Acacia albida*), *Ficus*, *Zizyphus*, *Balanites*, *Cordia abyssinica*, *Commiphora*, *Combretum*, *Tamarindus*, mahogany and bamboo, and is carpeted with thick and tall grasses for most of the year ; *sorghum* and *pennisetum*, rough cotton, chillies, onions, garlic, tobacco and local vegetables grow in great abundance. In this land of temperate climate and productive soil live the main body of the Fur. In 1937 they numbered 24,000 tax-paying males and a total population of about 120,000. Outside the area described there are also Fur along the Jebel Si ridge to the north and in the Nyala flats to the southeast, whose customs will doubtless vary somewhat, but it is with these central Fur that this note is primarily concerned.

3. ETHNOLOGICAL.

" The Fur are a negroid race described by El Tunisi (1784) as 'entièrement étrangers à la langue et aux habitudes arabes.' He divides the race into three groups—Kunjara, Karakirit and Temurka."

" With the exception of the Kunjara, whose superiority is attributed to the presence of an Arab strain, the Fur are said to be socially, physically and intellectually inferior to the average of the neighbouring tribes."

"Browne (1799) remarks on the blackness of their skin and short hair. El Tunisi describes them as 'une population très noire . . . brutaux et colères.'"

The above are excerpts from Seligman's *Pagan Tribes of the Southern Sudan*, but three years familiarity with them makes me doubt their inferiority to all neighbouring tribes. The Arabs have points of undoubted superiority, but the Fur have a closely knit social organisation, are physically strong and hardworking and at least the intellectual equal of some of their non-Arab neighbours.

There is a tradition current in Western Darfur that the Fur, emanating from Jebel Si, swept the Tora off the mountain in a victorious drive to the south as a preliminary to their period of expansion and conquest to the east. Arkell has records of four sultans dating back to 1526 A.D., namely Dali Afnu of Bornu origin, Idris Jaal, Kuru and Tunsam, all of whom had their capital on Jebel Marra, but whether they are the tail end of the Tora Kings or the beginning of the Fur line requires further elucidation. From the time of Suliman however Arab nomenclature is continuous.

At its zenith Fur sway extended as far as the Nile, but in 1885 Felkin states (*Proceedings of the Royal Society of Edinburgh*) that the Fur, who were once the sole inhabitants of Darfur, had been driven back into the western part of the country by Humr, Berti and Rizeigat invaders. A study of tribal origins in 1936 reveals a bewildering variety of fifty or more including Messeria, Daju, Beigo, Senyar and Masabaat, while sectional investigations yield a list of at least as many more including foreigners such as the Iringa from the north of Dar Masalit, the Marati and Nyerlenga from the west, the Fianga from the north as well as home stock such as Forenga, Baasinga, Kamninga, Dalinga and Kunjara.

To the south of the district in Dar Fungoro a language called Gele still survives alongside Fur. It has been identified by Arkell as a dialect of Gula belonging to the Bongo group. It bears no relation to Fur and is probably the relic of a population swamped by the Fur invader. The language of the Fur (*bele For*) is also a mystery since both Sudanic and Hamitic traits are confusingly co-existent in both grammar and syntax. It is a tongue quite distinct from Arabic, containing those vowels and consonants so typical of Equatoria; it is however very rich in vocabulary and highly complex in its grammatical and syntactical systems; its place-names retain onomatopoeic fossils, e.g. *dilejdilej* for muddy ground and *golol* for cascade as well as apposite descriptions e.g. the hill *diblong*, "a buttock appears," and the stony

gorge called *murtajels* which means 'Lead-your-horse,' and its idiom is rich and varied e.g. *dika ng*—'to sit black' for one in a foul temper and 'utong jaasu—a mouth-wiper' describing a fine awarded for insult.

The Fur call themselves Fora with *Fordungo* as the singular form; the Masalit call them Forta with For as the singular; the Senyar use the same singular as the Masalit but with Forsi as the plural. Other names for them are *Yerce* (Daju), *Kora* (Zaghawa) and *Furawi* (Arabic). The plates will show what a typical Fur looks like today. As a race they are brave, respectful, on the whole honest and extremely industrious.

4. HISTORICAL.

There are traces throughout the district of a people skilled in the art of working stone and on Jebel Marra and other hill tops are Tora ruins of walls of faced stone. Arkell is the authority on this prehistory which lies outside the immediate scope of this article.

The traditional founder of the Fur sultanate was Suliman Solong of the Beni Hilal (*Solong* in Fur means Arab) and he is dated roughly at the end of the sixteenth century with his capital in Dar Tora. Musa and Ahmed Bakr who moved the capital to El Fasher, and Mohammed Daura roughly cover the seventeenth century. Omar Leila, with his headquarters near Nyala, and Abu el Gasim lived early in the eighteenth century, which saw the heyday of the Fur empire under Suliman Teirab (1752-1758); he defeated the armies of the Fung and held sway over the Sudan as far east as Omdurman and Metemma, the place of his death. Abdel Rahman El Rashid (1785-1800) formed his court at El Fasher, whence his successor, Mohammed Fadl (1800-1839) moved to Kobbei and proceeded to systematise the administration by fixing tribal boundaries and probably organising the four commands known as "magdumates." Hussein (1839-1874) consolidated his father's system and fixed most of the fiefs, but Kobbei was sacked by Zubeir in this or the following reign. Ibrahim Garad (1874) was slain by Zubeir. In 1877 Zubeir's son, Suliman, who had been left behind when his father departed for Cairo, was appointed Governor of the Bahr el Ghazal by Gordon. Harun (1874-1880) was sultan when an Italian, Messadiglia, was Governor of Darfur and Abdullahi Dud Banga (1880-1884) reigned in the time of Slatin's governate. From about the end of 1883 Sayid Mohammed Khalid (Zogal Bey) was Derwish Emir until about 1886 when the Khalifa recognised Yusif. The latter proved too independent and another Emir, Osman Wad Adam, was appointed. Abu el Kheirat (1888-1897) succeeded Yusif and was murdered by his cousin Ali Dinar.

Ali Dinar (1899-1916) had joined the Derwish Emir, Mahmoud Ahmed, and had accompanied him to Omdurman. In his absence a Fertit upstart, Abu Koda, (1897-1899) seized the throne. Although Kitchener appointed Ibrahim Ali as Governor of Darfur, Ali Dinar outpaced him in a race from Omdurman, was acclaimed Sultan and married into the Taisha tribe. His government was one of centralisation and cruelty. When in 1916 the Sudan Government re-occupied Darfur, Ali Dinar was killed at Zulli by a patrol operating in Dar Zami Toya under the command of a young officer who later, as Major General Huddleston, became Governor-General of the Sudan. Arkell is again the authority for the lineage and dating of the Sultans.

5. ADMINISTRATIVE.

The first century and a half of the Suliman Solong dynasty was an era of expansion by conquest, but when Suliman Teirab's swollen realm had shrunk about the end of the eighteenth century to something like the size of the present Darfur, Sultan Mohammed Fadl co-ordinated and systematised the administration by fixing tribal boundaries and organising the four "magdumates" of the north, south, east and west. The present western Darfur district fell mainly under the *magdum* of the south who lived near Nyala and supervised the two subcommands of the *Aba Dimang* or Dimingawi over the lowland areas and of the *Umo* or Umingawi over the mountain "shartaiships," as well as other territory outside the present district. Dar Kerne, now also part of western Darfur, originally came under the *magdum* of the west. The *magdum* had powers of life and death and toured his area with armed police to assist in border affrays or to quell tribal feuds; he appointed and dismissed tribal leaders, attended the triennial ceremony of the 'covering of the sultan's drums' to render his yearly dues and received part of these dues to maintain his tax collecting and private staff for the coming triennium. Each "magdumate" was divided into "shartaiships" under a *shartai* or chief called a *Kiiso* with subdivisions called "dimligias," each under a subchief (*dilmong*). The functions of these local chiefs were the awarding of fines for minor offences and the apportioning and collection of dues for the magdum. There are two accounts of the *dilmong* — one is that he faded from the administrative scene when Sultan Hussein organised the fief system, to re-appear in 1922 when the government amalgamated the fiefs into larger administrative units called 'dimligias,' and the other is that the title *dilmong* is reserved for the functionary who performs the rain ceremonies, that the

use of the title for the pre-Hussein sub-chiefs is wrong and that such administrative subordinates were in fact fief-holders or stewards on a somewhat larger scale and should be called *sagala*. However that may be, Sultan Hussein developed the small fief system, under which court councillors at the capital were assigned a number of such fiefs (*ro* plural *rota* in Fur) for their own pecuniary advantage. These fief holders, the whole tribe of whom was later known as the *Baasinga*, might resort to their estates and farm them in person, or dispatch a relative or slave as steward or appoint a local man as manager. When these fief managers became powers in the land rivalling at times the chief in importance, it is not surprising that any intermediary rank should have been squeezed out. Each fief was made up of the manors of half a dozen villages, whose sheikhs were ultimately responsible for the assessment and collection of the individuals' taxes.

Ali Dinar cut across this system by appointing a large number of *mandubs* (agents) instead of the four *magdums* and although he accorded them the command of police, he allowed them much less freedom than that enjoyed by their predecessors and moved them at frequent intervals. Troops under separate command were posted about the kingdom. The present Western Darfur District is in fact the area entrusted by Ali Dinar to his Zalingei *mandub*. Within it the Fur peasant had to respond to five heavy calls on his purse—the sultan's for royal dues, the *mandub's* for the maintenance of his eight or nine captains (*ras mia*) each with a couple of score of police (*jihadia*), the *agid's* (troop commander's) for luxuries for the sultan's troops, the fief manager's, who fed his patron's purse at court, and the village head, who collected what he could for chief and *Aba Dimang*. In addition to these functionaries were the agents of the sultan spying on the *mandub* and the latter's spies keeping watch on the chiefs. With so many palms for the ordinary man to grease and so many mouths for him to fill, it is as well that the land was not niggard of its produce or the peasant of his labour.

The *mandub* of Zalingei (which incidentally means "the place of the oppressor") therefore controlled the territorial command of the *Aba Dimang* over the southern areas of Dima, Tilni, Aribo, Tebella, Zami Baya, Zami Toya, Kulli, Kubara-cum-Fungoro, Suro and Nyoma, and of the *Umo* over the mountain areas of Turra, Nyuringa, Luwing, Möri, Wanna and Turdi in the northeast and also the area of Kerne in the northwest. The thoroughness of Sultan Hussein's fief network and its value as an administrative expedient are evident from the fact that the names and boundaries of such fiefs are matters of common knowledge

even today, although they have since 1922 been engrossed in the larger "dimligias" of government times.

6. JUSTICE.

"No judicial system with the judiciary distinct from the executive can ever be said to have existed;" such is Bence Pembroke's summing up of the administration of justice in the time of the sultans—a dictum borne out by Boustead's exhaustive researches into the subject throughout the length and breadth of the district. It would have been completely foreign to tradition for the sultan to have divested himself of the role of supreme judge, but at the same time there was considerable judicial devolution to local dignitaries, while Qadis dealt with Sharia cases both in and out of El Fasher.

The *magdums* of the older sultanate had powers of life and death, while the chiefs could deal with other criminal cases, the fines for which formed a considerable item of revenue for chief, *magdum* and sultan. Ali Dinar reserved the death penalty for himself and weakened his viceroys' powers with the increase of their numbers and their frequent transfer; this naturally led to oppression because the *mandub* found himself constrained to make such hay as he could during what frequently proved to be but short spells of sunshine.

The last of the sultans is variously credited with clubbing murderers to death, beating to pulp inefficient tax collectors, lopping off the hands of thieves and castrating adulterers; these however were penalties awarded for extreme cases and other evidence points to the local settlement of as many charges as possible.

A murderer was liable to be killed by the enraged relatives of his victim, but if the case was referred to the chief, an attempt would be made to raise bloodmoney, valued at fifty cows originally, but latterly twelve and sometimes six only, from the family of the accused; this *sadaga* as it was termed, represents in its smaller values more an offering expiatory of bloodguiltiness than compensation for death. The sultan might imprison a murderer whose family had paid blood dues and would order death by clubbing if the payment was not forthcoming. An odd feature of Fur murder cases was that every household in the neighbouring hamlets as well as in the village of the culprit had to pay a fine of one roll of cloth, while a burial levy was also imposed on the family of the victim. The Fur did not subscribe to the custom of surrendering a woman as payment for a murdered man.

Theft outside the sultan's realm was connived at provided the

marauder handed over the sultan's prerogative booty of horses, rifles and slaves; within the kingdom however theft was taken much more seriously and although Felkin records beating for three offences, and mutilation for a fourth, the fine was the more favoured penalty.

Felkin was told that for the rape of a virgin all the offender's cattle would be confiscated, various sums from sixteen to fifty six rolls of cloth are now locally quoted as fines with a proportion as compensation to the girl; if sexual intercourse with a willing girl were discovered, fines would be levied in proportion to the man's power to pay. A husband could kill an adulterer caught in the act, but failing this both parties were heavily fined, sometimes to the extent of the whole of the man's possessions.

Insult was punished with a small fine and cases of hurt according to the seriousness of the damage.

The giving of justice was in fact a revenue-producing item in the budget. The distribution of this revenue varied,—for instance, in Forei of Dar Kerne the chief received three units, the fief holder two and the fief manager two out of every eight, whereas in Dar Kulli the chief received half, but whatever the division of the spoils, the purpose was to fill the purses of sultan, courtiers, viceroys, chief and steward. Out of his income the chief had to render one half to the *magdum* of earlier days and later to Sultan Ali himself. Under such a system it paid everyone, except the guilty, for court business to be brisk and for the heaviest fines to be imposed.

7. THE SOCIAL STRUCTURE.

At the apex stood the all powerful hereditary sultan, or *Aba Kuuri*, the royal lord, sprung from the Keira line, commanding his personal army and attended by a body of councillors, who owed their wealth to royal patronage. In the early days their numerous fiefs made them wealthy men and therefore not only loyal to their King, but probably benign to their tenants; under Ali Dinar's regime of suspicion however fief tenure was so capricious that estate holders were as careless of their advice to their master as they were heedless of their serfs' welfare.

Away from the court was the provincial viceroy with his police captains, police and agents scattered about his command. He watched the sultan's, his own and his minions' interests in that order, but he latterly tended to become but a transient official bent on feathering his own nest.

The origin of the title of *Aba Dimang* is wrapped in mystery. El

Tunisi says that it was customary to name the chief dignitaries after various parts of the sultan's body e.g. *Abo dima*—the right arm, *Abo uma*—the dorsal vertebrae and *Abo Fure* or *Kamneh*—the sultan's neck, but neither *dima*, *uma*, *fure* nor *kamneh* bear in Fur the meanings he ascribes to them. Etymologically *Aba Dimang* could mean "Lord of Dima," the ancestral home of that functionary, but the Fur do not always thus interpret it. Some light on the question has emerged from investigating Fur rain ritual (see *Sudan Notes and Records* Vol. XXII Part II 1939) which suggests that the origin of the *Aba Dimang* and of the Kunjar and Keira sections dates back to the time of the arrival of Ahmed the Bornu blessed with both holiness and the gift of rain from the regions of the west. He, it is said, taught Kunjar and Keir, the sons of an early sultan, and married Keir's sister, who bore him a son, Adim Morge. It was this Adim who was first made *Aba Dimang* by his maternal uncle, Keir, and who, after resorting to the land of Dima, founded the *Morgenga* clan, which numbers so many rain priests among its ranks.

The *Umo* was steward of the mountain, where there is a fief of that name. In Fur *Umo* means fontanelle; is it possible that this official was so named because of some real or fancied resemblance between the lake configuration of Jebel Marra and the unknit bone of a babe's skull?

Forei is the title assigned to the manager of the sultan's personal fief (*ro kuuri*—royal estate). Such an one was appointed for the honey-producing Fungoro and another for the salt-rich mountain and in course of time they gave rise to the *Foreinga* section. The *Kömninga*, probably the same as Tunisi's Abo Kamneh, are an aristocratic clan and include in their ranks the family of the shartai of Dar Kerne. The *Baasinga* are fief holders—a rank rather than a clan—and men of importance at court. El Tunisi mentions a very important dignitary, the *Urundulu*, which he translates as the head of the sultan; this explanation is so wide of the mark that suspicion at once alights on Tunisi's other renderings. Macmichael interprets it as meaning 'the threshold of the door.' The latter is much nearer the true meaning of the word, which should read *Orreng dulung*; *dulung* means 'post' and *orreng* means 'of the door'—an obvious name for the sentry whose duty it was to see that no arms were concealed on any petitioner craving admission to the royal presence. A host of *Jubanga* also toured the King's domains to see to the efficient collection of the tithe dues which fell on every one of his subjects.

The office-holder of the greatest local importance was the chief (fig. 10), who had some judicial powers, was the *magdum*'s channel of communication and latterly attended the drum-covering festival with his contributions to the royal coffers. Under the chief came the fief

steward or *sagal*, a man of local influence, always respected and often revered, for he above all could temper the wind to the shorn lamb. The village head (*eling wakiil*) had his little meed of prestige among the villagers, but his office was one more of labour than profit, while the undistinguished mess president (*darrang töbu*) or the hardworking householder (*tönging siid*) was content with his lot, if his crops produced enough to feed his masters and his family and provided that he did not fall foul of any of the parasites who waxed fat on his labours.

Such was the Fur social structure. Its two characteristics are the territorial basis of social rank and the strong hereditary principle; the former is evident from the description of the personages who make up the social scene and the fact that even holy men were awarded their revenue-producing estates and the latter is patent from a study of the families of the chiefs, subchiefs and village sheikhs of today, who practically all have their origins in the ruling houses and respected clans of the distant past. But as in all states and empires, it is the common man whose daily labours support the aristocracy, whether of office or birth, and it is with the daily life and customs of the ordinary man that this note is primarily concerned.

8. THE FAMILY.

The Daily Round.

The average Fur family, living in a small village beside one of the great rivers of their country and leading an essentially rural existence, pays its dues to the taxgatherers and maintains its own existence by manual labour in the fields. The daily routine varies according to the time of the year. In the rainy season, roughly from June to October, the wife arises before dawn to start her household duties and is shortly followed by her husband, who, after praying, makes ready to go to his fields. A Fiki however having longer prayers to say arises before his wife. At dawn the woman arouses the children, who if grown up will accompany their father to work, but who if still small will stay behind with their mother and perhaps help her in the preparation of the food. The father goes fasting to his labours carrying, if the house will provide it, a pot of beer. When she has prepared the morning meal, the mother takes it to the fields, where her husband and his neighbours eat together and hand over the remains for the women and children to finish. As the wife will have crops of her own, she now sets to work on them aided by her husband, whom she in turn assists. Noon is the time for rest and beer, and the afternoon for renewed efforts on the land. Just before dusk the wife looks about for some firewood, fills her pot

at the river or well and returns home to cook the dinner. At sunset, and often much later, the man goes home, puts away his tools, joins his neighbours (mostly relatives or daughters' husbands) in their joint mess (*darra*) and waits for the evening meal. When he and his companions have eaten their fill, the women remove the remainder and consume it apart with their children, who then retire for the night, although in some cases the women have small messes of their own. The after-dinner hour is a time of general talk, and when cotton-spinning and drinking begin to pall, the time is whiled away by the telling of tales; Felkin mentions the stories of the elephant and the camel, the hyena and the lamb, and the rabbit and the hawk, and others are recorded in full in *Sudan Notes and Records* Vol. XXIII Part II 1940.

In the autumn and winter when the crops are being reaped, the daily routine is much the same except that sowing and weeding give place to the cutting, threshing, winnowing and storing of the crops and the preparation of the dues rendered to the chief. From about February to the beginning of June when most of the work in connection with the crops is over for the year, breakfast is taken quietly in the mess and the morning is devoted to the cutting of wood for building, the plaiting of grass mats, the picking and spinning of cotton and the weaving of cloth, or, if there is no call for a long journey in search of salt or honey, a day may well be spent in a visit to one of the local markets or attending the area hunt.

Such householders as own animals must make arrangements for their herding. It falls to the lot of the eldest son to take the cattle from their kraal in the household enclosure to the water-hole early in the morning and to bring them back as soon as may be to the homestead for the women to milk; he then joins his father in the fields if it is in the rains, otherwise he joins in whatever activity is afoot for the morning. During the rains each cattleowner will take his turn at herding the cattle for the day. After breaking his fast at home he drives the herd to pasture and tends them there until evening, when he drives them back to the wide path of the village (*ṣṣ*) for each housewife to take away her cows for milking; this latter duty is never performed by males. In the dry season after the garnering of the crops, the women take it in turn to tend the cattle—a duty they cannot discharge in the rains, because they are fully occupied in sowing and weeding, nor in the autumn, because they are busy gathering their own and their husbands' crops. In the dry weather too a grown up son will usually deputise for his mother as cowherd. Goats and sheep are generally herded by the younger children and are driven to different grazing

grounds from the cattle; they too are milked only by women and children. When the youths are herding, they may match a bull or he-goat against a similar animal from the next village and sometimes sharpen the horns after they have been softened by the application of a wild cucumber to the tip—such devilment is indulged in without their parents' knowledge.

Since the Fur are Muslims, Friday is observed as a holy day. Monday is usually a holiday. No work is supposed to be done on either day and it is indeed popularly believed in some parts that contravention of this taboo will lead to sickness. At the village of Duri on Friday, 18/8/37, no field work was in progress despite the fact that a heavy fall of rain in the night had produced ideal conditions for weeding. The prohibition, which in fact is not always observed by the adults, does not apply to the children, but they will naturally do little in their parents' absence.

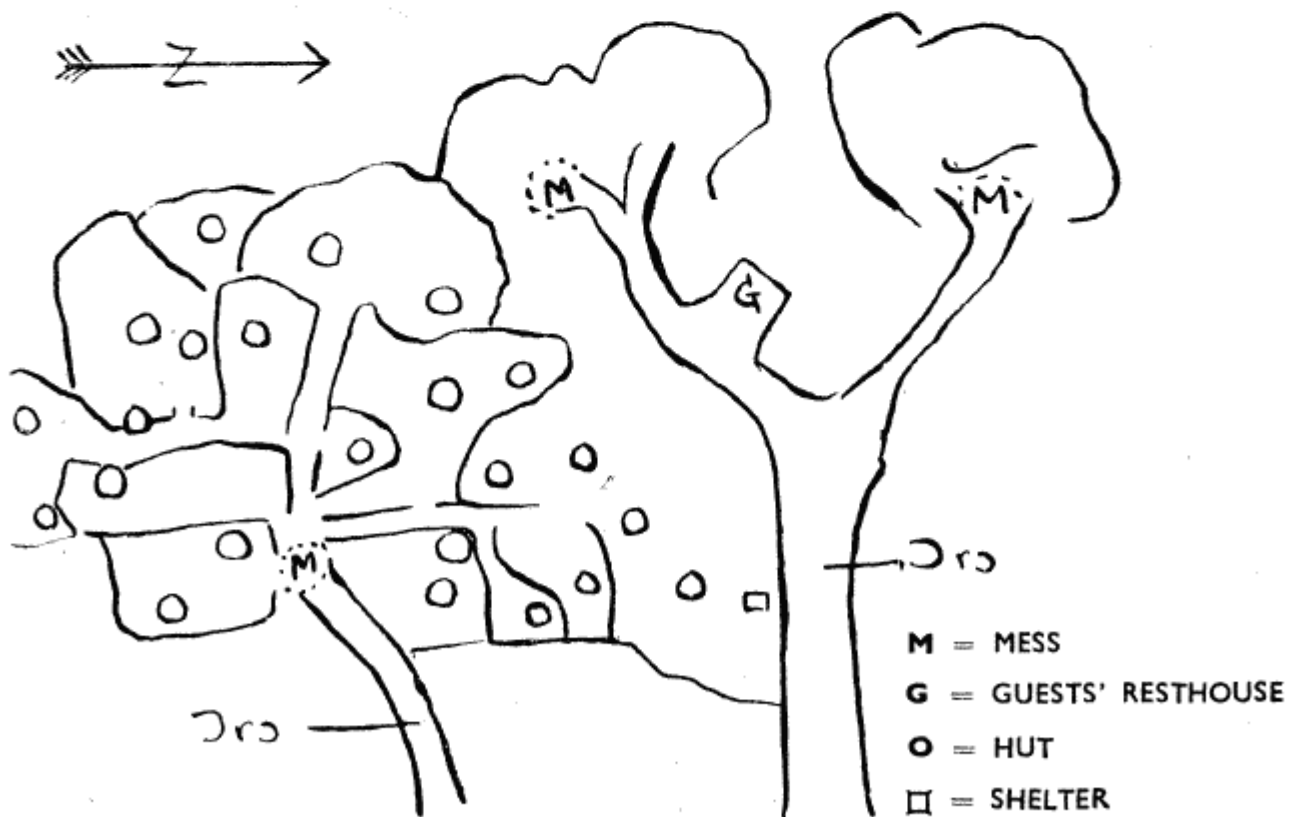
When kinsfolk visit a village, their relatives give them oil, beer, meat and cooked food until they have filled their bellies (*na diɔ fiis fiya*) and shelter for the night in the hut (*riɛ*) assigned for that purpose. Strangers are given a little food to eat in the village street, where they sleep in the guest house. Uncooked food is never given in discharge of hospitality, unless the land is suffering from famine; neighbours do not as a rule give mutual hospitality and enemies could expect little in the way of entertainment however benighted.

Villages were originally founded by community settlement or developed by gradual additions to the homestead of the first settler. If a miscellaneous party pioneered new territory, they would settle more or less in the grouping they observed in the parent village, but if a single householder broke new ground, he would gradually find a hamlet grow up around him as his daughters married and raised families. Fur marriage is customarily matrilineal.

The home of the Fur peasant consists of a number of huts surrounded by a rough hedge or fence. The average hut is a circular wall about five feet high and four yards in diameter built of wooden stakes and grass mats (*jilenga*) and topped with a conical roof of thatch; mudwalling, and on the mountain, dry stone walling (*ergel*), are also found. The smallest Fur household will consist of one hut which a newly accepted bridegroom has been allowed to build near the home of his bride's parents; after the birth of the first child, the husband builds a much larger hut which is henceforth known as the mother's house (*aming fōyi*) and in it the mistress of the household continues to sleep all her married life. As other children are born, more huts will be

built for the elder boys and grown-up girls. Girls and small boys usually sleep in their mother's hut unless their father is there, in which case they are sent to their grandmother's house or their father's hut. When a daughter has come of age to marry, her husband will be invited to build near her parent's home as her father was originally; if after a year or two a young husband does not get on happily with his wife's family, he will return with her to the village of his birth. This congregation of daughters' husbands around the home of the mother and grandmother gradually develops into a 'mess' in which the men take their meals together. Such a 'mess' would naturally be placed at the end of a street. The sketch shows a small settlement with three messes set round two streets; bigger villages have roads running through them with messes developing on culs-de-sac running off the roads. If a settler arrives with the hopeful intention of joining the community, he is required to build a temporary hut outside the village for the first year of his stay and is given a sack or two of grain to keep him until he can earn his own living; after this year of probation, he is allowed to join a mess and is allotted a piece of land by the village head, imam and elders.

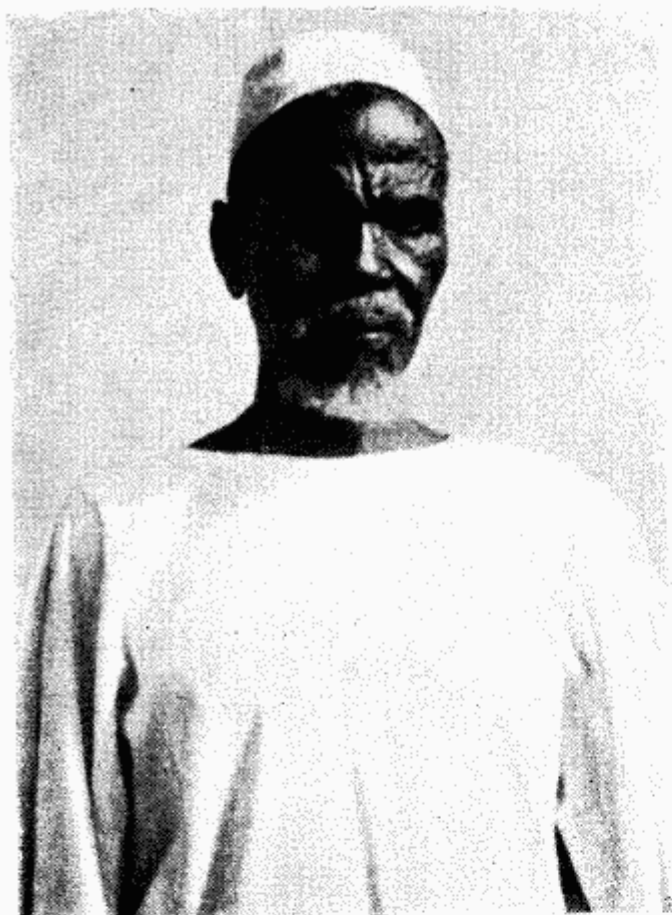
SKETCH OF FONFON



Birth.

If possible a birth should take place in the house of the pregnant woman's mother, where an old woman acts as midwife. Felkin states "the normal position for a woman in labour to adopt is that of standing and leaning against the hut wall . . . in isolated cases a rope is suspended from the roof for the woman to support herself." The use of the rope is now more common. The woman kneels with her legs wide apart and the child is delivered into a food dish (*fangga*) placed between her knees. The midwife cuts the navel-cord, and when the afterbirth (*diil*) has been ejected, puts it into a small pot (*dute*), covers it with ashes and throws it into the bush. The husband has meanwhile collected wood to heat water for his wife's bath. After being bathed by the midwife, the young mother remains for seven days in her house alone with her husband and child. If it is a son, the father sticks a barbed spear (*sambe*) point downwards into the ground and the mother goes to the water-hole with a gourd full of ashes, which she sprinkles at the entrance of every bifurcation of the path that does not lead direct to the water point. In the case of a daughter, a plain-bladed spear (*kor lape*) is used. Sometimes the father sacrifices a ram for the elders and children. Twins (pace Felkin) are rare, triplets are said to die, albinos are uncommon and are subject to insult. Barren women often resort to the tomb of a holy man and there pray for a child, although it is believed that the offspring following such prayers will be albinos. A meal of thin gruel is supposed to cleanse the womb after birth. A boy is suckled for a year, but a girl for two, as the male is credited with the stronger heart. A period of continence is observed by a pregnant woman lasting from about four months before to forty four days after the birth. Abortion is at times practised and is said to be procured by a paper bought of a fiki or by a visit to a fiki's tomb, while certain old women are said to know how to brew abortifacients from roots.

The christening usually takes place seven days after birth. The mode of naming is not necessarily after the grandfather but the fiki's good offices are requested. The process is described:—"The fiki writes two names on separate pieces of paper, which are wrapped in cloth, tied by threads to a string and dangled before the babe's eyes; it thereupon chooses its own name according to whichever paper it first clutches; the piece of paper and cloth are hung on a string round its neck, where they remain until they wear out and drop off. If the babe ignores the first two, a fresh pair is made." Arkell has recorded a variant by which the father pulls one from a number of threads attached to names in a Koran and of two subsequently prepared and identical



FIGS. 1 TO 4 A FUR MAN AND A FUR GIRL.

FIG. 5
GIRL'S COIFFURE



FIG. 6
JOMBOLE LEAPS



papers one is given to the mother and the second hung round the child's neck as a charm. This is doubtless a later development, as it would baffle any fiki to discover some Fur names in the Book.

A man is usually known by his own name or as the father of his child; if ever he is addressed as the 'son of so-and-so,' the implication is that he was reared by that person and not by his real father. Some Fur male names are *Ngang*, *Togul*, *Bangbang*, *Solbi*, *Morge* and *Murunggu*, but current usage is almost entirely Arabic. Most children have nicknames which stick to them through life, such as *Wad Jankab*—"the son of one who hoes his fields twice," *Suköt fiil*, "elephant hoof," *Kanjom*—"dwarf" and *Sor* "born at 4-0 pm." The Fur for firstborn is *bikir*, for secondborn *bikiring sor*, while *fuya* is a child born after previous children have died, *jarungang kelel* is the child after twins and *korikome* is the last child of either father or mother.

Education.

Parents are assisted in the training of their children by the grandparents and maternal uncle, whose association with his sister's son is nearly as close as the *ngörinyi-mananye* relationship among the Bari. A child is taught to eschew truculence, thieving, meddlesomeness, insult and lying. All children eat with their mother, but at seven or eight a boy may be allowed to eat in his father's mess. While the girls stay at home to learn a woman's duties, the boys at the age of seven often go off to a fiki's school (*som*) in a distant village, where they learn to read and write verses from the Koran on wooden boards and help their mentor in his fields. When they reach the age of puberty—for their schooling lasts many years—they are frequently the cause of complaint before the local court, because they make eyes at the women and girls while the men of the village are out at work. A fiki's pupil does not hunt, but if a boy stays at home, he is taken out hunting in addition to being given instruction in cultivation and cotton spinning. Girls learn to grind grain and cook meals under their mothers' eye; they also fetch water and mind the baby. Children generally are taught the planting and care of onion beds. Although a village headman's son will work like other boys, the sons of chiefs and subchiefs often lead idler lives. Children may be switched with a birch (*bisa*) for naughtiness but only as a general rule by their own parents; a man who habitually cuffs children for no reason is liable to reprimand and insult from his relatives and friends. Basket-weaving, drum-making and house-building are men's work, pot-making is a female chore. Folk stories are picked up in the evening tale-telling hour and prayer is learned from father and

fiki. A child therefore acquires a practical and moral education from imitation, inculcation and exhortation with small rewards at times in the offing for good work or exemplary behaviour.

The daily round at fiki's schools is one of alternate rigour and idleness. Such a school of thirty to one hundred pupils (*muhaajira*) will arise at first cockcrow and chant the Koran in small groups round separate fires until sunrise. During the day those who have achieved a certain standard grind grain, bring wood and water or go the round of the village begging for food. On Tuesdays the small boys go out in groups to distant villages to beg for food and return with their offerings on Fridays, while the bigger lads have been busy learning more lessons. Starting at the age of seven or eight the pupil does a normal course lasting seven years, after which his own teacher and another fiki examine him in a treble recitation of the book; if word perfection gains him a pass, he may proceed to the rank of fiki in due course. The failure either returns home or travels to the Gezira cotton fields to earn enough money to marry. These schoolboys perform a special dance, the Jombole, which has been described in full with its songs in *Sudan Notes and Records* Vol. XXIII Part II 1940. On Fridays they parade the village in cleanly washed clothes.

When such a boy returns from school or when a father considers that a homekeeping son is well-versed in the general code of behaviour, is fit to do a man's work and is not idle, mischievous or a dullard, the boy is circumcised at about the age of fourteen, usually between harvest and the early rains. The occasion is one of some ceremonial, with songs and a dance called '*firanga bie*'—'the gazelles flee,' because the womenfolk run about in front of the boy singing and dancing. One evening the boy is sent to a neighbouring hamlet, where his family join him the next day. The man in whose house he sleeps gives him a roll of cloth as a gift, arrays him in a clean white shirt (later returned) and if possible provides him with a mount. The boy then rides round to each of his relatives for presents, while the women of both villages run in front of him waving palms and making rattles made of plaited palms or grouds. A male relative wears a woman's robe and false ringlets, while a female relative dresses as a man with her husband's charm on her arm and his spear in her hand. The grandmother, if alive, attends the operation and smears a drop of the blood on her cheeks below the eyes chanting "*na gis dwinig kweng kweng deng jandile haadirin fiya na keng kewa kuungi aaso*"—"I rejoice that I was present at my grandson's circumcision and smeared my eyes with his blood."

In the dry weather the boy sleeps in a nearby shelter until the

wound has healed, but if the rains have started, he walks home and is met in the door of his house by his mother, who sprinkles him with a mixture of soot, flour and water and makes the sign of an inverted T on his forehead. For the next month all those who have been operated on eat birds, rats and other flesh as often as three times a day and drink quantities of beer. Some of the songs sung at the rite are recorded in *Sudan Notes and Records* Vol. XXIII Part II 1940. Originally female circumcision was not practised but was said to be not uncommon in El Tunisi's time.

After circumcision a youth may handle spears and is taught their use and that of the shield by his father and brothers. He has as a boy already learned the art of hurling a throwing stick (*dormang*) and may now wield the iron type (*sambal*). Instruction in ironworking is confined to the despised class of smiths (*miira*); hunting is a general sport although the huntmasters (*aulanga*) do little cultivation; the rain maker's lore is inherited.

Although the Fur have no age-class system such as is found among the Bari, their age-grades in some way approximate to it. An article on this subject and youth organization covering children's games, circumcision, rejoicings, harvest festivals, raids and war is in *Sudan Notes and Records* Vol. XXIV 1941.

After circumcision and at puberty a youth becomes a fully fledged member of society and will begin to cast about for bridewealth with a view to marriage.

Marriage.

Premarital chastity is enjoined on, but not necessarily observed by both sexes. Fur morals are loose and promiscuity not uncommon. The presence of boarders at the fikis' schools and the prevalent practice among able-bodied males of migrating to the east for long periods, plentiful beer and frequent dances, all conduce to that moral laxity which the courts are so frequently called on to correct.

Felkin reports that the father of an unmarried girl's child had to pay a fine to the chief if he refused to marry the girl and that the child then belonged to the girl's father, who retained it if the girl subsequently married. Nowadays however a subsequent husband will adopt the illegitimate child, bring it up and give it his name. Every endeavour however is first made before the child is born to arrange a marriage between the child's father and the girl he has seduced. Boustead has listed Arbab, Gumaa, Khamis, Baga, Bosuru, Lelin Dogu, Gul and Tindil as names often bestowed on bastard boys and Khamisa and Uma Gumaa as the equivalent for girls. Sultan Ali is said to have

rounded up scores of such naturals in Jebel Marra and to have taken them into his palace as slaves.

Brothers and sisters, parents' and grandparents' children and maternal cousins fall within the prohibited degrees, but paternal cousin marriage is allowed. The clan (*ori*) system has not been fully investigated but there appears to be no prohibition of endogamy within the clan if that indeed is what the '*ori*' can strictly be called. Since the girls of the village are to be seen daily at the waterhole and about the village and regularly in the fields or at markets and dances the would-be bridegroom has every opportunity of long acquaintance with any girl he may wish to marry. No youth may take a wife until he has reached, the age of puberty, and, although a girl may be betrothed while young she may not be claimed by her husband in final marriage until her menstrual periods have started. Apart from this there is no period during which marriage is forbidden to either side, unlike some tribes whose customs enjoin celibacy on youths until the attainment of a certain age-class. In pre-government days a girl, who refused to marry a man chosen for her in her infancy, was beaten and handed over by force, but nowadays the matter is settled by the repayment of any advance of bridewealth made by the rejected wooer. The bridewealth, although containing certain basic essentials, is not a fixed sum, but depends on the girl's rank and the youth's wealth—thus a chief's son could marry a commoner, but an ordinary man would not waste time aspiring to the hand of a chief's daughter. Illicit liaisons, if discovered, end in immediate marriage or punishment, but on the mountain in the old days, owing, it is said, to the prevalence of female sterility, marriage was frequently delayed until the girl had proved herself capable of bearing a child. Elopement (*jabu*) is regarded as a disgrace and if the elopers cannot be apprehended, the girl is disowned by her family.

In ordinary cases however a youth's amorous intentions will culminate in a proposal of marriage (*kulo*) to the girl. A successful suitor's first move in the somewhat elaborate preliminaries to marriage is to send by the hand of a go-between (*mirsaal*), usually a male member of his family, the gift of four rolls of cloth to the father of the girl; this is called a "mouth-opener" (*utɔng jouli*) to persuade the father to give his consent. The gift is returned if the suitor is rejected outright, but if the father is disposed to accept, he will distribute the rolls to his sister, his wife and the girl's mother's brother and sister, and, on obtaining unanimous consent from them, will send for the go-between to open negotiations on bridewealth. From the time of the sending of the gift until after the consummation of the marriage a groom will neither visit

nor speak to his future parents-in-law and will ritually avoid them by crouching and removing his cap, if he chances to meet them on any path or in any place of common resort ; he may however visit his future bride by night as often as he can make the assignation, but on discovery any delay or deficit in the bridewealth is likely to lead to increased demands.

The basic constituents of the bridewealth are :—

<i>Kweniwing tōni</i> (uu)	— the bride's cow
<i>Iyang nansāng tōni</i> (uu)	— the cow of the mother's breast.
<i>Abang oring tōni</i> (uu)	— the cow of the father's clan.
<i>Khaalang tob</i>	— the mother's sister's share
<i>Mamang tob</i>	— the mother's brother's share.
<i>Anyang tob</i>	— the father's sister's share.

Uu means cow and *tōni* is the Fur for the Arabic tania—a four year cow ; it is reckoned as worth eight goats or sheep, eight ardebs of grain or eight rolls of cloth, while a *tob* is equal to two rolls of cloth. A bride therefore receives a cow or its equivalent in other units, but it is frequently rendered in the form of a necklace and remains her property unless repaid on divorce. The bride's mother gets a similar portion. The bride's father often receives a large bull or valuable donkey, though such an offering would never be made to the bride or her mother. There are also gifts of money to other members of the bride's family and the father's brother. Larger portions are paid by agreement and smaller values may be accepted, but the above is the average for an ordinary marriage. Such bridewealth may all come from the bridegroom's own cattle, or may be raised by gifts from his relatives or by loans from his friends ; on no account would money, hoes, spears or pots be accepted, but a Koran may be deposited instead of the father's or the bride's share on promise of future redemption.

When the go-between has handed over the whole amount to the bride's father (or uncle if the father is dead), the recipient fixes a day for the inspection of the bridewealth by the bride's uncle and the elders, who all join in a general beer party. A week or so later the bridewealth is formally accepted and divided among the bride's family. The *fiki* is now invited to read the book (*alang faati fiya*) and the occasion is one of ceremony with beer-drinking, mutual congratulation, singing, dancing, the tying of charms on the bride's neck and palmleaves on her wrists and general merriment and feasting ; the bride however may not attend the dance. If all the bridewealth has been paid the groom is allotted a site near the girl's home for their future house, but if part remains unpaid, such permission will be withheld until the agreed amount is forthcoming and is duly handed over at another beerparty

and dance. The new husband's male relatives will help him to build his first house, which is ordinarily six cubits in diameter, and after it has been completed, the bride will take embers from her mother's hearth and kindle a fire in her new home ; from that time cohabitation is usual.

These customs are the norm, but as in all human regulations of conduct based on mutual agreement, exceptions are frequently made. Arkell records a ceremony of forcible abduction of a penniless bridegroom by his bride's family and I myself have seen a middle-aged mother of children handing back in court a Koran deposited with her many years before by her young husband and now returned to him on divorce.

Defloration is the husband's right. If the consummation proves the wife to be a virgin, the husband gives a feast (*faara*) in her honour. When no feast is forthcoming the young wife may be the subject of beating by her mother and of derisive songs sung by her friends. I know of one case in which such songs ended in homicide and considering the general moral level, a number of these post-hymeneal feastings must be something of an empty vaunt.

If often happens that two friends marry one another's sisters, but so fundamental is the delivery of bridewealth in sealing the marriage bond that both are expected to pay the full amount. If an unwitting case of incest is discovered, both parties must fast for two days and then proceed to get a divorce. Polygyny is practised and is not confined to any one class ; it is usual with chiefs but out of twelve messes investigated in five different villages sixty-seven ordinary householders out of seventy proved to be monogamous and even the polygamous three only had two wives each. An approximation to the percentage of polygynous males may be arrived at by a consideration of the 1937 tax lists which showed eighteen Shartais, forty-five dimligs, five hundred and eighty-five sheikhs—a total of 648 notables—and 24,000 tax payers. If every shartai is allowed three polygamous relatives, every dimlig two and every sheikh one, there results a polygamous ruling caste of c.1377 i.e. 648 plus 729. Deducting the 729 from 24,000 leaves 23,271 ordinary householders of whom 996 (i.e. 3 in every 70) can be counted as having more than one wife. Adding 996 and 1377 gives 2373 or 9.6% of the tax-paying plus ruling males.

An ordinary man cannot afford a second wife until he has established himself by his industry or married off a daughter or two. When he does marry again, he will endeavour to bring his second wife to his first home, but if the two wives disagree, the husband will establish the junior in a different mess area and will spend three days with each in turn. If

however the second wife is from a neighbouring village the matrilineal principle holds good.

A modified form of the sororate is observed whereby a younger sister may, if she chooses, take the place of an elder sister who has died before marriage, but if the first sister has been properly married or has had a child in the course of an as yet uncompleted marriage, the younger sister may not be so approached.

The levirate is admitted but not enforced. A widow may elect to marry a brother of her dead spouse, who would only be asked to render eight rolls of cloth as this secondary bridewealth. The first husband's brother is charged with the provision of food, clothing and shelter for his dead brother's children and any subsequent children are looked on as those of the new husband, whether brother or otherwise.

Divorce.

A wife may be divorced for insult, idleness, disgraceful conduct with other men, theft, quarrelsomeness, or general bad behaviour. In the case of a husband insult, poverty, theft, cruelty, though not necessarily adultery, are grounds for divorce, but in all cases every effort is made to compose any differences which threaten to lead to the courts. Some men on divorcing their wives do not demand the return of the bridewealth; the whole may be claimed if there are no children, otherwise half is repayable including one whole *töni* from the woman. Daughters usually stay with their mother, but when they marry, their bridewealth is divided as though their parents were still married. The same rules apply if the man is divorced by his wife. In some cases the children will go with their father, but whether he takes the children or no, he is responsible for their upkeep until they can fend for themselves. It is impossible to say how common divorce is, but from court records it appears fairly frequent and I have seen a couple suing for divorce both of whom had children by two previous marriages as well as by the current union.

In such matters the censure of neighbours is a healthy corrective of misbehaviour and the opinions and advice of the village elders in their attempts to compose quarrels count as much with the Fur as do the pronouncements of their hereditary chiefs.

Adultery.

In pre-government days an adulterer caught *in flagranti delicto* could be killed by the outraged husband with impunity, but if this extreme penalty was not exacted in hot blood or if the adultery was

proved by other evidence, the adulterer was tied up in the husband's house until he had been stripped of all his worldly possessions. Nowadays the matter is the subject of a court case which nearly always ends in the imposition of a fine. As women possess property, both bridewealth and the proceeds of the sale of their crops, they can personally be mulcted of a fine without touching the husband's pocket. A number of acts are regarded as equivalent to adultery—being found at night (though not necessarily by day) on a married woman's bed whether or not she is present, being discovered unclothed in her presence at any time and being proved to have laid hands on her loin-cloth.

Death.

Death is thought to be the result of the sport of the devil, sickness or the evil eye, but in the last case only if the victim, who will naturally be conscious of his bewitchment, fails to go to the *fiki* for the antidote, namely a draught of water used to wash a koranic inscription off a wooden writing board. The soul is now thought to be seated in the heart and to fly to God at death and although Felkin records an old tradition in the west that after two or three days in the grave a man passes mysteriously to rejuvenation in a new country, there is now no accepted belief in reincarnation. A dying person is laid in a house or under a tree for the recital of the prayer of death and after death the corpse is washed and wrapped in a shroud.

The graveyard lies to the east of a village, if possible, and on soft ground. The graves (*turbanga*) are rectangular with a recess in the east side and lie north and south in length. The body is laid with the feet to the north and the back to the west, whether man, woman or child, and is buried one day after death. Although there are no family burial places, the *Aba Dimang*, the chief and the *fiki* are severally interred as near their relatives as possible in graves surrounded by stones. Lepers are consigned to a separate part of the graveyard. The old men usually dig the grave while the young men are making mud bricks (*libinya*) to build up the recess in which the corpse is laid and after the Imam has prayed, the diggers fill in the grave and cover it with thorns to keep off the hyenas. When stones have been set at the head and foot, the burial party wash their hands and feet. No personal belongings are put in the grave nor is valuable property ritually destroyed. Only men go to the cemetery even if a woman is being buried, while the women remain at home to grind grain for the funeral feast. On the return of the burial party, the death offering (*sadaga*) is made; a ram, blessed by Imam or *fiki*, is killed and after the Imam and elders have said prayers

on their rosaries (*sibinga*) for grace to the soul of the departed, the meat is eaten with other food by the assembled mourners in circles (*soma*) of five or six. Mourning lasts one day only and is confined to close relatives, though the people of three or four nearby villages may attend the feast with offerings of a little grain. There is no mourning anniversary except perhaps in the case of a sultan.

Graveyards are not tended and there is no segregation of sexes therein, for the site of each grave is settled by the Imam as necessity arises. Each person has a separate grave which is never re-opened. If newly born babes die, they are buried in the house enclosure to the east of the praying place. The son of a chief or Imam often gives a feast six months after his father's funeral and then proceeds to clean the grass off the grave; there is nothing to prevent an ordinary man from doing likewise, but it is unusual. Graveyards are not feared by day, but by night there is thought to be a danger of the dead arising and seizing upon an intruder. The corpses of lepers and persons murdered, struck by lightning or drowned, and of suicides are buried apart so that the crying of the spirits of the unnaturally dead may not disturb the cemetery; such bodies are not usually washed, but death from such epidemics as cerebro-spinal-meningitis makes no difference to the normal burial of such unfortunates. When a woman is in childbirth and likely to die, it is believed that, if her burden is that of a male child, it will be born and may survive, but that a female child will perish unborn. Victors in battle usually bury the dead of the vanquished.

9. ECONOMICS.

Husbandry, as has already been noted, is the primary occupation of the Fur peasant and indeed the main source of the food and wealth of his family. He grows, eats and sells with amazing industry as wide a variety of crops as is to be found anywhere in the Sudan; his cotton plots yield clothing and cloth for barter, while his animals and salt-pans are a valuable food and money asset to the district; smiths, tanners, potters and plaiters add their various contributions to the general economy.

Cultivation.

The boundaries of all shartaiships, dimligias, fiefs and villages are defined and well known and the village headman is responsible for assigning cultivation plots especially to new settlers. A good deal of latitude is allowed to old inhabitants in the less closely populated areas over the choice of new ground for tilling, but the main rule is that once a man has cleared a plot of its bush timber, it remains in his 'possession'

even though for the moment it is lying fallow, and everyone is very careful not to poach on any ground known to be under the axe or hoe of another. Each village has a small council of elders, who decide minor cultivation disputes and enforce their decisions by advice and warning. Such is the Fur respect for authority that such decisions are for the most part obeyed and very few land disputes appear in court. Thus the rights of the village are vested in its inhabitants jointly and any village disputes are settled by the *dimlig* or *shartai*. Wood-cutting and hunting rights are exercised at random over the area controlled by a *dimlig*, except that in the former case a wood-cutter does not go further from his home than necessity compels. Mutual assistance is given by man and wife in their fields; children work with their mother until the boys of twelve or so are regarded as old enough to help their father in his crops. Some families concentrate their efforts on plots in one vicinity, but others prefer to scatter their holdings over different areas. It is the man's duty to use the axe because tree clearance is too heavy a task for the woman. Each person plants his or her own seed, and weeds by hoeing his or her own sprouting crops, except that the husband gives his wife some aid and looks to her to provide a beer party (*tawzi*) for the villagers who assemble on any agreed day to help him; he in his turn will give a day's weeding to others who call upon him for help. The secondary grass growth in standing crops is plucked by hand. The wife's grain is cut first and again the wife rallies the villagers to her husband's assistance by giving a beer party. The cut heads are piled, trodden down and left for one or two months to dry, and another beer party is held when the dry ears are brought to the house, piled under an open shelter of wood and straw (*dirbo*) and covered with grass. The wife makes a mud-coated threshing-floor (*diirong*) about three to four metres in diameter and a month or so later the grain is threshed with a flail (*mutog*) by men and women called together by the promise of beer. Men with more than one wife give equal assistance to each woman. The distant and main cultivation is called '*rei*' and a small plot of groundnuts, simsim or grain near the house is called a '*bögu*.' No ploughs are used, but reliance is placed in the axe (*böu*) for clearing, the mattock (*tuur* or *boten*), the long hoe (*faar*) and on the mountain a pick-shaped hoe called a '*sanggo*'; for reaping a small knife (*tigdi*) is used. Crops are protected against animals by thorn fences, against birds by scarecrows (though rarely) and against other evil agencies by an inverted pot on a stake. Ridges (*ulinga*) raised between the rows of grain are set along the land contours to hold up the rain water, and on Jebel Marra the running streams are diverted

to irrigate winter crops. If simsim is grown in any quantity, it is sown separately, otherwise it is mixed in with grain and, ripening early, is cut and hung on frames, beaten and collected on palmleaf mats. There is no rotation of crops, as a fresh area is opened up when one plot has grown stale and is left to fallow. Manure is used on poor and stony ground especially in the hills where well-built terraces of stone hold up the precious earth against the disrupting force of torrents. Deserted Arab cattle kraals are much sought after as fertile plots, but are usually monopolised by the headmen. After threshing the grain is winnowed (*uwilingi*), poured into earth jars (*kunuma*) about breast high and a cubit across and sealed for future use; Felkin also describes a large granary consisting of a hole in the ground lined with mats or hides and surmounted by an erection like a grass hut. If children tend separate cultivations, their fruits are always added to the wife's store and if her crops fail, the husband hands over the whole of his and goes off trading in salt or cloth. Seligman quotes Browne and El Tunisi for the ritual sowings by the sultan himself of several casts of seed and Felkin describes a similar ceremony attended by chiefs and headmen; in each case unmarried girls form the entourage. The harvest festival rites performed by hands of unmarried girls and youths has been described in *Sudan Notes and Records* Vol. XXIV 1941. Dues of *futra* and *zeka* were levied on all crops in pre-government times and *futra* is still frequently handed over in the belief that its rendering will bring luck in the coming year. The opening rains often produce a black worm (*mundi*) which is very destructive; to kill the pest all the goats are driven to the riverbed where a black one chosen at random is slaughtered—the subsequent cry of the owner on discovering his loss is said to kill the worm. Among many sections of the Fur it is considered as very unlucky to indulge in ablution from the date of sowing until the grain is a foot high.

Fur food crops are grain of the tall white-seeded variety (*marga*), which is planted at the beginning of July and reaped about November, pennisetum typhoideum (*sona*) planted in July and reaped in October, two sowings of wheat (*gumonga*) planted on Jebel Marra in July and ripening after ninety days and the irrigated crop of December or January which is cut about April, maize (*fogusa*) in small plots plucked in September, simsim (*kurta*), groundnuts (*fuula*) in small patches, beans (*kura*) in scattered plots, hibiscus esculentis (*faganga*) which will give two yields if the rains are protracted, small and large chillies (*tasa* and *dinggaba*), tomatoes (*birinjaala*), potatoes, onions planted in large quantities after the rains in irrigated beds or damp soil, garlic (*tum*), pumpkins (*rusunga*), marrows (*dwi*), hibiscus sabdariffa (*funda*) as

well as cucumbers, melons and a little manioc. The fruits of such forest trees as *Balanites aegyptiaca*, *Cordia abyssinica*, *Ficus*, *Sclerocarya Birrea*, and *Tamarindus indica* are also eaten both in times of plenty and distress. For cash the Fur tend cotton plots, which yield inferior bolls for several years, and tobacco which is planted in sunken beds in the winter. Dues were, and in places still are, rendered on grain at the rate of one basket of 28 lbs. weight per man, woman and child as soon as the harvest is garnered, or when grain is short, at the rate of 30 threads of cotton (*kwiito*) or 5 m/ms. per head; Sultan, chief or headman took one third each. *Zaka* is paid to the chief, fiki or poor at the rate of one tenth of the crop but only if the latter exceeds a couple of tons in weight. The peasant of the sultanate was also called upon for seven days free labour per year distributed at the rate of one day for each of the activities of clearing, planting, weeding, cutting, threshing, house-repairing and fence-building for the benefit of the chief; lesser functionaries also received unpaid labour on a much reduced scale and with the expectation on the part of the labourers that a meat feast or beer-party would be provided.

Animals.

Cattle nomenclature is bullcalf—*nungi*, heifer—*nonga*, bull—*nung* and cow—*uu*. Cattle run in herds but are stalled by individual owners in the homestead. The Fur rely on the Arabs for castration, which is done by bruising (*nungsi korge koldie na ture kawii*—"they beat a bull's testicles and make it impotent"). Thorns are tied to calves' mouths at weaning time. White, brown and dappled cows are much sought after, but black beasts are said to house devils. Prize kine are protected by paper charms written by a fiki, enclosed in leather and hung round the animal's neck. There is no clan or tribal branding and although earcutting is not a clan custom, it is used by individuals to mark personal ownership. There is no horntwisting nor is bull's blood taken as food. Cattle are valuable as currency for bridewealth, for their milk, meat and hides. The 1937 tax lists reveal that approximately 24,000 tax payers owned 34,000 cattle rising four years and upwards. Sheep and goats totalled 16,000 and 55,000 respectively. 7000 donkeys, 1200 horses and 17 camels were also on the lists. Dogs of a mixed breed are kept for hunting and scaring off hyenas. Animal prices in 1938 were for camels L.E. 4—L.E. 5, for horses L.E. 5, for donkeys 600 m/ms., for a cow L.E. 3, a bull L.E. 1.500 m/ms., for sheep 300 m/ms. and for goats 150 m/ms.

Industries.

Salt is a valuable source of income and is sold in far distant markets.

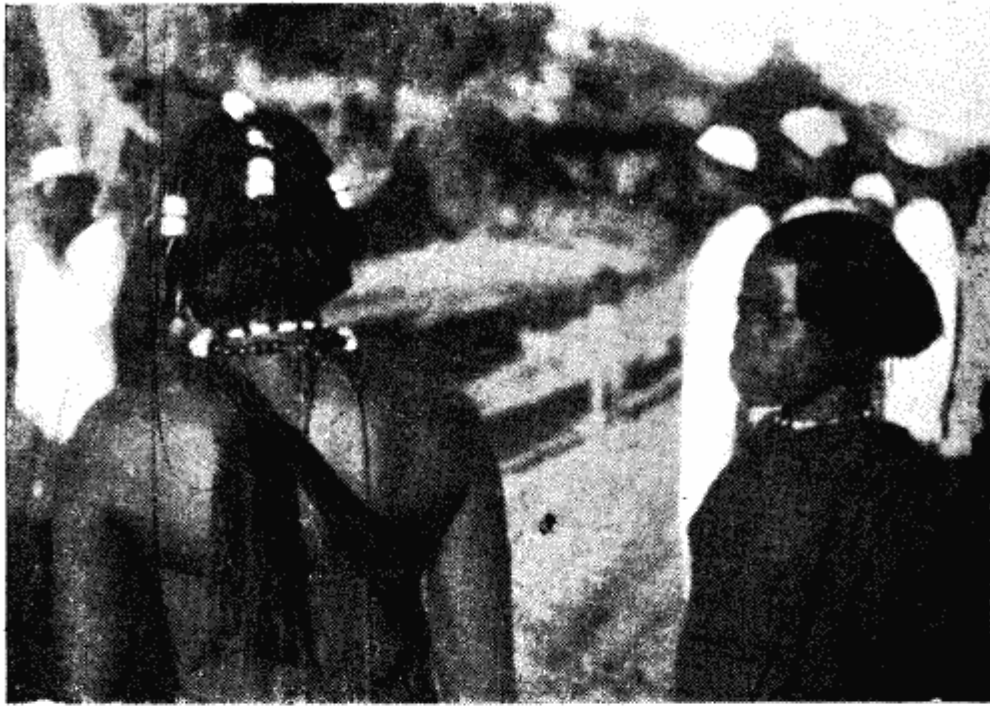


FIG. 7
WOMAN'S COIFFURE



FIG. 8
PIPE AND RATTLE



FIG. 9
FUR DANCE DRUMS



FIG. 10
FUR CHIEF AND SONS

The salt bearing earth of certain hill streams is scraped up, put in a perforated pot, covered with water and allowed to drip. The saline drip is then crystallised off by heating and the sediment worked up into small cones (*felgo*) on grass stalks about 9" long. A salt pan is called a salt-field—*kerang rei*.

In tanning the skin is first cleaned and then allowed to soak for three days in a bath of water full of *Acacia arabica* pods. After drying, it is worked by the hands into pliability. Tar (*ögum*) is then rubbed in to make it ready for cutting.

Tar is distilled from the seeds of the melon, cucumber or marrow. A vertical hole two feet deep is dug with a side access tunnel for the removal of the tar dish which is set at the bottom of the hole; at the mouth of the vertical hole a perforated pot holding the seeds is sunk flush with the ground, plastered and heaped over with fire; the tar drips into the dish at the bottom of the hole.

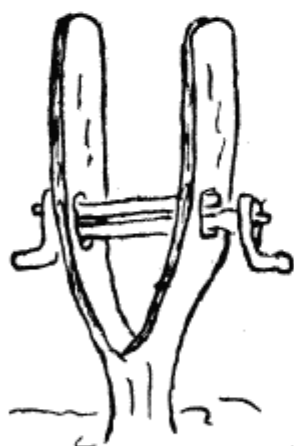
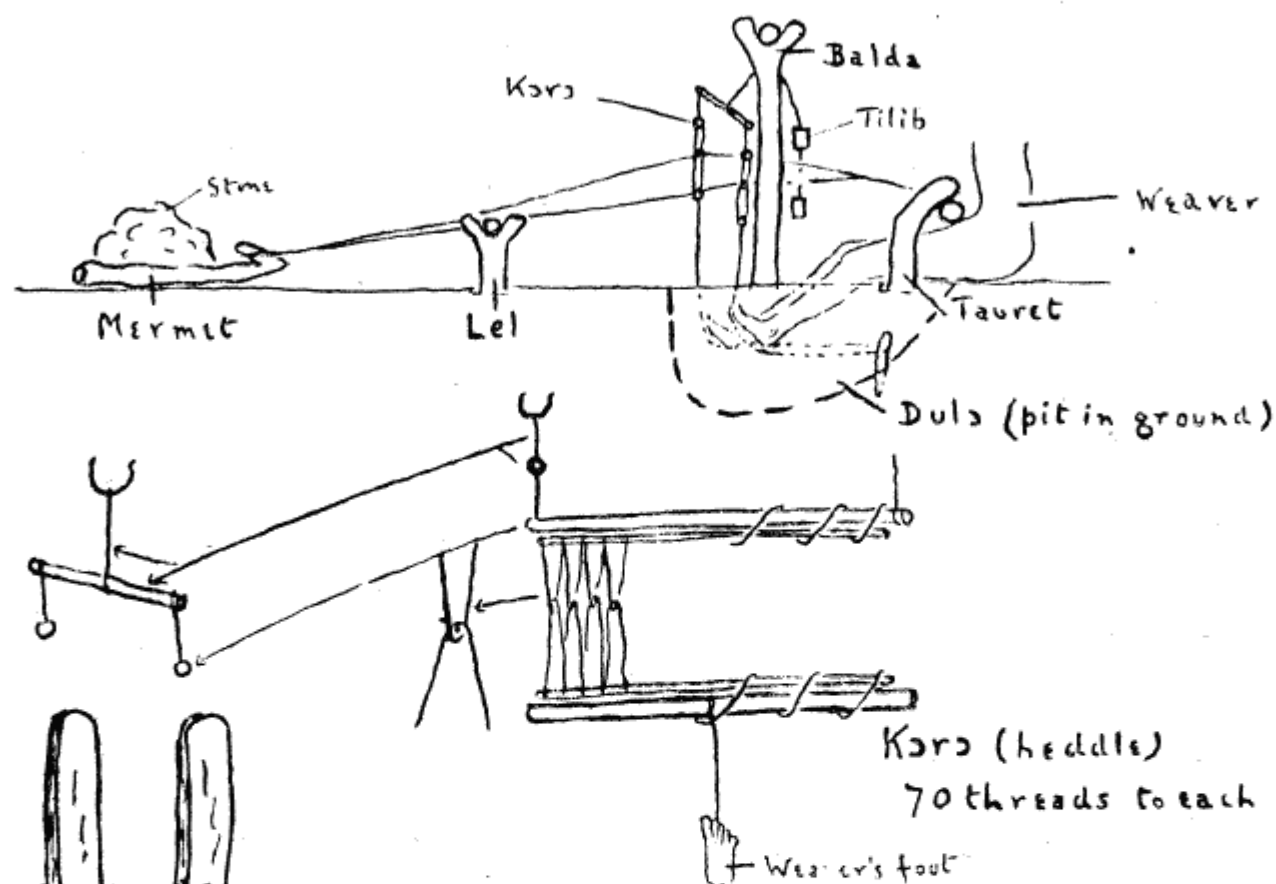
Sandals are made with a flat sole and heel and with a strap for the big toe.

The ironworkers (*miira*), found in ones and twos in almost every large village, are a despised caste who are not normally allowed inter-marriage with ordinary Fur; their trade is hereditary, although all smiths will take apprentices in the rare event of any ordinary Fur wishing to associate himself with their trade and caste. Their wives are the pot-makers of the community; as a class they do practically no cultivation, but rely on the sale of their products to buy food. A smith's tools consist of an anvil (*tumie*) about 4" high and the same across, a pair of long pincers (*subanga*), a hammer (*maturak*), two iron bludgeons about 10" long, called *bölgi* if it has a knobkerry end and *amada* if its head is more tapered, and finally the bellows (*suwenga*) made of skin fitted to a wooden nozzle with a larger mud nozzle (*borongot*) used to protect the wooden nozzle from charring. Iron dust (*daurang suru*) is collected by Fur women from the sandy riverbeds in the hills and sold to the smiths at a fourteen pounds grain basket full for one roll of cloth. Smelting is done at night. At the bottom of a mud-plastered hole about three feet deep is laid a stack of wood on the top of which the iron dust is poured. About dusk the oven is fired and the smith and his assistants sit through the night stoking and working their bellows. At the first light of dawn the fire is allowed to die down and after the oven has cooled for four days the cast-iron is broken up with axes as required for working. A hoe head was worth 50 m/ms. in 1937, an axe head 40 m/ms., knives and spear heads about 10 m/ms.

Cotton spinning on hand-twirled spindles (*jubaari*) is a universal

craft while every village has its few wooden ginsns (*maal*) and its loom (*shaaka*). For details see sketches below.

FUR LOOM

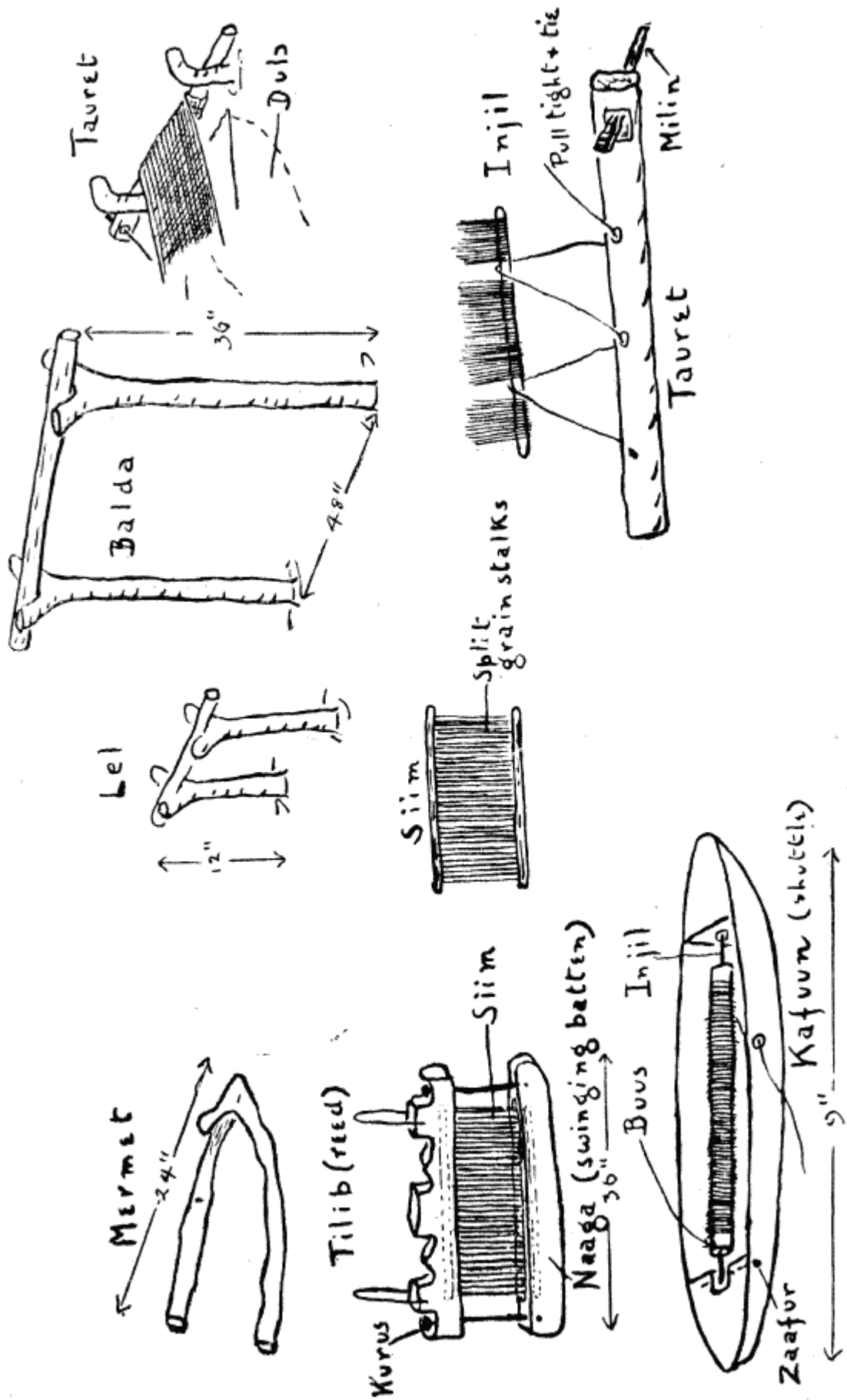


MAAL
(COTTON GINN)

Grass mats (*jilenga*) are plaited in every household and used for walls and roofs of houses.

Rates of exchange are based on the '*tōni*,' the fundamental unit of bride wealth. Eight rolls of cloth, eight goats, seven sheep, eight silver coins worth 200 m/ms. each, one Koran and one bull plus one roll of cloth are now all regarded as equivalent to the *tōni* in value; in Felkin's

day a good bull was worth fifteen sheep and a cow fifteen young goats. Similarly sheep values in hoes have sunk from six in 1885 to three in 1938. Twenty to thirty rolls of cloth will now buy a cow, although the bride wealth value is only eight, as will also sixty to one hundred baskets of grain. The barter system is still in wide operation in the markets of Western Darfur.



COMPONENTS OF LOOM

10. PERSONAL.

In the rains, save that superstition at times forbids the practice, bathing is easy in the flowing river, but from November to May, when water has to be dipped out of wells and waterholes, washing is less in favour; no soap is used for personal hygiene, but a local detergent made out of the crushed nuts of the *Balanites aegyptiaca* is made use of when clothes have to be washed. The teeth are cleaned with frayed twigs cut from the *Balanites* and *Tamarindus*. The not overcleanly habits of the Fur peasants lead to frequent scabies and their lax morals contribute to the spread of venereal disease, and, although they eat as well as any tribe in the Sudan, their dirty personal habits and overcrowded houses render them very vulnerable to such epidemics as relapsing fever and cerebro-spinal-meningitis.

For clothing the man wears loose shin-length drawers, a knee-length shirt with long sleeves and a skull cap, all made of locally grown and locally woven cotton; sandals of home-tanned hide are usually worn. Chiefs and notables, especially on ceremonial occasions, are much more elaborate in their dress, with turbans and decorated robes, preferring imported cloth to the rough homespun; the increase of imported cloth before the war however enabled many a villager to buy a smarter outfit for market days and holidays.

A man's brother will shave his head for him monthly, his wife will pluck the hair from his armpits and he will trim his own beard and moustache and shave his own pubic regions. Nails are cut with a knife and no ceremonial or magical customs attach to the destruction of the parings; henna staining is a foreign practice.

Women wear a loin cloth (*kadmul*) with a roll of cloth thrown loosely about the shoulders; their clothing is home-made, but manufactured blue cloth is fairly prevalent, and again the richer women are more elaborate in their ensembles. The hair is invariably black and worn in ringlets. Unmarried girls wear a specially dressed knot of hair at the back of the head (see plate 6) but after marriage long ringlets are usual; the coiffure is moplike and is oiled, plaited with silk, and often ornamented with beads and coins (see plate 7). Beads are regularly worn in the perforations made during childhood in the right nostril and the lobes of both ears. The lower lip and upper gum are pricked with heglig thorns and the punctures are blackened with 'kohl' after bleeding. Necklaces of beads and silver armlets and anklets are worn. Every woman herself plucks the hair from her armpits and pubic regions and a relative may be seen killing lice in the oiled and plaited locks of her head. Teeth

are not ceremonially excised, and female circumcision is not common among the ordinary villagers; the face is not veiled nor are the women secluded, and although they may not become chiefs or fish or hunt, they in fact live an unrestricted life as vigorous partners in a usually happy and hardworking household.

Fire is kindled with a spark struck from a flint and steel or by means of fire-sticks made of the wood of the *Cordia abyssinica*. When the family is at home, the fire is kept perpetually burning, but annually the fires of the village are extinguished and under the leadership of the elders fresh fire is kindled in the main street. From this central fire every woman rekindles the fire in her home using for the purpose old grass (*kinyo*), as it is believed that this will prevent any old fire from breaking out again and burning down the village; the freshly kindled fire is not supposed to be so malignant in its year of existence. This ceremony usually takes place at the new year and is referred to as *uto diwo* "the new fire."

Food.

Cooking is only done by women (even the rich and socially superior make a point of preparing their husbands' meals) and by the pupils in a fiki's school. The big house (*tong apa*), also called the wife's house (*dwoñiang föyi*) or the mother's house (*iyang föyi*) is the kitchen.

To prepare porridge (*nung*) grain is first coarsely ground, reduced to fine flour by a second grinding, poured into a pot of boiling water and cooked to the consistency of thick gruel with constant stirring; such plain porridge is only eaten by fiki's pupils who roll it into cakes which they bake in the embers, others eat it with a fine sauce, compounded of ground hibiscus, salt, chillies and meat, and poured over the porridge in the food dish. Other sauces are made of ground monkey-nuts or simsim cooked with a little water; stewed meat is also a favourite accompanying dish, although meat is frequently eaten raw and rotten.

Pancakes (*tugur*) are made of doubly pounded grain, winnowed, dried and ground into a fine flour, which is made into a paste in a pot over the fire; ground sprouted grain (*tirma*) is then stirred in and the whole left for a day. The pancakes are made on a hot iron plate and eaten with sauce at home, or with water when travelling; they are served in a gourd, not in a dish.

Coarse meal is essentially the food of cultivation time; it is roughly ground dukhn with a little salt and water added.

Lema is the porridge eaten on Mondays and Fridays, when every man brings his share uncooked for the communal pot, in which it is blessed by the Imam; after being cooked, it is shared by all contributors.

A Ramadan food called *diri* is made of the boiled and skimmed fruit of the *Cordia abyssinica*, *Balanites aegyptiaca*, *Zizyphus spina christi*, *Tamarindus indica* and *Grewia betulaefolia*, with an admixture of flour to make it into an edible paste or honey to convert it into a palatable drink. Honey itself is eaten alone or mixed in with other sauces, but honey and salt never coincide in one dish.

Butter (*dei fata*) is made in a swinging-gourd churn from boiled milk, and clarified butter (*dei semin*) is produced by a long boiling of butter over a fire; a fat is also extracted by women from the kernels of the *Balanites aegyptiaca* fruit and is preferred to the oil of the sesame plant.

Drink.

Fresh milk (*fera*) is drunk as it is milked from the cow or heated with cream intact (*dukala*) and skimmed milk (*renyala*) is also drunk; other drinks are water, honey and water, tea, beer.

Beermaking is a complicated process. Grain is made to sprout by being soaked in water and buried for four days, then dried and stored; other grain is ground coarsely, soaked, beaten up, soured, dried in the sun, stored and later ground finely. These two products are called *tirma* and *fatar* respectively. Porridge is now made from the latter and ground *tirma* is added. Next day more porridge is mixed from freshly ground grain and water, and spread out on a mat so that yet more newly ground *tirma* may be kneaded into it. This new mixture called *doringa* is worked into the first mixture, which has been standing one night, and after a further twenty-four hours becomes sour, is dropped into fresh water and stirred for fifteen minutes; the resultant liquid strained through a cotton cloth is beer—*kira*, *dingsunga* or *saabenga* as it is variously called. In times of famine the seeds of the *Cenchrus catharticus* or *Dactyloctenium aegyptiacum* may be used instead of grain.

To make *ambila* the nuts of the *Cordia abyssinica* are boiled until a juice is formed, and this juice is poured off, reboiled, allowed to cool and bottled in gourds for two days; a similar drink may be produced by treating sprouted grain in the same way.

Narcotics are not used, since hashish is unknown, and although tobacco is grown in fair quantities for sale, very few Fur smoke and only a limited number chew it.

The household utensils used for the preparation of food and drink are few and simple. A water jar (*kiti*) of burnt mud about two feet high with a wide mouth stands on its rounded base in a small depression inside every house; it is filled from a smaller jar (*tawa*) of similar shape

which is carried to the well and filled by means of a calabash (*kere*). The 'aala,' a pot about the same size as the 'tawa' is used for cooking—both are about one foot high; a still smaller pot (*dute*) about nine inches high is employed for the cooking of sauces. A potsherd (*taule*) serves for the carrying of embers. The plain or bottlenecked gourd (*kasa*) holds liquids and a broken piece of gourd (*kaurong*) does duty as a ladle for flour; the food dish (*fangga*) hewn from a cross-section of the *Sclerocarya birrea* has a lip and rounded base; if food has to be carried any distance the dish is set in a small basket (*tasa*) and covered with a food cover (*korito*) woven from straw. A hooked stick (*awuni*) is used as a stirrer, and a stick with a blunt hoe-like attachment is twirled between the palms to stir liquids. Grain is pounded in a mortar (*fundug*) with a long wooden pole called the *funduging kuru*—the mortar is about 2'6" high and the pestle is slightly longer and of a girth that can comfortably be held in the hands. The average basket (*gera*), holding about twenty-five pounds weight of grain, is circular, of woven cornstalks with a rounded base, and the flat basket (*tabag*) is used for winnowing grain and collecting flour from the grindstones (*diito*, plural *kiitonga*). At night the ordinary man reclines on a palmleaf mat or on a bed (*fitie*), made of flour forked uprights with crosspoles, and a mattress of plaited bamboo or cornstalks.

Property.

The Fur have had to resort to the Arabic language for words to express the distinction between rich (*kawaj*) and poor (*maskiin*).¹ Property consists of houses, domestic articles, rolls of cloth, cattle, crops, the yield of saltpans, weapons and copies of the Koran. To own ten cattle is to be a wealthy commoner but the scale for chiefs is much higher; twenty goats or sheep, two or three horses, four donkeys and forty rolls of cloth are possessions out of the ordinary. Rights of property are vested in the individual owner and a wife receives her portion of the bridewealth for disposal if she chooses; on divorce however she must return it, if still in her possession, or failing that, on re-marriage. Land is vested in the fief and village and its revenues in the old days were at the disposal of the sultan.

Cattle are often bought in partnership, but naturally only female beasts are so purchased and that for their progeny. If a cow is bought by two equally-sharing partners each is said to hold a side; after the

¹ The reader may have already noticed a sprinkling of Arabic words for certain objects. — *Ed.*

first calf, the two animals remain in joint ownership until the second calf is born and then, if both calves are heifers or one a heifer and one a bull, the one partner takes the original cow and the other the two calves, but if the calves are both bulls, the outcome of the third calving is awaited; if the cow still persists in bearing bullcalves, one partner takes the three bulls and the other the cow, but if the cow at last has produced a female calf, one partner receives the cow and the other the cowcalf and a bull, leaving the second bull to be held in jointure until its value in cash or in cloth can be realised. When a cow is bought in unequal shares by a three-quarter partner and a quarter partner, the former is regarded as owning three legs to the latter's one; in such cases the first calf, if a female, is the property of the junior and the cow of the senior partners; if the firstborn is a bull calf both animals remain jointly held and if the secondborn is still a bull, the smaller contributor gets the first bull and half the price of the second, while the greater contributor takes the rest. If three persons share equally in a cow, they wait until two of them can take a cowcalf each leaving the cow to the third and meantime splitting the value of the bullcalves, but if three share unequally, in that one has a side and the other two a leg each, the two latter count as joint owners of a side and receive between them such a half-partner's share—they thus eventually become half shareholders in a whole animal. If four persons subscribe for a leg apiece, two of them are bought out with the first two cowcalves leaving the other two as half shareholders in the original animal.

A loan from a non-relative is called *kiwo* and from a relative *raan*. No interest is payable on either, but if the owner of a stud bull, which has been borrowed for breeding purposes, comes to the village of the borrowers, he is well feasted. Debts may be redeemed by labour.

The Fur verb to cover the complexities of inheritance is *angara* which means 'to divide.' A man's property is distributed to his children on his death. If the number of cattle suffices, these are given one by one to each child in turn, provided that the children are all of the same sex; if however the sexes are different, a male child receives two animals for each one given to a female. If however the cattle do not suffice for such a division (or if the remainder after a one by one division do not suffice) the available stock is divided into sides or legs, whichever is suitable for the next distribution. When an undistributable remainder is left, such a remnant goes to the wife or wives. In such divisions there is naturally little dispute over the sexes of the animals, as only female beasts as a rule are kept and the few stud males can be otherwise divided by shares or sale. A childless man's property passes to his brothers

and sisters in full blood, who divide it on the same principles as govern the distribution to sons and daughters. An heirless man's possessions pass to the chief. Unless a wife bequeaths her property to her husband, it is divided on her death between her mother, father, sisters and brothers, but if she only has the value of one cow (her original share of the bridewealth), half of it provides the funeral feast and the rest goes to the husband; when her family take her property, they are responsible for the burial feast. All the above is traditional, but *Sharia* law is now applied when the case is referred to a court or a Qadi.

FUR RELATIONSHIP TABLE.

m.s. — man speaking		w.s. — woman speaking	
F — father	M — mother	Br — brother	
S — sister	W — wife	H — husband	
Father	— <i>aba</i>	Father's mother	— <i>abɔ</i>
Mother	— <i>ama</i>	Mother's father	— <i>uwɔ</i>
	— <i>iya</i>	Mother's mother	— <i>abɔ</i>
Sister (m.s.)	— <i>niu</i>	Husband	— <i>Duo</i>
Brother (own father, different mother)	— <i>dwɔn</i> — <i>aming kwe</i>		<i>Tɔnging siid</i> <i>Jare</i> <i>Allang abid</i> <i>Dogalang baaba</i>
Brother (own mother, different father)	— <i>bara</i>	Wife's father	— <i>magal</i>
Sister (own father different mother)	— <i>bara niu</i>	Wife's mother	— <i>mare</i>
Sister (own mother different father)	— <i>bara niu</i>	Husband's father	— <i>magal</i>
Elder brother (m.s.)	— <i>bain</i>	Husband's mother	— <i>mare</i>
Elder brother (w.s.)	— <i>dwɔn apa</i>	Wife's brother	— <i>jaru</i>
Elder sister (m.s.)	— <i>niu apa</i>	Wife's sister	— <i>kɔra</i>
Elder sister (w.s.)	— <i>dada</i>	Wife's br.'s wife	— <i>jarung dwɔnia</i>
Father's brother	— <i>aba</i>	Husband's brother	— <i>kona</i>
F.'s brother's wife	— <i>ami</i>	Husband's sister	— <i>kɔra</i>
F.'s brother's child	— <i>abang kwe</i>	W.'s S.'s husband	— <i>kɔrang duo</i>
Father's sister	— <i>anya</i>	H.'s Br.'s wife	— <i>maning dwɔnia</i>
F.'s sister's husband	— <i>mama</i>	Son's wife's parents	— <i>baranga</i>
F.'s sister's child	— <i>bara or niu</i>	Fiancé	— <i>jaal</i>
Mother's brother	— <i>mama</i>	Wife's lover	— <i>wanda</i>
M.'s brother's wife	— <i>khaala</i>	Son	— <i>kwe de</i>
M.'s brother's child	— <i>bara or niu</i>	Daughter	— <i>kwe niu</i>
Mother's sister	— <i>khaala</i>	Brother (w.s.)	— <i>dwɔn</i>
M.'s sister's husband	— <i>mama</i>	Younger brother (m.s.)	— <i>dittan</i>
M.'s sister's child	— <i>khaalang kwe</i>	Younger sister (m.s.)	— <i>niu</i>
Father's father	— <i>uwɔ</i>	Younger brother (w.s.)	— <i>dwɔn iti</i>
		Younger sister (w.s.)	— <i>dittan</i>
		Brother's child (m.s.)	— <i>barang kwe</i>
		Younger Brother's child	— <i>barang kwe</i>

FUR RELATIONSHIP TABLE — *Continued.*

Elder br. child (m.s.)	— <i>barang kwe</i>	Daughter's daughter (m.s.)	— <i>atin</i>
Husband's br. child	— <i>konang kwe</i>	Daughter's son (w.s.)	— <i>atin</i>
F. younger br.'s child	— <i>abang kwe</i>	Daughter's daughter (w.s.)	— <i>atin</i>
Brother's child	— <i>dwōnin kwe</i>	Wife	— <i>Dwōnia</i>
Wife's br.'s child	— <i>jarung kwe</i>		— <i>Tōnging siid</i>
M.'s br.'s child	— <i>mamang kwe</i>		<i>Iyang kwe</i>
Sister's child (m.s.)	— <i>dalang</i>		<i>Allang kōi</i>
H.'s S.'s child	— <i>kōrang kwe</i>		<i>Dogalang ama</i>
F.'s S.'s child	— <i>bara or niu</i>	Daughter's husband (m.s.)	— <i>magal</i>
Younger S.'s child (w.s.)	— <i>dittaning kwe</i>	Daughter's husband (w.s.)	— <i>magal</i>
Elder S.'s child (w.s.)	— <i>dadang kwe</i>	Son's wife (m.s.)	— <i>ōrus</i>
Sister's child (w.s.)	— <i>niung kwe</i>	Son's wife (w.s.)	— <i>ōrus</i>
Wife's S.'s child	— <i>kōrang kwe</i>	Sister's husband (m.s.)	— <i>jaru</i>
M.'s younger S.'s child	— <i>khaalang kwe</i>	Sister's husband (w.s.)	— <i>mari</i>
Son's son (m.s.)	— <i>atin</i>	H.'s S.'s husband	— <i>mani</i>
Son's daughter (m.s.)	— <i>atin</i>	Brother's wife (m.s.)	— <i>ōrus</i>
Son's son (w.s.)	— <i>atin</i>	Brother's wife (w.s.)	— <i>ōrus</i>
Son's daughter (w.s.)	— <i>atin</i>	Fiancée	— <i>ser</i>
Daughter's son (m.s.)	— <i>atin</i>	Husband's lover	— <i>wana</i>

11. RECREATIONS.

War, or the spasmodic raiding that passed for war in the old days, was one of the chief recreations of the Fur. Soldiers (*daalima*) were armed with a heavy spear (*kōr*), a number of light barbed spears (*sambenga*), a shield (*kōbe*) of buffalo hide and an iron throwing knife somewhat boomerang-like in shape. Slings (*zertinga*) once used in battle now only serve to scare birds off crops. The passes and hill paths of mountains were defended by walls and booby traps (*mina*) of logs and stones while in the plains thorn fences and stockades provided defences for the village.

In forays the chief led his force with an attendant following of cavalry and behind him came his headmen in command of troops of spearmen. The main object of forays was the rapine of villages and the seizure of slaves. Bravery in battle was honoured, cowardice jibed at publicly; a deserter's wife would divorce him and his female relatives would find it difficult to marry; courage therefore carried an economic as well as a moral premium. In every fief the warriors were banded together under the command of the *Ornang*, who is an older warrior selected by the elders as a leader; he takes his orders from the chief and in peace time he organises parties to track and recover lost and stolen cattle.

Hunting (*aula*) is a dry weather activity for Saturdays and Tuesdays. The hunters are called together by the huntmaster (*agiid*) at the water-

hole, where, after drinking, the hunt is divided into gangs; a spear and a number of wooden throwing sticks are the weapons used and the grass is sometimes fired; any bird or animal is fair game. Sometimes parties from three neighbouring "dimiligias" will have a combined hunt, but after the huntmasters have settled the line for the day, their followers frequently get mixed up in the excitement of the chase. A kudu horn is blown for the muster. Dogs are used for pursuit. An individual's bag for the day may be as much as two guineafowl, three partridge, a hare and a gazelle. In the evening the hunt reassembles at the same waterhole and fixes the rendez-vous for the next meeting; no mention is made of the proposed line lest the game get wind of it and make off.

A lone hunter (*jankaat*) will make a hide and set a rope-net trap (*kunyyir*)—this consists of a loose net fixed to a semi-circular stick, and when the back of the net has been pegged down, the stick ends are lodged in the ground astride a watering spot; a long rope attached to the middle of the stick is jerked to trap any birds that have collected to drink. A basket propped on a small stick is also used.

A whole village will co-operate in the erection of a stone leopard trap baited with rotten meat or a live goat; the intruding leopard releases a peg holding up a heavy timber drop-door. A lion trap consists of a large hole covered with mats and armed with spear attached to an embedded pole; a hunk of flesh fixed to a tall light pole induces the lion to jump for it only to crash into the pit and on to the spikes of the spears.

Children catch guineafowl by driving them into an opening between two bushes across which a rope has been slung with a number of nooses (*kilfanda*) dangling from it.

No poison is used in the hunt; neither fiki's pupils nor women engage in the sport.

Fishing is carried out by waders armed with conical fishcages of bamboo with a wide open base and a hole at the apex; the cage is thrust down over a shoal of fish and the catch removed by hand. Nets and hooks are also employed and at times dammed pools are poisoned with powdered heglig bark. Some women in the south engage in fishing.

The various Fur dances, the *Tesa*, the *Kosok*, the *Diktis*, the *Jombole*, the *Jure*, the *Duko* or *Ruge*, the *Kona*, the *Jozing Kona* and the *Firanga bie* have all been described in full in *Sudan Notes and Records* Vol. XXIII Part II 1940, as also the musical instruments employed (see plates 8, 9 and 10).

Children engage in a number of games such as spearing hoops, hopping in the circle, knucklebones, pebbles in the holes and groundnut dice.

12. RELIGION.

The Fur are now-a-days all devotees of Islam which has spread steadily under Arab influence. Every village has its Imam and fiki, its simple mosque or praying place and all villagers observe the festivals of their religion.

13. SUPERSTITIONS.

There are however relics of pre-Islamic beliefs still current. Felkin reports an ancient creed to Molu—the old name for God—according to which a man's soul, seated in his liver (*kilma*), was thought on death to fly to Accra where his worth was judged; if he passed the test he went to heaven (*juwel*), if not, to *uddu*, the place of punishment. He also records a belief in poltergeists, an ancient tradition that the Fur alone of mankind worshipped a god, the survival of stone spirit houses dedicated to Molu and the existence of a powerful spirit on Jebel Marra. So far as I know most of those are extinct, although various localities are credited with spirit inhabitants.

A belief in metamorphosis, whereby various sections are believed to be able to transmute themselves into lions, hyenas, jackals, hares, cats and dogs, still persists. One area recently resented the poisoning of hyenas for this reason and an actual court case is recorded by Boustead, in which a woman was accused of self-change into a cat; the proof adduced was a number of burns on the woman's feet which a neighbour alleged she had inflicted on an intruding cat.

Certain men are credited with the power of scaring off swarms of locusts; their stock-in-trade is usually a stick with a feather and hollow horn containing ground roots attached to one end; the operator must abstain from intercourse with his wife. The born locust scarer (*togony*) is said to have a locust shape imprinted on the palms of his hands, and although their eventual powers are less efficacious, would-be scarers may learn the art from a born expert after drinking a root concoction; the services of such operators are paid for with grain.

Small pox is treated as an honoured guest and referred to euphemistically as grandmother (*abɔ*); grain and flour are sprinkled outside houses to propitiate it and to avert a fatal visitation. So far

in fact do such propitiatory rites go that sometimes a deputation is sent to an infected village where pustules are punctured and the pus conveyed back to the uninfected village for use in a primitive sort of inoculation.

On seeing a rainbow the Fur smear their heads with pot soot to avert a calamity.

Gourds are rattled in pots when a distant boom—of remote thunder or of wind echoes in the hills—is heard ; the boom is called *rise foye*—" Rise has fallen " ; it is believed that evil spirits periodically attempt to scale the heights of heaven by clambering up on one another's shoulders until the load proves too great for the lowermost unfortunate and his wriggling to extricate himself causes his fellows to tumble with an audible crash.

14. CONCLUSION.

In the preparation of this note I am particularly indebted to Arkell for notes, comments and a precis of Felkin, to Boustead for the collection of voluminous notes and records, and not least to the chiefs, headmen and commoners who shortened long animal treks with their tales of long ago or gathered round the evening camp fire to discuss with intelligence and kindly readiness the traditions of their forbears, and the beliefs and customs that now govern their daily existence.

MORE NOTES ON THE PADANG DINKA.

By Ibrahim Bedri.

PART I.—GENERAL HISTORICAL NOTES.

(An earlier article was published in Vol. XXII of S.N. & R.).

THESE notes refer to the Abilang, Paloich and Donjol Dinka known both as the Padang Dinka and Northern Dinka, of the Northern District of the Upper Nile Province ; and to understand them a brief account of their historical structure is necessary.

The Padang Dinka according to their own tradition emigrated from the neighbourhood of Bor about 200 years ago under the leadership of Akwei Cakab the supposed son of Aywil Dit their spiritual ancestor. It seems that they wandered through many places including Zeraf Island¹ and the Maban country, before reaching their present country. On crossing the Sobat River they found the relics of the Fung, whose power in this area had previously been broken by the Shilluk, and after they had driven them eastwards they made contacts with the Arabs in the neighbourhood of Kawa. In the days of Turkish Government there was much raiding and counter-raiding between the Dinka and the Arabs on the White Nile and between the Rufaa and others on the Blue Nile. A daring raid on the village of Fiki Sabonabi on the Blue Nile, in which the Fiki and many others were killed, resulted in a punitive expedition which drove the Dinka to take refuge in the comparatively inaccessible Donjol country. After this the Dinka came to terms with the Government, who gave their representatives robes of honour and invested them with authority. By this time, after their many vicissitudes, they had lost their original unity and emerged into their present-day groupings.

The Abilang group was also known in the old days as "Dinka Ibrahim" and the following narratives explain this :

When *Kiec Akwei*—"bees of Akwei" (an expression to show how dense the army was) marched from their old country to their present one there was always a group that was late and whenever they were questioned about it they replied *Wok abi lang* "We went to get the

¹ The pyramid on Zeraf Island which is known as "*Poum de Aywil*" is said to have been built by Dinka when they were staying there before being turned out by Nuers. It seems that the Aywil who built this pyramid is another Aywil not the ancestor of Padang Mendyor.

fruit of the sidr tree." One story is that Ibrahim was an Arab weaver, who lived amongst the Abilang Dinka and sold his "damur" (cloth) through the Dinka to the Hameg and Arabs, and wherever they went these Dinka, were referred to as Dinka Ibrahim.

Another story is that Ibrahim was a white man who came from the North accompanied by two dogs, Jong Jak and Jong Lwal—He talked Arabic as well as Dinka. He said that he was a Dinka in origin and that his Dinka name was Lwal Kohr and that he came carried by *Kohr*, meaning whirlwind. He performed some miracles and the Arabs in the neighbourhood ascribed this to Dinka Ibrahim. The Din Fabiang of Bawom claim to be descendants of this man. The present day groupings and meanings of their names are given:—

- Abilang* — bring fruit of sidr tree.
- Bawom* — to snatch things from here and there (robbers) ¹
- Akon* — elephant. They were elephant hunters.
- Giel* — not known.
- Paloich* — Pal - Loich — leave the gazelle.
- Ager* — a cow with its horns downwards.
- Aboya* — Dust.
- Bier* — from the verb "*Bur*" to cause damage by negligence ²
- Niel* — Python ³
- Donjol* — not known.
- Gambeny* — to give a chief ⁴
- Giuweng* — to embrace cattle.

It was in 1899 at Fashoda that Col. Jackson (subsequently Major General Sir H. W. Jackson, K.B.E., C.M.G.) first met the Dinka. After this Government troops were invited by Chief Salim Banjang to land at Banjang, but the people there were very wild and refused to receive them. So it was at Mule that they landed. And in 1901 the first military post was established there, and the place became known as "El Renk" after Areng Cum the former Dinka chief whose family invited the Government to come to his place Mule.

¹ In the old days Bawom and Akon were one section under one chief and only split during the time of this Government. At present the tie between the two is very weak.

² They say when the other sections of Paloich groups emigrated from the Maban to the Nile, the Bier remained there behind but they used to come with their cattle to graze them in the *toic* of others through other people's cultivation. The people used to say "*Aci Buer*" and for this reason the Bier still have no *toich* of their own.

³ *Bier* and *Niel* also were one section under one chief and split as above but the tie between the two is stronger than the above.

⁴ The whole Donjol up to 1930 was under one chief always from Din Fagag. Probably for better administration it was split into two, one under a chief from the above Din, the other from Din Fakur.

It seems that Akwel who led the Dinka to the present country was not the above son of Aywil Dit who was mentioned before. He may be one of his descendants by the same name. The Dongol came to their present place a long time after the two other groups were settled. Ayong Aywil who they claim to have been leading them is not one of Aywil's sons. He is a son of a younger Aywil.

The Padang Dinka social structure is the same throughout and is based on :—

- (a) *The Din*. This is the exogamous family group. Persons from the same din (or clan) are found scattered throughout Dinka land.
- (b) *The Mendyor*. (men = sons, dyor = holy man; hence, the sons of the holy man) the females Yendyor — daughters of the holy man. These are the descendants of the seven sons of Aywil Dit¹ They are similarly scattered throughout Dinka country, and all members of these families are credited with supernatural powers, and from them the *beny rem* of each section of the tribe is chosen.
- (c) *The Beny Rem*. He is the spiritual head, who alone can make the necessary sacrifices to ensure success and prosperity. (Dinka society is very democratic and the idea of an executive chief is foreign to them).
- (d) *The Wut*, is a collection of *dins* originally for defensive purposes. Administratively it plays a small part, but in the dry season when the Dinka move down to the river, all the cattle from one *wut* graze together.

PART II.—PADANG DINKA RELIGIOUS BELIEFS.

The Padang Dinka believe in the existence of a supreme being known to them as Nialic, who is the creator of everything. Nialic is also known as Acek — two names of the only God, who lives in heaven, though it is also possible that Acek is the female counter-part of Nialic. Acek is the past participle of the verb *Cak* "to create" and *Nial* means "above."

Apart from sickness and death, all earthly occurrences such as barrenness, pregnancy, the care of the embryo child, giving it life, and sowing seeds are referred to as being done by Acek. When they talk of the sky, rain and the sun they refer to Nialic.

¹ In Vol. XXII 1939, page 125.—It has been mentioned that Aywil's sons are six only. The seventh is Goc De Aywil.

Sickness and death are caused by Jok about whom they have two different ideas. Some believe that Jok is only an angel who lives with other angels between earth and heaven and acts only on Acek's orders. When a person is seized by a sickness, sacrifices are offered to Nialic who when he accepts them, sends the word of recovery to Jok. This recovery is referred to as being caused by Nialic and not by Jok, who is no more than an instrument; but when Nialic refuses the sacrifice and death occurs, they refer to this as being caused by Jok as a result of Nialic's refusal of the sacrifice.

Others believe that Acek and Jok are one being and that when he creates he is known as Acek and when he destroys he is known as Jok, but they neither sacrifice to Jok nor worship him. Some believe in both stories.

When a person dies his spirit is received by Acek in heaven and not by Jok. What happens to the spirit after that nobody knows, but none of it becomes "Jok."

The death feast is made to prevent the spirit of the deceased from worrying the living relatives, especially the widow and children, but nothing is known about after-death.

Before the divine mission of Aywil Dit, who is also known as Aywil Longar, Aywil Wer, Aywil Aget—Bortyop and Aywil Apiok, the ancestor of the Mendyor elements, the Dinka knew Nialic but they worshipped him through the angels or spiritual beings or mediums. The angels (*Coke*) live between heaven and earth, and when God sends his words to one of them, the angel enters into some chosen persons and causes them to express his words to others. Such a person is called a *Tyet*, but the position of a *Tyet* may also be achieved by practice and spiritual and earthly merits.

The male angels or spirit heroes, which is a better name for them are :—

Garang

Deng (son of above Garang and not Deng son of Nialic)

Kerjok.

Arang.

Ngor (also known as Awol Rial).

Malek.

Lwal Aywil who is represented on earth by cobra (Lwal Dit).

The females are :—

Nyanwir.

Ajweng.

When a person is possessed by one of these spirit heroes and becomes a medium, a shrine is made for it in the house of the medium and sacrifices are offered there, and sometimes the acts of a medium are referred to as the acts of the spirit. Up to the coming of Aywil Dit, Nialic was thus worshipped through these spirits, though the Bor Dinka know Garang as God (The spirit hero of Fadang) and have nothing above Garang.

When Aywil Dit came he invited the people to worship God direct and not through these spirits as before. He also brought with him the belief that God has a son named Deng whose mother was Abuk. She is always referred to as Abuk the mother of Deng, and Aywil asked the people to worship also both Deng the son and Abuk the mother. The Dinka pray to Deng to intercede with Nialic when rain is wanted, but sometimes they also pray to Abuk for rain, as they consider in some way rain and thunder as hers.

Prayers are in the form of assemblies for special occasions only—for rain, etc., and there is no form of prayer in their every-day life.

They do not know whether Abuk was an earthly woman but they believe she lives in heaven now and the following is a song about her:—

Abuk man deng pal pan nial ku ba loi bai loi bai rial pa nom de deng.

Translation.

Abuk mother of Deng leave your house in heaven and make your house on earth and fill Deng's house with light.

The Dinka speak of opposition to the new religion introduced by Aywil.

An agreement between Aywil Did and Diing the leader of the Kic before Aywil came and in whose house Aywil was brought up, resulted in all spiritual power rain-making, etc., being left to Aywil and his sons and the ground was left to Diing and sons. But Aywil had some difficulty in putting his new doctrine into force.

In a quarrel between Aywil and Diing the former pinned Diing's foot to the ground with the sacred spear, and he remained thus for some time as neither he nor anyone else could remove the spear. Then all the inhabitants of the earth, human beings, animals and birds, all appealed to Aywil who admitted that Diing's support of the old earthly religion *i.e.* the worship of God through the angels, was not a breach of their agreement and he removed the spear. The two religions were allowed to go in side by side, and now the difference between a *mendyor* priest and *kic tyet* who is merely a different type of religious man and magician

rather than a priest functionary, is that the first does his miracle through direct prayer for appeal to God, and the latter works either through roots or when possessed by an angel's spirit. There are both good *tyet* such as those working in their own area and producing fertility etc. and bad ones who to enrich themselves intimidate the people with their magic.

When a *mendyor* becomes possessed by an angel's spirit he ceases to rank as *mendyor* and is regarded as a *tyet*. This is clearly a case of natural inspiration and not artificial inspiration, which, particularly when achieved through roots, is not approved of by the *mendyor*.

It is said that the following song was sung when the Government in the early days disregarded the *mendyor* and made certain Kic Dinka Chiefs :—

Abuk man Deng pal pan nial ku ba loi bai abia rial pa nom de Deng. Na mat ye yic pan da kwal ci ciern bai mat Deng war ku mat akol. Menke col deng aci tok loi: mith ka kwal alek bany rir num eee.

Translation.

Abuk mother of Deng leave your house in heaven and come and make your house here on earth, fill Deng's house with light. If you make your house on earth the people of roots will not stay because you will be here day and night. Deng became tired of the work of the children of roots who made his head giddy.

The *mendyor* acknowledges and respects all spirit heroes except Lwal Aywil who is represented on earth by the cobra (Lwal Dit). The Dinka allow the cobra to live with them in their houses. They offer her milk, rub its neck and head with butter of sacred cows. If it happens that the snake bites somebody, they always think it a punishment for a sin the victim commits.

Though ancestor worship must exist as well, the Dinka chiefly worship a spirit of a famous *mendyor* priest or of a good *tyet* through whom they communicate with the spiritual world, and sometimes they refer to Aywil Longar and Deng the son as being the same, as the following song shows :—

Yen aba wac weng tier Ton dit longar Aywil ba bai Terku deng luak. Ton dit longar Aywil ba bai Aywil yen ba wac weng bwat.

Translation.

You are propitiated with ten cows. You the bull Longar Aywil please appear. Open the cattle byre for Deng the bull Aywil Longar to appear. You are propitiated with a hundred cows.

There were no prophecies about the coming of Aywil and his new religion. The Bor and Ngok Dinka believe in other Aywils of different legends. These Aywils are recorded as being born without fathers, and to have been spirits incarnate who always have some connection with Deng the son, or they may be re-incarnations of the first Aywil. The word *Aywil* means the ground-nut which has been left in the ground and grows of its own accord the next year, and this may illustrate the Dinka belief about re-incarnation.

Some Dinka believe that God created heaven first and the earth afterwards, and heavy rain fell on the earth and people sprouted like grain. Others say that God sent to the earth his son Deng who married a girl called Ajang and she produced children. Deng then left them on earth and rejoined his father in heaven. And so all human beings on earth are the descendants of Deng and Ajang.

Still others say that God took the earth and made a man and a woman, and the first man was called Apiny-Diing, *i.e.* Diing the earth.

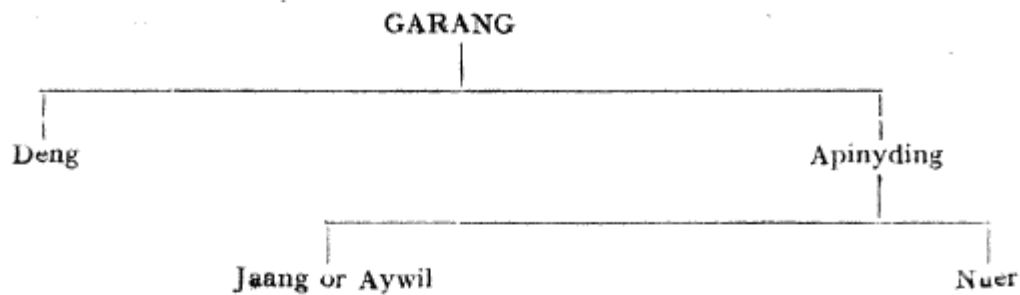
The word *Yat* in the Dinka language has many different meanings. It can mean their religion, or their sacred articles, or sacred practices such as *Tongyat* (the sacred spear) and it is also used for the shrine containing their sacred objects, for sacred animals, or birds and for tombs.

The Mendiya have only *Deng* (rain) as their totem. The kic have different totems which may be an animal or a bird. Sacrifices are offered to totems and a man may only kill his totem if it attacks him or his animals. Some Dinka are allowed to eat their totem animals if they have been killed by people of another totem. The devil is not known to the Dinka. They talk of *Tyeb* (shade) but by this they mean a ghost or a restless spirit of a deceased person. In any case it has no connection with the devil of other religions.

A *beny rem* does not teach the children at their initiations anything about religion. They are taught morals only and the people only learn about their religion when they become men of thirty five.

Bor Dinka Theology and History.

In 1941 Lt. Col. Forbes, then District Commissioner, Bor, made the following notes which explain the old Dinka beliefs and other differences between the old and new religion :—" The creator was Garang who was a malevolent spirit and to him the Dinka attribute most of their misfortunes. He had two sons Deng and Apinyding. Deng is a benevolent spirit and it is to him that the Dinka pray to intercede with Garang on their behalf. Deng is also the rain which produces grass and crops and water to drink and on whom therefore all life depends. Almost all Dinka worship Deng in some form or other and their faith is enormous.



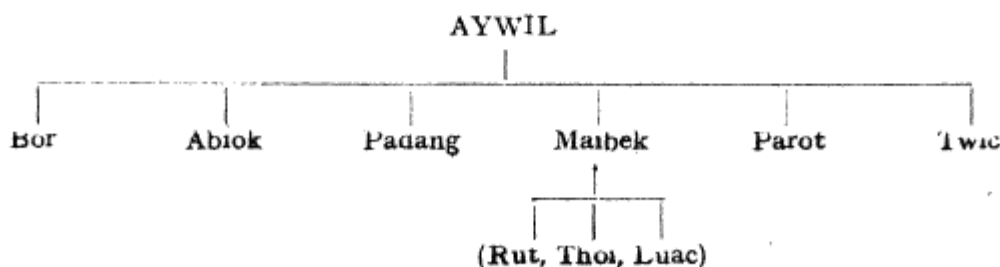
Apinyding is the ancestor of the Dinka and Nuer.

He arranged to divide his cattle between his sons and he decided to give the old cow to Jaang who was clever and could look after himself and the cow calf to his younger son Nuer. As Apinyding lay dying, Jaang came and, pretending to be Nuer, obtained the more valuable cow calf. Later Nuer came along and found only the old cow left and Apinyding told him to take it and consoled him saying that his descendants would raid the Dinka and take their cattle.

Aywil travelled about the country distributing the land to his sons, and *duks* which hold water today are said to be the places where he rested. Finally he settled at Poum on the Zeraf island at Gaawer. In time of famine he got food from the sun. This food like the widows cruse never decreased and Aywil got tired of it and had it thrown into the river. The sun was furious with him and decided to kill him, but Aywil avoided attack by staying in his *luak* (cattle byre) by day and going out by night.

Finally the sun made an alliance with the moon who struck Aywil with a fishing spear and skewered him to the ground. He was interred on the spot with the shaft of the spear sticking out of the top of the mound that covered him. This mound is said to be that existing today on Zeraf Island, known as Poum de Aywil — the pyramids of Aywil. It is one hundred and six paces in circumference and twenty one along the slope. It seems to be made of burnt cotton soil.

Aywil is the ancestor of most of the Bor Dinka.



Aywil in the old religion is considered the ancestor of all the Dinka, but in the new religion he is known as the founder of the new religion and the ancestor of the *mendyor* Dinka only.

Garang and his son Deng in the new religion are shown as angels, but in the old religion Garang was the creator and Deng his son.

PART III.—CEREMONIES.

The following are the most important ceremonies performed by Padang Dinka.

The Installation of Beny Rem or Beny Rial.

The *Beny Rem* is more or less the spiritual head of his tribe, ceremonially installed and ceremonially killed. But it seems that the practice of killing *Beny Rem* is not common at present. If a *Beny Rem* has been raised to the heaven on the shoulders of the elders on the day of his installation (*Beny Nial*—or Chief of Heaven), the honour of being such a *Beny Rem* is greater and he must be killed. If he is killed then his spirit will look after the tribe; he rules from heaven until somebody is chosen in his place (even an ordinary *Beny Rem*) and then his spirit passes into the new *Beny Nial*. If he is left to die a natural death his spirit will also die and the divine grace and the virtue vested in him on behalf of his tribe will perish. He is also responsible for the initiation of all boys of the tribe when they attain the age of puberty. They parade and march before him in their age-class and in war costume.

There are at present only two *Beny Nial* in the whole Padang tribe, Chief Run Deng of Paloic area and Ayong Gwot of the Donjol area. Both are very old and highly respected and honoured throughout the Padang. When a *mendyor* is chosen as *beny rem* of a section or sub-section because of the interest he takes in the people or his exceptional characteristics the following rites are performed. A big feast is held followed by a religious ceremony by all the elders of the section both Kic and Mendyor. Meanwhile all the young men parade in their dance apparel, beads round their necks, leopard skins on their waist, etc.

Two bulls are brought — one by the elders of the section which is slaughtered the evening before the installation and the other by the *Beny Rem* elect which is sacrificed on the day itself. Both bulls are eaten by the elders of the section and the bones are buried in one place which henceforth becomes the burial place of the bones of all sacrifices and is known as *Yik de Yat* (mound). The fire used for roasting the meat

is taken to the *Beny Rem's* house and becomes known as his fire. It is sacred and is never allowed to go out until the day of his death when it together with all fires in the section is extinguished.

The Kic elders make the *Beny Rem* elect sit on an ambach bed on the ground and wash his hands and arms with water. Then both Kic and Mendyor elders place two or more strings of beads made of ostrich eggs shells (*Abeg Mendyor*) round his neck, crown him with a ring made from the mane of a roan antelope (*Gol*) and cover his body with butter from a sacred cow. He then sits down on the hide of the bull which has been brought by the section elders and sacrificed. All who previously had any claim by right to this office cut off a portion of one of the legs of the hide until by doing so the hide is turned into an oval shape (*Bwang Yat*). They thus renounce their rights and swear loyalty to the new *Beny Rem*.

From the four legs of the other hide they cut strips with which they tie a special kind of grass (*Mon*) and make a stand (*Kol Yat*). From the remainder of the hide they make a long rope and every member of the section ties or pins to the rope any kind of armlet — beads, rings etc. The elders then make the rope into a coil, place it on the stand and it is given to the *Beny Rem*, (*Ywen Yat*). Then the *Beny Rem* is presented with his ancestor's spear (*Tong Yat*) and the warriors parade and march before him. He sprinkles the people with water and the blood of the sacrificed bull and then the whole section celebrates by joining in a large dance which may last for several days. When this is over the *Beny Rem* with a few elders goes from village to village with two small pieces of wood, each one foot long and made from the heglig tree, hanging from his neck. They are soaked in butter from the sacred cow and are similar to the bits of wood (*Ajuruk*) which Dinka women in the old days used for carrying their children, and he sings similar songs.

When the women see the *Beny Rem* coming towards their village they meet him outside and repeat the songs, and those without children touch the pieces of wood with their hands and then their stomachs and kiss their hands as a good omen for becoming pregnant. This is practised in Abilang and Paloc areas though the Donjol Dinka use larger pieces of wood.

A *Beny Rem* of exceptional characteristics is carried on an ambach bed on the shoulders of the elders as a token of their feelings. The *Beny Rem* imitates a dead man and the elders run with him towards each of the four points of the compass singing, while the chorus repeats the song shown on page 130 of the S.N. & R. Vol. XXII.

The people then lower the ambach bed and before it reaches the

ground the *Beny Rem* jumps from it as if returning to life again. Such a *Beny Rem* becomes known as *Beny Nial* (Chief of Heaven) and the installation ceremony is the same except that the *Beny Nial* wears the skin of a leopard which has been killed by the section warriors and one or two of the *mendyor* elders may be installed with him as his viziers. These also may wear leopard skins with the permission of the *Beny Nial*, but the leopard skins which some *Beny Rem* wear are not necessarily badges of office and may not necessarily have been brought by the section warriors.

A successor to a *Beny Nial* may not be appointed for a long time—until his spirit enters someone else, or for some special circumstances. Ayong Gwot the *Beny Rem* of the Donjol was dismissed by the Government and immediately made a *Beny Nial* by the people.

Run Deng of the Niel Dinka south of Melut was dismissed by the Government three years after he had been made a *Beny Rem* for his complicity in a Nuer raid on the Mabaan and was then made a *Beny Nial* by his people.

The Killing of the *Beny Rem* or *Beny Nial*.

When the elders of a section decide to kill their *Beny Rem* or when he himself has made the request, all the warriors who were initiated by him are summoned. They come in dancing attire, circle round his hut and sing songs in his honour. The elders then enter the hut and kill the *Beny Rem* usually by suffocation, one man holding his wind pipe and another his nose.

They then cover his body with butter from a sacred cow and his joints are broken, though some say the joints are broken before death. Sometimes they vigorously stretch his figure, legs and penis and squeeze his testicles. Why this is done to the penis and testicles is not known, but it may have some connection with the fertility ceremony mentioned earlier (*Ajuruk*).

His death is announced to the warriors who bow and in one voice say "oh" and a sheep is sacrificed and thrown to the birds.

He is buried secretly by night usually in the bed of a khor or in the forest so that nobody else may know his grave. He is buried in a deep hole sitting on a bed made of *indarab* stakes, and with stakes at his back bound with hide to keep him upright. His *mendyor* spear is put in his hand pointing in the direction of the enemies of the tribe. The body is then covered with *Leyie* grass from the river bank and the grave filled in.

If an enemy interferes with the grave or the position of the body he brings misfortune to the section.

All except children observe a complete fast from the time of his death until his burial. Before the sunrise following his death all people and cattle leave the village or the cattle camps and stay out in the sun till mid-day. All foodstuffs for which fires are used for cooking such as meat, fish etc. are thrown outside the village. Between the time of his death and his burial, all fires in all villages including that of *Beny Rem* must be extinguished. Then the grass round the villages or cattle camps is burnt and the people and cattle return to the villages or cattle camps through the smoke. If this happens on the river bank, people and cattle go through the smoke to the river wading up to their waists.

Another sheep is sacrificed and thrown to the birds.

On the third day a third sheep is sacrificed and half of it is thrown into the forest for the spirit of the dead man, and the other half is boiled and eaten by those who buried him. Some of this meat and the water in which cooked, and merissa and charcoal are taken secretly and thrown over the grave. This is done in order to release the people from the spiritual keeping of the dead *Beny Rem* into which they had been symbolically delivered by the placing of the necklace of ostrich-egg beads round his neck at his installation.

Finally at the first harvest after his death a big sacrificial ceremony is held and attended by all the people of the section: several bulls are slaughtered, beer is brewed in large quantities and the people dance for several days. On the last day the heads of the sons of the *Beny Rem* are shaved and this signifies the end of the period of mourning, which is observed by his family only and not the whole section. If for any reason the *Beny Rem* dies in another way, e.g. accidental drowning, a sheep is suffocated and buried with him in the same grave and the rites are conducted in the same way.

It is not always necessary to kill a *Beny Rem* and it is generally sufficient if a sheep is killed and buried with him, but this ceremonial killing is essential in the case of a *Beny Nial* and there are always people accompanying him for this purpose.

Peace Ceremony.

A peace ceremony is performed between sections or any parties in a fight in which a life is lost.

Cattle are always paid as blood money and this varies in number—20 among the Abilang and Paloc Dinka, of which 15 are cows and 5 are bulls, and 15 among the Donjol Dinka, of which 12 are cows, but sometimes a girl is handed over from the family of the killer to the deceased's family. This may happen if the deceased is from a big family

or if the parties to the fight live very close together, and there is a slight difference in the two ceremonies. When cattle are being paid as blood money the elders of each section led by the *Beny Rem* or in his absence a *mendyor* elder meet and the relatives of the deceased and the killer are also present. They sit separately and independant elders act as go-betweens. Although the peace has been accepted in principle the preliminaries take some days. When everything is ready an independant *Beny Rem* hands over the cattle by touching each animal with a mallet made of the *suffar* tree. He then kindles a fire with two sticks of *indarab* wood.

A bull from the blood-money cattle is sacrificed and divided into two halves, each to be roasted by one party. Then each section brings a part of the roasted meat, they mix it and eat it together. Pipes and tobacco are exchanged between them. At the end the relatives of the killer and deceased exchange spears and hit a *heglig* tree. In doing this they show that the old feud between them is banished to the tree.

Some of the hide of the bull is taken by the people of each section to their villages. They then collect all the women and children who were not present at the ceremony and make them smell the smoke from the hide when it is thrown onto a fire.

The *Beny Rem* who kindled the fire and handed over the cattle receives a cow calf from the blood money cattle.

When a girl is agreed upon as blood money, she is brought by her male relatives and one or two women of her family with a bull and a cow calf before the elders. The bull is sacrificed in the same way as before, and the girl is brought with a rope round her waist and no ornaments. She is received by the mother of the deceased or a near female relative, but before she is handed over she is disrobed. The woman who receives her takes the rope from off her waist, covers her with her own garment, and presses her to her body. The girl is then taken to the river and her legs feet and face are washed and she then goes off with the relatives of the deceased, who also receive the cow calf which is then usually given to the *Beny Rem* who kindled the fire. When they reach the village a sheep is sacrificed and the girl steps over it and enters the village, and the sheep is then thrown to the birds. After a month or so the girl goes back to her family taking a cow calf with her and then some time later she is received by a brother of the deceased or a close relative of his. After she has borne her first child she goes back to her family and a proper marriage is arranged. A reduced bride price is paid, usually five cattle less than the normal, and she finally returns to her husband and her children are recognised as children of the deceased.

Strangely enough it is said the Donjol paid no blood money before the time of the present Government, though there must be some doubt about this in view of the existence among the Donjol of a *Beny Nial* and *Beny Rem* one of whose functions include the conduct of peace ceremonies. When a man was killed in a fight they spoke of him having "gone to the grass of Ayong the great" (*aci la wal ka ayong dit nim*), and there may be connection between the legend of Ayong Dit and the non-payment of blood money. Ayong Dit was the grandfather of Ayong Qwat the present Donjol *Beny Nial* and it is said that when he became very old he asked his people to build up his *luak* (cattle byre). They did so and with his wife and eight bulls he died there of starvation. Such a voluntary death may lead to the abolition of blood money as a token of mourning.

The River Ceremony.

When the Dinka move from their villages down to their summer grazing grounds on the river they make an annual sacrifice to the river before they drink its water. It is usually conducted by any member of the Din Faiwer, a class of Kic Dinka, but it may also be conducted by any *mendyor* member. It is done in small groups as and when they reach the river.

Everyone including the children stands on the river bank and the man who conducts the ceremony (a *Beny Wir* or a river Chief) brings a small sheep or goat and a gourd containing butter from a sacred cow. All full grown persons then tie some ornament — beads, rings or bracelets — round the neck of the sheep and the *Beny Wir* prays to the river and all the people raise their arms to heaven. After this small children are carried on people's shoulders and the *Beny Wir* takes the sheep and drowns it or causes it to disappear. Usually he ties it to some obstacle already arranged. He then throws the butter from the gourd to the water and all the people wade in up to their waists and drink. Before that the river is taboo.

In places where the people live close to the river as in the Banjang area a larger ceremony is held. Several villages or *wuts* may join together and those who are absent are represented by a piece of wood or grain stalk carried by their relatives.

Health Ceremony

When an illness such as malaria or cough befalls the people a *Beny Rem* or *mendyor* elder or even a Kic witch-doctor (*tyet*) conducts a ceremony to drive it away or give the people resistance against it.

A small animal is brought for sacrifice and all the people of the section including children gather near the *tula yat* (the bunch of several small axes kept outside the house) of the *Beny Rem* who holds in his hand a new gourd into which each grown up person spits. He then passes the gourd over the heads of the small children who are carried by their mothers. When this is done the *Beny Rem* brings another gourd containing butter of a sacred cow and he takes a little of it in his fingers and touches the chest of everyone with it. After that both gourds are thrown into the river.

These are the most important ceremonies belonging to the Padang Dinka. There are other of lesser importance such as that of shaving the children's heads for the first time, when a small animal is sacrificed to the spirits of their ancestors, or in the case of incest when a small animal is sacrificed and cut into half (*Aghar*) one of which is thrown into the forest and the other eaten by the elders who hold the ceremony. Marriage ceremonies etc. only concern the two families.

Donjol Eight Years Ceremony.

This is performed only by the Donjol Dinka, all of whom take part in it every eight years, and it is called "*yai run ka baiet*." It is held when a divine message is received in a dream and the Donjol *Beny Nial* fixes the date of the ceremony. On the previous night all Donjol men and women with the exception of Din Fakur march in family groups to the holy village of Rukchuk, where no tree is allowed to grow, to dine and spend the night there.

At dawn all food such as dried fish, meat and flour should be thrown out of the villages and all fires, with the exception of that of Fakur, are extinguished with water. This is done in all villages excluding Fakur, and at one time.

The people then march in sections and each of the eight sections has its bull. They are all led by thier *Beny Nial* (at present Ayong Gwot) to the pyramid of Ayong Dit the ancestor of the Donjol *Mendyor*, singing songs and when they reach it each section takes up its position round the pyramid and the *Beny Nial* prays for the welfare of the people.

Then a member of the Din Tut by order of the *Beny Nial* lights a fire of *indarab* sticks and *adik* grass, and wood is piled on it.

Each section then slaughters its bull and divides the meat, the major portion being given to the *Beny Nial* who cuts several small pieces from the ribs and places them on the summit of the pyramid. There follows a scramble in which the young men climb the sides of the pyramid each seeking to get as much of the meat as he can—the elders beat them

with *indarab* twigs as they do so, alleging that they are trying to prevent them. After this they descend and roast the meat together and eat together. This probably signifies the union of the Donjol people. Between the time of extinguishing the fires and roasting the meat nobody is allowed to drink water and they take no arms nor sticks with them to the pyramid. They return in the afternoon to Rukchuk.

There the old women fill the baskets in which their babies are carried, with grain stalks prepared by Rukchuk women, (*Yandyor*) cut up into small pieces and soaked in butter from a sacred cow. The old women carry them on their heads and imitate a woman carrying her baby and go from village to village distributing the stalks to women who have no children. The stalks are kept under the skin on which she sleeps and male children born after the ceremony are called Ayong and girls either Nya Yiek (the girl of the Yiek) or Nya Wac (the girl of Dough). Each village usually slaughters a bull for the old women.

In the harvest season of that year the old women return to the pyramid with large quantities of durra dough and make stripes along the pyramid with it.

The pyramid is cleared of grass, more earth is added to it and the surface smoothed by women when the ceremony takes place. When the people return home they light their fires, so that no fire is allowed that day except that round the pyramid. The pyramid itself is a huge heap of earth and is built on the site of Ayong's *luak*. It is said that Ayong fell sick and his wife announced his death, but when the people came they found him alive and he told them not to go back. He asked for eight bulls including his favourite bull (Merial). He put them inside the *luak* and with his wife went inside and told the people to lock up the door. And so they died. The pyramid is seventy five paces in circumference and twenty six along the slope.

PART IV.—DINKA SACRED OBJECTS.

The following are descriptions of sacred objects most of which have already been mentioned.

Yiek de Yat (the sacred mound).

The bones of all animals sacrificed in ceremonies are collected and buried in a hole in front of a *mendyor* elder's house. After many years a mound is thus formed and this is known as the *Yiek de yat*.

Abeg Mendyor. (The beads of the descendant of the holy man).

These are two or more strings of beads made of ostrich eggs shells and presented to the *Beny Rem* on the day of his installation and always

worn by him round his neck. These beads represent the lives of all the members of his section and it is said that the *Beny Rem* can kill instantly any one of his section by crushing a head and pronouncing the victim's name.

Other *mendyor* elders may wear this *abeg* but it is not necessarily a badge of office. Kic were not allowed to wear such *abeg*.

Bwang Yat. (The sacred hide).

This is the hide of the bull sacrificed by the section on the installation day of the *Beny Rem*. It is kept in the sacred hut of the *Beny Rem* who uses it for prayer in time of battle or for rain making, etc.

Kol and Ywen Yat. (The sacred stool and sacred rope).

The hide of one of the two bulls sacrificed at the *Beny Rem*'s installation is made into a rope by all the people of the section and a stand is made for it of "*mon*" grass tied with strips of the hide. When the rope is made every member of the section should tie some ornament to the rope — beads, iron or brass rings — and the rope is then kept by the *Beny Rem* in his hut. He ceremonially brings it out and ties it between two trees in the time of battle and also at times of epidemics and cattle plague to produce an immunity to those who pass under it.

Tong de Yat. (the sacred spear).

When Aywil Longar ordered his seven sons to emigrate north he gave them each a spear, and these spears are considered as the original *tong de yat*. Some claim the possession of the original *tong de yat* but owing to increase in population and the splitting of *wuts* (sections) there are many *tong de yat* now.

Any ordinary spear may be turned into a *tong de yat* if all the *mendyor* elders of the section agree. The spear is brought out, each *Din* brings a sacrifice and then the spear is ceremonially acknowledged. The spear may either be kept in the open space near the *yiek de yat* laid on two forked or in a hut specially built for it. In this case the blade is kept upwards and no one is allowed to enter this hut wearing his shoes, nor is anyone allowed to pass through the village where a *tong de yat* is kept with his spear blade upwards.

If ever the wooden handle has to be replaced, it must be done ceremonially.

When an attack from an enemy is feared the *Beny Rem* ceremonially takes the spear out and polishes it and then takes it in his hand and aims it in the direction from which the enemy is expected.

If the spear is required for an oath, a sheep must first be sacrificed. Then the *Beny Rem* handles the spear and makes the person step over it, and after this to replace the spear another sacrifice is necessary. The

spear of Run Deng the *Beny Nial* of the Niel Dinka near Melut has, so far as is known, never been brought out for this purpose.

Tong Mendyor. (The spear of mendyor).

This is a small spear made of iron and more or less a replica of the *tong de yat*. It is a badge of office which the *Beny Rem* carries with him, and it is used for curing sick people and for everyday purposes.

Tule Yat. (The sacred Tula).

This is a bunch of several small axes with handles of *heglig* wood. It may be seen in the front of any *mendyor* elder's hut. It keeps away wild animals and enemies, and prayers are said to it at sunset.

The *Beny Nial*'s leopard skin which the Ngot Dinka hold in such esteem is not recognised as a sacred article by the Padang Dinka, nor is the *Gol* (the crown from the mane of a roan antelope) a sacred article.

There are other sacred articles which vary in importance — the *bith yat* (fishing spear) and *weng yat* (the sacred cow) which is offered as sacrifice to man's ancestors or kept by the *Beny Rem* for sacred purposes.

AN UNPUBLISHED ITINERARY TO KORDOFAN 1824-1825

Translated, with Notes, by R. L. Hill.

Translator's Introduction

THE manuscript is entitled *Voyage de Dongola à Cordofan fait dans l'année 1824 et 25, par M. J. Chiros* [Chiron ?] (1).¹

It is written in the first of two unpaginated notebooks, each 7 in. by 5 in. of hand-made cream laid paper, bearing the watermark PINE & THOMAS. The text extends to 58 pages, or about 9000 words, written with unequal clarity. It is intact except for one page, apparently containing a footnote, which has been torn out. The second notebook, entitled *Cours du Nil depuis l'Isle de Philae jusqu'à l'Embouchure du Bahr Rahat* [al-Rahad] (2), contains sketch maps of various reaches and cataracts of the Nile in ink and water colours, together with descriptive navigational, topographical and general notes, the whole done in a neat hand. The following itineraries are mapped and described:—

1. Philae-Wadi Halfa — Dongola — Berber — mouth of the Rahad river (May-Dec. 1826).
2. Abo Haraz, across the Butana to Shendi via Jabal Mundara, Raira and Qoz Rajab (Dec.-Jan. 1826-7).
3. White Nile from Khartoum to al-Ais (April 1827).
4. Mouth of the Rahad to Sennar (May 1827).

The two notebooks were acquired by Matthew Parkyns who travelled in Sennar and Kordofan in 1845-8. They are now in the possession of Mr. A. J. Arkell, Sudan Government Commissioner for Archaeology and Anthropology.

Topographical observations and descriptions have been largely omitted from the translation.

Text.

I arrived at Dongola on the 2nd. December 1824 and hastened to call on 'Abdin Kashif (3), commandant of the town, in order to deliver several letters I had for him. He received me cordially as he does all Europeans, and during the whole of my stay in Dongola did me all manner of kindnesses without which I should have been in a bad way since there are not even the necessities of life here.

After some days I prepared to leave for Kordofan. The moment was unfortunate, however, since all the troops had left (4) and already

¹ Figures in brackets refer to notes at the end.

bands of Arabs were attempting to close the road and some caravans had even been molested.

While at Dongola I had the pleasure of meeting Messrs. Rüppell and Aye (*i.e.* Hey), German travellers who were also ready to take the road for our common destination (5). We agreed to make the journey together. 'Abdin Kashif was good enough to write to one of his kashifs (6) who was commandant at Debba, five days journey from Dongola, to stop all caravans from setting out for Kordofan until we arrived at Debba, which was of great service to me. He also gave me many provisions for my journey and the loan of a sailing boat to carry me to Debba. On the 23rd December at 2.0 p.m., when all was ready, I set sail under a good north wind....

On the 26th we were extremely tormented by small flies which infest this country for three months of the year and which appear only during the day. These flies are of the size of a flea and attack only the eyes and the inside of the ears. They are in such great quantity in Dongola that people in the fields are compelled to shut up their cattle during the daytime and to let them out at night. The peasants who are obliged to be outside their huts during the day carry lighted torches made of date palm fibre to defend themselves against these unbearable insects. Others carry in their hands a kindled piece of dung and this produces the same effect.

On the 28th we arrived at Debba. I went to the house of the kashif who had received an order to have ten camels ready for me and to supply me with all that I might be in need of. He made me very welcome, gave me lodging and did everything possible for me during my stay....

At 12.30 p.m. on the 30th our caravan set out. It was composed of 53 camels and about 43 men. Monsieur Rüppell is going to Kordofan to collect any curiosities there might be, but specially giraffes...

On the 2nd January we started out and ... towards midday were in a valley which leads to the mountains of Simmerie [Simriya]¹ when our guides suddenly got down from their camels, armed themselves with their spears and shouted to us to stop and get ready to fight, pointing out to us some men mounted on dromedaries who were coming up in front of us. They said that these were Beni Guierar [Jerar] Arabs. (7)

Already my Arabs, each man armed with three spears and a shield, had seen them from afar. I got down from my dromedary, took my double-barrelled gun, my pistols and my sword, followed by my servants who were themselves all armed with guns. I did everything in my power

¹ See Editor's concluding note.

to inspirit everybody. I encouraged them in what little I know of Arabic and, to convince them that there was little to fear from those who were advancing on us, I walked seven or eight paces in front.

Having been told that these Arabs give no quarter I prepared to sell my life as dearly as I could. And there was no point in escaping one kind of death to run into another even more horrible for there was no water less than three days away either ahead or behind. It was this, no doubt, that gave me courage. We accordingly walked straight towards those who were nearing us when, to our astonishment, when we got within firing range, we found that they were about a hundred wretchedly clothed and bedraggled soldiers who had believed us to be what we thought them to be and had likewise got ready to fight.

Among the persons composing our caravan was, as I have said, Monsieur Rüppell. When he heard that some Arabs were coming against us he was so taken with surprise that he stayed fixed on his dromedary although everybody shouted to him to get down. In the end one of his servants was forced to pull him down telling him that, if he did not want to fight, he might at least give the two guns that he had on the saddle of his dromedary to those who would know how to use them.

Rüppell having given the matter a little reflexion judged it prudent to go and hide behind the camels, thinking perhaps that a man travelling for the sake of Science ought not to expose himself to the consequences of depriving all the learned men of Europe of their expectations by going and dying like a gnat.

But what he did not bargain for was the choicest bit of all. After all danger was past and the caravan re-formed, each member of the party upbraided him for his want of courage saying, "If these had been Arabs and they had beaten us, you would have suffered most because they do not like cowards. It would have been better to have defended yourself than done what you did."

Our men then came up to me and overwhelmed me with compliments and blessed the mother who bore me. But what flattered me most was to hear them, in front of a European stranger, shout with one accord, "Long live the French; they are men without fear; they do not fear to die!"

For myself I have not mentioned all this out of self-pride for, perhaps, had there been any other means of safety, I might not have appeared so brave. A short while ago a caravan of 300 camels loaded with dates belonging to 'Abdin Bey had been looted and of 50 men who accompanied the caravan only five survived. However, after this

delay and our harrowing experience we set off again on our way laughing heartily at our fears, and at 3.0 p.m. arrived at Simriya...

The mountains of Haraza are quite high. The chain extends from east to west forming a gorge in which there is a well and a village named Cailoub [Kailum?]. There are about 100 abandoned huts to the north of the mountains, and another village named Arazi [Haraza?], about two and a half miles from the first, where there is water. The shaikh of the latter village paid us a visit and, as there are no sheep in this locality, brought us a small bull calf. Although the water is bad the people pay one dollar for watering each four camels. We were exempted from paying this charge as we were considered to be in Government service.

The tukls or houses are mostly made of branches of trees and are built in conical form, the inhabitants [word undeciphered]... and have the appearance of negroes, not only because they are not so far removed from them in fact but also by reason of their having negro slaves and having children by slave women to whom they are partial.

When the Daftardar Muhammad Bey (8), son-in-law of the Pasha (9), was on his way to conquer Kordofan, he passed Haraza where he made the shaikh come to him and asked him how many horses he had in the village. He answered twenty-seven. "Ah, well, I must have them," said the Daftardar, and the 27 horses were handed over without the least demur, although they were the people's only means of hunting ostriches. But it was necessary to yield to force. All the same, the chief had the shrewdness not to give up his own horse which he hid in the woods. It was a valuable horse which he was loth to part with.

After five days rest here the Daftardar and his men left to continue the conquest and arrived on the borders of Kordofan. A short time later he learned that this shaikh had kept back his own horse which, he was told, was an unusually good horse. Although already three days march away the Daftardar summoned him and asked for his horse. The shaikh answered that he could not give it up.

Such a refusal was enough to anger the Seigneur who on the spot ordered the shaikh to be put down a well where he stayed uncomplaining for four years (10). His family who lived nearby were forced to feed him. The shaikh's name was 'Abd al-Qadir.

When the Daftardar left in August 1824 he deputed Alim [Halim] Bey (11) to govern the region. He, being more charitable than his predecessor, had the unfortunate man taken out of the well and afterwards brought to El Obeid where he lived for a time. At the time I left Kordofan he thought of returning to his home and pressed me to

await him for some days when he would have the pleasure of entertaining me at his home in Jabal Haraza on my way....

On the 9th we... arrived at Caggimar [Kagmar] where there is a lake in length about a quarter of a mile from north to south, and a little less from east to west. The water is fit only for camels and herds which the Arabs pasture in the neighbourhood....

The town of Bara was in a prosperous state before the invasion of the Turkish troops. The place has become famous by reason of the great battle that the Kunjara fought with the Turks in which the sultan of Kordofan was killed and his army routed (12). In that battle the Daftardar Bey commanding the army had with him only about 700 men and four four-pounder guns. The army of the blacks was of 16,000 men armed only with spear and shield while a portion of them carried great swords like our broadswords. The negroes, moreover, no sooner perceived the army of the enemy than they ran forward with frightful yells, but 500 of them were killed by cannon shot, something which they had not expected. Nevertheless the negroes showed prodigies of valour and the Turks owed their victory entirely to their musketry and artillery which completely unhorsed the enemy cavalry.

These horsemen carried suits of mail, iron helmets and leather gauntlets. In the course of the battle they massacred the men who served the Turkish cannon. Their sword blows were applied with such force that they were imprinted deeply on a gun and this gun can be seen to-day in the fort at El Obeid.

All who were not killed or made prisoner took refuge in Darfur. There were twenty-two chiefs of whom eighteen were left dead on the battlefield. One of them, seeing nearly all his companions dead and realizing that he could not hope to save his life by retreat, let himself fall from his horse as though he were dead and covered himself with blood. When the Turkish troops searched the battlefield for loot from the dead chiefs who had carried gold ornaments, and to cut off the ears of the fallen (13), he allowed them to despoil him and cut off his ears without betraying the least sign of life.... When he saw that the Turks had gone away he returned to El Obeid where the Daftardar was encamped, presented himself and told of his adventure. The Daftardar gave him a robe and made him chief of the Kunjara.

After the victory the Daftardar imposed a heavy indemnity on the town of Bara and from there continued on the road to El Obeid where he arrived unopposed.

Bara contains about 2000 people at least two-thirds of whom possess more or less extensive gardens which the owners, who are almost all

traders, irrigate and cultivate with the many slaves who are found drawing water day and night for the gardens....

Water is very abundant at Bara and is generally pretty good. He who has need of water has only to dig a well and at 10 to 15 feet he will find very clear water.

In these gardens they were cultivating all kinds of green vegetables when I passed by. We found melons and other fruit which are not to be had in Europe except during June and July. They also sow some wheat, though this succeeds only by hard labour for the soil here is bad. The commodity most extensively cultivated is tobacco; although of a poor quality there is much consumed. The price is very moderate, since only 36 to 40 Egyptian piastres are paid for a quintal of 110 lbs.

The town has its greatest length from east to west, a distance of about three miles in this direction, and about a quarter of a mile from north to south.

The kashif commanding the town has had built a kind of fortified house with crenellated walls and with about 40 small houses built inside the enclosure to lodge his small command, and he has made some little garden plots which are more like prison cells than anything else. In the town are some date trees which do not yield fruit.

The inhabitants here originated in great part from Dongola. They stay for some time here and then travel even as far as Egypt or Darfur in pursuit of commerce. They are more civilized than the people of the other regions of Kordofan, an undoubted result of their travelling....

On the 13th January we... arrived at El Obeid, the capital of Kordofan. On my arrival I dismounted at the house of an important merchant named al-Hajj Anbar. This man is an Abyssinian originally established at Makkah. In the hope of increasing his wealth he collected a cargo of precious Indian wares with the intention of selling them in Cairo. But he had the misfortune to be shipwrecked in the Red Sea and was able to salvage only a fragment of his goods which he sold in Cairo, came on to Sennar and eventually to Kordofan where he has lived for the last thirteen years. My Arabs assured me that he was a very worthy man. To be sure he received me kindly. He lodged me and my men; we were at once given food and for a fortnight he continued to entertain us.

The town of El Obeid is very large and lies with its greatest length from north to south. There are about 20,000 dwellings or huts among which are several mud houses of about fifteen feet in height without windows and excluding the daylight except through the doors. The inhabitants are nearly all Danagla. They are distinguished from the

others by their colour, as the blacks distinguish the whites, calling them *ahmar* [ahmar], red. The Danagla are almost the only ones here who engage in commerce. They own a large number of slaves of both sexes who, after having done their work which is not over hard, live like the beasts, that is without any moral restraints. At the end of the year the children they have produced are sold. The Danagla marry only women of their tribe among whom are to be found some exceedingly pretty and, especially when their husbands are absent, not too flint-hearted.

Morals in this country are extremely free and there is not the least resistance to amorous adventure on the part of any woman free or slave. [Follows a description of El Obeid and the fauna, flora and trade of Kordofan]....

The arts are, so to speak, as yet unborn in this land. There are however some silversmiths it is true, but whose artistry is limited to making silver rings for the women and heavy bangles, also in silver, which they wear on their feet.

There are iron workers who make spear heads and other weapons which the negroes use. There are also very abundant iron mines in Kordofan which the natives themselves exploit. The quality of the metal is very good. Being very soft it is tough when worked cold. They do not use steel in their weapons.

Neither copper nor silver however are found, but there are gold mines in the mountains of Taqali (14), six days southward of El Obeid. These are rich in gold but the negroes (a slave, himself from Taqali, confirms it) do not trouble to exploit it. These mountains numbering 32 all told are not within the dominion of the Pasha and the Daftardar's troops have never been able to gain possession of them. The natives of these mountains are negroes governed by a sultan who rules the 32 mountains which are nothing short of a chain of which each mountain forms a link. The Turks hold only a part of Kordofan, the plain on which the towns are located; they have never been able to occupy the mountains.

The garrison of Kordofan is made up of two battalions of the Pasha's newly-raised army formed on the French model. A bey named Sulaiman (15) is in command. When I was in Kordofan there were also 400 cavalry, a number of Arabs, 50 gunners and four four-pounder cannon. These troops have fortified themselves in a type of entrenchment after the French military practice.

At the time I was in El Obeid the governor wanted to make a raid on the negroes inhabiting the mountain of Toucoum [Tukam] only three

days distant and the nearest to El Obeid of the 32 mountains I have mentioned. He selected as leader of the expedition an officer named Sharif Agha and ordered him to prepare to leave with his battalion with camels for the transport of men and baggage, for there were tribes in the locality, and especially on the White Nile, who were easily able to furnish 20-30,000 each.

The campaign was estimated to take a fortnight and plans were worked out accordingly. When all was ready they set out. The infantry were mounted two to a camel to ensure that they would arrive as fresh as when they left El Obeid. The cavalry [*read* artillery] was two cannon. The army was followed by 10-12,000 Arabs, some on horses, some on camels, dromedaries and bullocks. They were armed with spears.

Many dromedaries died during the march, for the Turks being everywhere the same had forgotten to bring fodder. Finally, the three days' march, which actually took five days, saw them at the end of their strength [several words undeciphered]... they arrived and encamped at the foot of the mountain.

The next day the officer in command sent to ask the chief of the mountain to be good enough to send him by way of a forced levy 2000 male slaves and 100 rolls of cloth (16) to cover the cost of the campaign. The chief sent word that he had not invited the officer to come; on the contrary he invited him to go away. If however he wished to have what he asked, he and his soldiers had only to come up into the mountain where they would receive a fitting welcome.

The commander angered by the chief's reply had the cannon fired in order to frighten the negroes, a gesture which did not succeed in drawing them out of the mountain where they crowned the summit, each man with seven or eight spears in his hand, quietly awaiting the Turks' next move. When the latter saw that the noise of the cannon had no effect the commander decided to scale the mountain. The slopes were strewn with granite boulders among which were [word undeciphered] which made walking difficult but which the natives cleared with the agility of goats.

When the negroes saw their enemy approaching they began throwing rocks which threw the Turks into confusion. Thereupon the soldiers, their courage returning, continued to advance but they were unable to get any further, so they returned to the foot of the mountain to await a more favourable occasion.

During the night the negroes came down and made a surprise attack so suddenly that neither the troops nor their leaders could resist.

The commander was one of the first to turn his bridle, shouting "Save yourselves who can!" Several soldiers who rallied were killed. Twenty-two soldiers altogether were killed and thirty wounded in this encounter. Among the dead were a captain and a non-commissioned officer with his subaltern and a lieutenant of Turkish cavalry. The Arabs remained simply spectators during the engagement.

After so precious an expedition the Turks returned to El Obeid in even greater disorder than they came and without bringing a single negro and with many dromedaries the less.

The governor of Kordofan was much annoyed at the conduct of Sharif and wished to lead an expedition himself. But in this he was no more successful for he had nineteen men killed, 40 wounded including a captain with a spear-thrust through his thigh, and brought back only about 600 slaves, old men and children who failed to escape quickly enough when the Turks took them by surprise.

On the 1st March the Turkish cavalry received the order to make a raid to the White Nile to collect tribute from the Ammera ['Amriya, Hasaniya?] who had refused to pay. They were unable to defend themselves against the expedition and lost much more than the value of the tribute demanded, on account of the pillage by the troops who took everything they could lay their hands on, a proceeding which depopulated the country. The re-assessment made this year by the various kashifs and accountants employed to levy the taxes showed that during the last four years the inhabitants of 700 towns and villages had fled.

During my stay at El Obeid I tried to procure a history of the country but I have now ascertained that nobody has ever written a word of it. However al-Hajj Anbar told me the story of the last sultan—or rather the one who bore this title—Musallam, whose memory survives probably because he ruled with justice. This man had spent his youth in Darfur. By reason of his aristocratic birth he was an officer of the sultan. He was a good-looking man. He had an intrigue with one of the most beautiful of the sultan's wives but, when the lady and himself were giving expression to their love in no ambiguous way, they were discovered and arrested.

The sultan condemned the guilty man to be castrated and at the same time made him a present of the wife whom he had seduced. Musallam, fearing that he might die from the operation to which he had been condemned, confessed to the sultan that he had not seduced the lady but that it was her eyes which had seduced him. In this he meant to act the gentleman but he was unintentionally cruel since the sultan ordered those seductive eyes to be torn out on the spot in the presence of Musallam.

So Musallam who stood in such great danger was saved and some time after was sent by the sultan al-Hajj Abd al-Rahman (17) with an army of 4-5000 men to conquer Kordofan. He completed the conquest after much trouble and established himself as sultan. Here he reigned twenty-two years but was always tributary to the sultan of Darfur. He was deposed by the Turks only after great difficulty. However, his soldiers were cut to pieces and were killed after having given proof of great bravery and showing a great hatred of the Turks.

His wife has lived at El Obeid since the day he left her....

After a stay of two months and some days at El Obeid I decided to return and went to take leave of the governor asking him out of politeness if I might go.

I was much surprised when he reproached me saying that, as I possessed slaves, I must return *via* Khartoum which is at the mouth of the White Nile where I must pay the customs dues. I laughed at him and after some rather lively discussion told him that, if he gave me permission, I would thank him but that, if he did not, I would still thank him and go all the same. I went to prepare for my departure and on the 19th March at 9.0 a.m. left El Obeid....

On the 5th we broke camp at 4.0 p.m. and continued during most of the night... because it was too hot during the day. Continuing our night marches by the same route as I had come we arrived at the mountain of Simriya at 9.0 p.m. But we had a nasty experience before our arrival there.

We heard in front of us in the darkness the voices of men who were coming in our direction. My guide told me that these were jallabs (18), a statement which reassured me. When we were very close to one another everybody began to shout "Who's there?" which only caused confusion, since what was intended as a cry of recognition acted as the contrary. Our men started shouting welcoming phrases which the others mistook for war cries. And without giving us more time to explain ourselves they fired a volley at us which happily did no harm, for in the darkness they could not see us. We were more fortunate for they had betrayed their position by their shots. We fired slightly wounding three persons, as we learnt later.

One of our supposed enemies, guided by the white shawl that I was wearing round my middle, stalked up and fired his pistol point blank at me. Luckily the bullet only grazed my shawl. Having discerned the man at the moment he had fired I grabbed him and threw him to the ground. I had already put the muzzle of my gun to his head and was on the point of killing him when a man came up behind me and

was about to strike me with his spear had not a negress who knew how to reload a pistol put him out of action. She broke his shoulder with a shot and he let go the spear which he had poised at me.

As for me, I no longer had the heart to kill the man at my feet and in this I did well since, when the two sides having discharged their firearms came together with their spears and swords, they recognized one another and the fight stopped. On hearing the good news I let the man go who had fired at me.

We all stopped to thank God for saving us from a worse evil and after having lit fires we attended the wounded, five on their side and two on ours. To the astonishment of the Arabs who knew that I was a Christian I joined them in prayer. But for me it was all the same to pray God in French or in Arabic. Then we asked one another the latest news and concluded peace by eating together. We then went to sleep but I kept two men on watch during the night....

I called on the kashif of Debba who received me with many courtesies and after staying two days with him I started on my journey to Cairo, a longer and more agreeable tour than the one I had just made.

NOTES.

(1). I have failed to identify the author and there is no internal evidence to assist his identification. The letter M. is more likely to be short for Monsieur than the first letter of a Christian name, suggesting that this is not the author's original text, but was perhaps dictated by him. The style is that of one accustomed to the French idiom but not to the refinements of grammar and punctuation. Chiros is an un-French surname and may possibly be a Frenchification for a highly improbable Greek surname *Xῆρος* or *Χειρὸς* or *Χοῖρος*. No reference to a Greek thus named has been found in the contemporary literature of the Sudan.

It is more likely that Chiros is a copyist's misspelling for Chiron. In *Il Corpo Epistolare di Bernardino Drovetti*, edited by G. Marro. (Publications Spéciales de la Soc. Roy. de Géog. d'Egypte. Roma, 1940), vol. 1, there is a reference to a Chiron of whom Captain Cadeau, a French instructor to the 1st infantry regiment in Kordofan, wrote that he came to El Obeid in 1825, the year of this itinerary, "under the same auspices as J. M. F. Vaissière," a French ex-officer of the Egyptian army, then trading in Kordofan.

(2). A. Chélu Pasha, formerly chief engineer of the Sudan, who published detailed maps of the Nile cataracts in his *De l'Equateur à la Méditerranée* (Paris, 1891), does not mention having seen these sketches.

(3). 'Abdin (or 'Abdi) Bey al-Arna'ut (c. 1780-1827), a distinguished Albanian officer in Isma'il Pasha's army which occupied the Northern Sudan in 1820-1. When the army moved forward from Dongola towards Sennar he was left on the line of communication to rule the territory between Wadi Halfa and Merowe.

(4). This refers to the passage of the 1st regiment to Sennar and Kordofan earlier in the year.

(5). Dr. E. W. P. S. Rüppell (1794-1884), naturalist, was the first European to explore Kordofan and describe the people and fauna of the Nuba hills. He had already reached the northern borders of Kordofan in 1822-3 and was now intending to cross the Bayûda to El Obeid and beyond. His *Reisen in Nubien, Kordofan, [etc.]* (Frankfurt a/M, 1829) contains no mention of the author of this itinerary. R. Hey was a member of Rüppell's expedition.

(6). Kashif, an officer charged with the government of a district (kashiflik) whose chief duty was the collection of revenue.

(7). The Beni Jarar then disputed the grazing grounds of the Bayuda with the Kababish.

(8). Mohammad Bey Khusraw Daramali (d. 1833), commander of the Egyptian force which occupied El Obeid in 1821; appointed *sir'askir* of Sennar and Kordofan on Isma'il Pasha's murder at Shendi in 1822.

(9). Mohammad 'Ali, *wâlî* of Egypt, was popularly known as the Pasha of Egypt, or simply, the Pasha.

(10). While 'Abd al-Hâdi, shaikh of the jebel, was forced to eat fodder in the Daftardar's stables in El Obeid for having advised Musallam of the Egyptian advance towards his capital. Douin, G. *Hist. du Soudan Egyptien*. (Le Caire, 1944) vol. 1, p. 209.

(11). Halim Bey was the Daftardar's second-in-command in the expedition of 1821 to Kordofan and in the battle of Bara.

(12). For a full account of this battle see Douin, *op. cit.*, pp. 200-6.

(13). A Turkish military custom to which the Pasha himself was opposed. (Abdin archives, quoted by Douin, *op. cit.* pp. 16-17). The Daftardar is reported to have paid P.T. 20 a pair for over 3000 delivered, as a bonus to his troops. Cadalvène, E. de and Breuvery, J. de. *L'Egypte et la Turquie, [etc.]* (Paris, 1836), Vol. II, p. 224, quoted in Douin, *op. cit.*, p. 206.

(14). An illusion widespread at this time. The gold workings were near Jebel Shaibun. See Bell, G. W. *Shaibun Gold*. S.N. & R. Vol. XX, p. 125.

(15). Sulaiman Bey Kharpûtli, qa'imaqam of the 1st regiment,

who succeeded Halim Bey as governor in June, 1825. He was later governor of Sennar with grade of pasha and rank of mirliwa'. "Ignorant and narrow-minded" (Guémard, G. (quoting Planat) in *Les Réformes en Egypte* (Le Caire, 1936), p. 125 n.).

(16). Author's footnote: These rolls have throughout Kordofan the value of money. They have the approximate value of half a Spanish piastre [The Spanish piastre was about 80 Egyptian piastres at the time].

(17). Author's footnote: 'Abd al-Rahman's son, Muhammad Fadl, the present ruler, cannot look at a white man, saying that it gives him the horrors.

(18). Petty traders (Arab. جلاب plur. جلابه).

[Mr. P. Hogg, who knows the caravan routes south of Debba, states that he knows no mountains called Simerie or Simriya in this area. He suggests that the reference may be to the hills of Gimr. The nearby wells could be termed the Gimriya wells. The "G" might easily be mis-transcribed as "S" by the author. *Ed.*]

MODERN PARALLELS FOR ANCIENT EGYPTIAN TATTOOING.

By Carl Schuster.

IN *Prehistoric Egypt* (London, 1920), W. M. F. Petrie illustrates (pl. vi, V, 4) the body-marking of a predynastic figurine, which we reproduce as Fig. 1. By the side of his drawing, Petrie has introduced the chest tattooing of a modern Papuan woman, which he recommends (*op. cit.*, p. 9) for comparison with the marking on the chest of the ancient Egyptian figurine. In his drawing (marked "vii. 5" at the right of our Fig. 1) Petrie has inverted the Papuan chest-marking to make it agree with that of the Egyptian figurine. Actually, the Papuan design appears as we reproduce it in Fig. 2, from Petrie's source (an article on Papuan tattooing by F. R. Barton in *J. R. A. I.*, 48, 1918); but as Petrie points out, and as we see from another predynastic figurine of the same period, Fig. 3, this ancient Egyptian chest-marking sometimes takes a form virtually identical with the modern Papuan marking, namely that of a column of interlocking M-shaped marks.

Petrie does not commit himself as to the significance of this comparison. Obviously, if the parallel is accidental, it may be dismissed as a curiosity. But if it is not accidental, then we cannot escape the conclusion that it forms part of an extensive cultural complex demanding investigation. Actually (as I hope to show in a forthcoming larger publication), the Papuan chest-marking illustrated in Fig. 2 is but a variant of a type widespread throughout the Pacific area. This type of marking consists generally of a great V or M extending from the centre of the chest, or sometimes from a point lower down, in the region of the navel, diagonally upwards towards the two shoulders. This marking may be carried out in pigment tattooing, scarification, or painting; but in any case it is commonly composed of two or more parallel rows of dots (this characteristic multiplicity of outline is reflected in the compact or reduced version of the design on the girl's neck in Fig. 2).

The fact that this type of chest-marking is so widely distributed throughout the Pacific suggests that it must be rooted in ancient tradition. And this conclusion is confirmed by the observation that closely similar markings occur widely throughout negro Africa: examples in our Figs. 6, 7, 8 and 10 (after Fulleborn, *Deutsch-Ost-Afrika*, 8, 1902, pl. 29, 3 b; K. Lampert, *Die Völker der Erde*, ii, 1902, p. 149; a photo of the S. A. Barrett African Expedition of the Milwaukee Public Museum, 1929; and E. J. Wayland in *J. R. A. I.*, 59, 1929, pl. L, respectively). Finally,



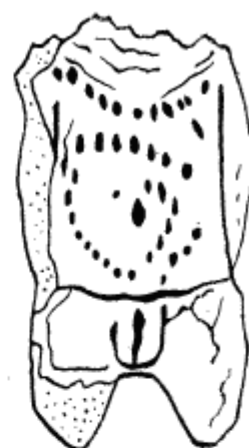
1. PREDYNASTIC
EGYPT



2. PAPUA



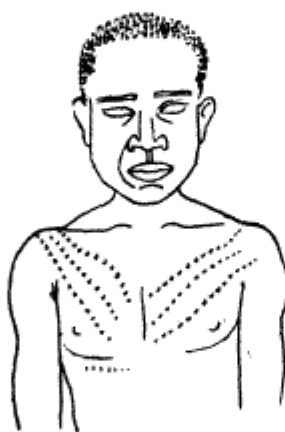
3. PREDYNASTIC
EGYPT



4. MORAVIA:
AURIGNACIAN



5. EGYPT:
MIDDLE KINGDOM



6. NYASSALAND



7. CONGO



8. UGANDA
(TURKANA)



9. PREDYNASTIC
EGYPT



10. UGANDA
(BAAMBA)



11. SOLOMON
ISLANDS



12. EGYPT:
MIDDLE KINGDOM

a hint of the great historical depth of this tradition is provided by the occurrence of a similar chest-marking in ancient Egypt: our Fig. 5, taken from a memorial tombstone of the Middle Kingdom at Abydos (Lange and Schafer, *Cat. gen. du Musée du Caire*, no. 20001-20780, vol. iv, pl. lxxxvi, no. 465: in the text, p. 163, the authors designate the rows of dots as "tattooing" with a question-mark). The structure of this Middle-Kingdom chest-marking is so much like that of the numerous modern African (and Oceanic) markings that it is difficult to avoid the inference of an historical connection of some kind between them.

If there is such a connection, the problem arises whether we are to suppose that the motive originated in ancient Egypt and spread in to Negro Africa (and thence, presumably, into Oceania), or whether, on the contrary, the motive is not rather one of immense antiquity among primitive races (in Africa and elsewhere), long antedating even the rise of Egyptian civilization. Among arguments supporting the latter view must, I believe, be counted the circumstance that the V-marking as illustrated in Fig. 5 is exceptional in Middle-Kingdom Egypt.

Another question, which perhaps will find its answer within this framework, is how to bridge the gap of two millennia between the predynastic figurines of the Amratian period (about 4000 B.C.) with their compact columns of M-shaped markings on the chest, and the related but somewhat different Middle-Kingdom marking of Fig. 5. Might it not seem reasonable to suppose that these related body-markings in two widely separated periods in the history of Egyptian culture are reflections of the repeated or constant cultural contact with more primitive peoples of the South?

In relation to this question we wish to call attention to two more ancient Egyptian figurines, one of which, Fig. 9 (after Petrie, *op. cit.*, pl. vi. V, 1) belongs in the same class of predynastic creations as Figs. 1 and 3. Though this drawing shows the back, we may perhaps be justified in interpreting the painted decoration as equivalent to a chest-design, inasmuch as the V-shaped chest-marking is often repeated on the back, with little or no variation, among modern primitive peoples of both Africa and Oceania. In Fig. 9, then, we have an asymmetrical design in which one arm of the V is made up of what we may regard as a characteristic cicatrization or tattooing pattern, namely a series of short transverse strokes, evidently equivalent to dots, while the other arm of the V must be regarded either as missing, or perhaps as supplanted by the horns of an antelope. The asymmetry of this arrangement strongly recalls a series of Oceanic tattooings and scarifications in which only *one* arm of the V-shaped chest-marking is carried out, the other arm

being suppressed, perhaps because of the pain of the operation, or perhaps simply out of a sense of smartness and novelty, or sometimes being supplanted by a diagonal motive of a different type. Fig. 11 (after D. L. Oliver in *Natural History* (New York), 50, 1942) shows a characteristic example of this asymmetrical arrangement from the Solomon Islands. I am not aware of any great frequency of such arrangements in modern Africa, but reproduce in Fig. 10 an African scarification in which one arm of the V is made of a zigzag line, and the other of a column of M-marks, analogous to the median chest-markings of the predynastic figurines, Figs. 1 and 3.

Finally, in Fig. 12, we have another Egyptian figurine, dating, like Fig. 5, from the Middle Kingdom (after M. Matthieu, "Les statuettes magiques coptes et égyptiennes," *Trudy ottdela vostoka gosudarstvennoi Ermitazha*, 1, 1937). This specimen is somewhat of an exception within its type. Many such figurines are decorated on the lower body with diamond-shaped groups of spots which are known to represent tattooing (see H. E. Winlock in *Bull. Metr. Mus.*, v. 18, part ii, Dec. 1923, p. 26 and fig. 20; and Winlock, *Excavations at Deir el Bahri*, New York, 1942, p. 74), while the upper body is decorated by two rows of dots crossing diagonally at right angles to form two X's, one on the chest and one on the back, generally thought to represent strings of beads (examples: Winlock in *Bull. Metr. Mus.*, 18, as above, fig. 15; Ambrose Lansing in the same *Bulletin*, v. 29, part ii, Non. 1934, fig. 29, second doll from left; H. Schafer in *Amtliche Berichte aus den kgl. Kunstsammlungen*, 34, 1913, col. 51, fig. 22, with tattooed spots on the forehead as well; Paris, Musée du Louvre, Dép. égyptien, No. 10942, apparently unpublished, similar to the last, but with tattooed spots on cheeks rather than forehead). Though relatively naturalistic, such figurines nevertheless show traces of archaism — for example in the absence of feet — which connect them unmistakably with their predynastic predecessors. In Fig. 12 we are interested in the exceptional arrangement of the spots on the chest, which, instead of forming the usual "X," are aligned in two parallel rows extending diagonally from the left shoulder to the right hip. If these are indeed beads, the illustration should be cancelled from consideration; but it seemed to me to be worth including, on the chance that the diagonal rows of dots might reflect tattooing and thus provide a Middle-Kingdom example of the asymmetrical or abortive type of V-shaped chest-marking.

Now, the tattooed "dancing girls" of the Middle Kingdom, represented by tomb figurines of the type of Fig. 12, are generally regarded as being of Nubian race (see Winlock in *Bull. Metr. Mus.*, v. 23, part ii,

Feb., 1928, p. 10 fig. 11 ; and *ibid.*, v. 27, part ii, Mar., 1932, pp. 33-34). And the predynastic figurines which carry the characteristic V or W shaped chest-markings are evidently modelled after a steatopygous race which once flourished in palaeolithic Europe, and is now extinct except in South Africa — a race which in predynastic times presumably provided the slaves whose modelled images were placed in tombs to accompany their masters into the afterworld (Petrie, *Prehistoric Egypt*, p. 9). The occurrence of these body-markings on figures of women belonging to a race which has gradually receded southward from palaeolithic times in Europe and was still known in Amratian times in Egypt, but now survives only in the Bushmen of South Africa, suggests an interesting problem in cultural history. Could this ancient steatopygous race or its palaeolithic contemporaries have been the original bearers of this type of body-marking, which is now so widely spread throughout Negro Africa and Oceania, and of which we find occasional reflections in the predynastic and dynastic art of Egypt? As a commentary on this question, we reproduce, in Fig. 4, a drawing of the modelled torso of a so-called "Venus" found in 1934 at Vestonice in Moravia, Czechoslovakia representing an Aurignacian culture of the ice age, some 30,000 years ago. The rows of incisions on the body are described by the discoverer as "geometrical dotted lines, resembling tattoo patterns of present-day primitive tribes" (K. Absalon in *The Illustrated London News*, 28th March, 1936, p. 547). Is it merely an accident that the patterns formed by these rows of incisions on a palaeolithic figurine include the motive of a flattened V on the chest? (Compare a somewhat similar, but not quite V-shaped, marking on the early Aurignacian "Venus" of Brassempouy: E. Piette, *L'art pendant l'âge du renne*, Paris, 1907, pl. lxxi)

This is, of course, a question of vast range. In bringing it to the attention of readers of Sudan Notes and Records, my hope was a more limited one. Since the only modern African examples of V-shaped chest-marking hitherto known to me are from more southerly Negroes, as represented in the illustrations, and since the area of ancient Nubia must obviously have played an important role in the exchange of cultural impulses between primitive Africa and civilized Egypt, it would be of great interest to learn of any modern tattooing or scarification of this type from the geographically intermediate area of the Sudan. My hope, accordingly, was that any interested residents of the Sudan who might chance to see this notice would be good enough to communicate to me, through the kind offices of the editor of this journal, any pertinent material, especially from the Sudan, in the form of documentation or comments.

APPENDIX.

Mr. Schuster has asked me to append a note on the historical implications of this subject with reference to relations between Ancient Egypt and Nubia. Time and space make it impossible to examine the matter in any detail, but when a study begun in Melanesia leads to Ancient Egypt and even Palaeolithic Moravia its interest and importance for Prehistory must be apparent to all.

The Sudan, especially the Northern Province, is one of the key places for the study of early migrations and contacts, for after 2,500 B.C. the Nile was the only possible route North and South, between the Caucasian and Negro areas, this side of the Western Sahara. Our knowledge of the ancient inhabitants of Nubia is exceedingly patchy and any clue that can help us towards a fuller knowledge is of great value not only to the history of the Sudan but also to the elucidation of the Prehistoric period over North Africa, South Arabia and South India. The existence of these tattooing or scarification marks among the Nuba or the Nilotic tribes might be even more significant than if found only among the negroes, but all evidence is valuable.

The question of steatopygy, raised by Mr. Schuster, may also provide clues. The theory he suggests is still the most widely accepted, though Madame Luce Passemard has thrown doubt upon the true steatopygy of the Palaeolithic figurines (*Le Vénus Stéatopyge*, Nîmes, 1938) and others have also inclined to the view that the great fatness indicated is no more than the hallmark of the Mother Goddess (see in particular G. D. Hornblower "Predynastic Figurines of Women and Their Successors" in *Journal of Egyptian Archaeology*, No. XV, pp. 29-47), and I think that an impartial study of Plates XXXIX to XLVII of H. Winkler's *Rock-Drawings of Southern Upper Egypt II*, London, 1939, will convince anyone that there was true steatopygy at Dakhla Oasis, very possibly accompanied by similar tattoo marks to those seen in the illustrations here.

There are some indications that in the Nile Valley in Egypt both the tattooing and steatopygy were a southern influence (they reappear in figurines during the "pan-Grave" infiltration from Nubia during the New Kingdom) except in so far as an earlier people of this type (Bushmen?) may have been enslaved by the earliest Egyptians known to us — the so-called Badarian peoples of *circa* 5,000 B.C. More light may perhaps be shed on the Egyptian side by L. Keimer's forthcoming "Rémarques sur le tatouage dans l'Égypte Ancienne" (tome LIII des *Mémoires de l'Institut d'Égypte*, in the Press).

Meanwhile it will be most helpful for all students of these difficult and complex questions if Mr. Schuster's interesting note and Sr. Miguel Covarrubia's drawings elicit any Sudanese parallels.

O. H. MYERS.

LITTLE KNOWN TRIBES OF THE BAHR EL GHAZAL BASIN.

By S. Santandrea.

Dr. A. N. Tucker in his *Eastern Sudanic Languages* (Oxford Univ. Press, 1940) has made an inestimable gift to Equatoria by the publication of the first volume of a series, which I should like to see completed. In the introduction, almost all local languages have at least been listed and mentioned. As far as the Bahr el Ghazal is concerned, after his painstaking survey, there remain only two lacunae worth mentioning: one in the Zande country (south-west) and one in the Raga district (north-west).

A.—SOUTHERN BAHR EL GHAZAL

The former gap has been already filled (in unpublished studies) by Father F. Giorgetti, who has written on the Pambia-Barambo and the Huma-Bukuru; the latter group may have been left out purposely by Tucker, as non-Sudanic, but the former seems to have Sudanic connections. Both serve to complete the survey of languages in the Zande area.

Though chiefly concerned with native music¹ Fr. Giorgetti has long been active also in ethnological and linguistic research. Leaving apart his studies on Zande and the Azande, it will be convenient to give here a short account of his works on the tribes and languages in question.

1. Barambo and Pambia.

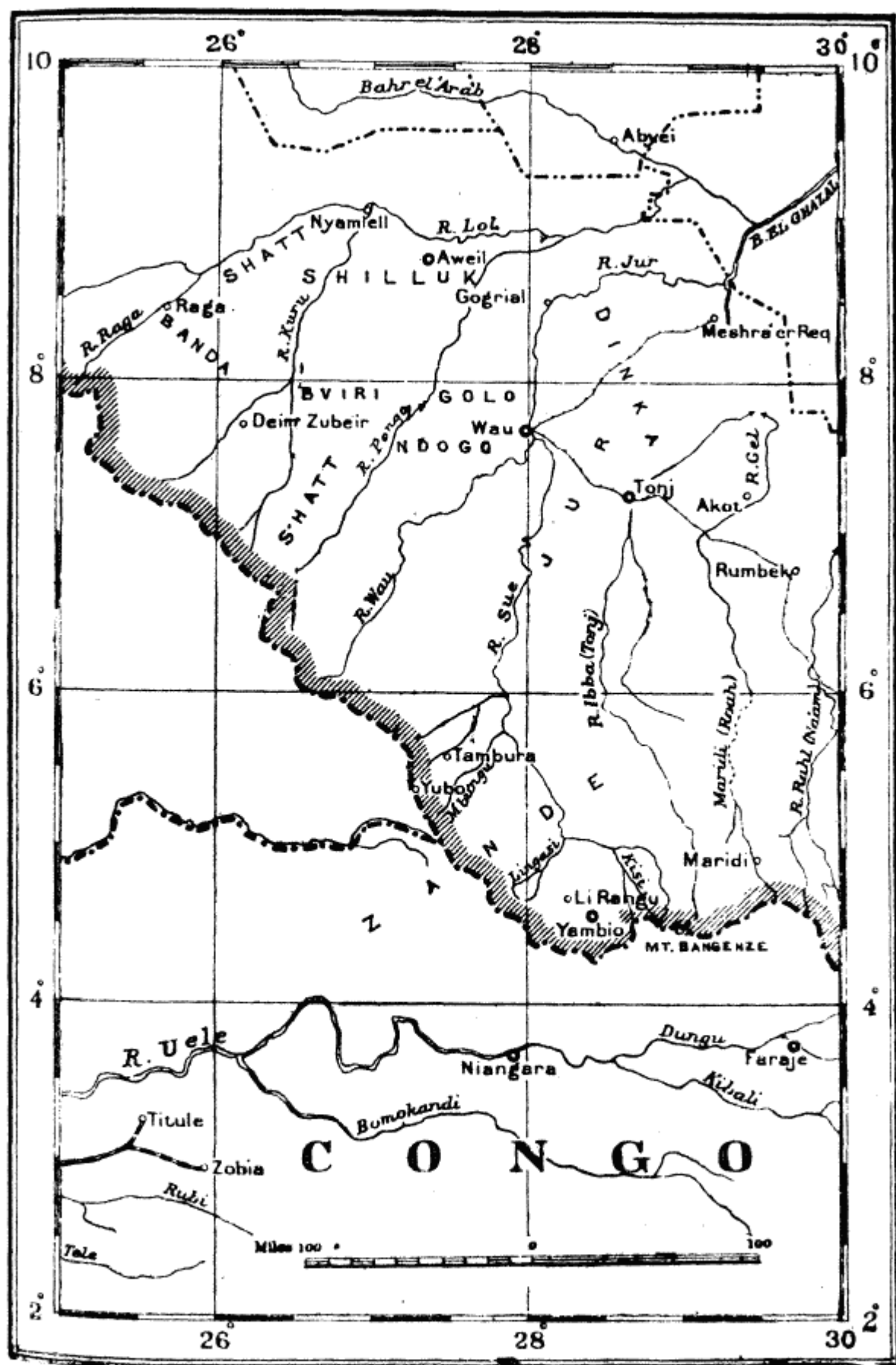
These are not new names to people acquainted with Zande country. Notes on the tribes have been written by Major Larken,² Fr. Van den Plas³ and Calonne-Beaufaict.⁴ All three authors use the spelling *Barambo*, but Fr. Giorgetti prefers *Barambu*, remarking that it is originally a common noun, meaning in their own language 'man' (it differs little from *bambu* — simply a shorter form — meaning likewise 'man' in the kindred language, Pambia). As far as the Pambia are concerned,

¹ Fr. Giorgetti has accumulated a great amount of material on native music, drumming, etc., which we hope he will publish.

² 'Zande notes' in *S.N. & R.*, Vol. VI, 2, 1923.

³ Historical introduction to *La langue des Azande* by C. R. Lagae et V. H. Van den Plas, 1921.

⁴ *Azande*, by A. de Calonne-Beaufaict, 1921.



all agree in stating that their real name is so far unknown — a rare but not unique case in this country ! The Zande nickname has stuck to them for good. The Azande call the Barambu, as Van den Plas says, Amiangb(w)a ; Giorgetti adds that also the Pambia may be covered by this general term, the two tribes being often looked upon as forming a single unit, but disagrees as to the etymology and consequent meaning of that name.

According to Van den Plas, the Barambu seem to have been a big tribe that crossed the Mbomu before the Azande. The bulk of the people found their way to the Welle River, whereas the rearguard drifted towards the upper course of the Api, where tiny groups of their descendants are still living. Larken has added information on the "Sudanese" sections who, after crossing the Congo-Nile Divide, settled between the rivers Mongu and Ringasi. "They are still in this country and outnumber any other tribe in Tombora sub-district." They amount to about 5660 tax-payers.

The short accounts written by Van den Plas and Larken on the Pambia agree on the whole with that of Fr. Giorgetti. The tribe inhabited, as it still does, the stretch of country lying between the hills near Tombora and the river Boku in the French Congo. They had little tribal organization, and so were an easy prey to the invaders. They now number about 2900 tax-payers.

Fr. Giorgetti has written extensive notes on the customs and tradition of the Barambu and Pambia, but he went to even greater pains in his linguistic studies. He translated into Barambu and Pambia the *Short Guide to the Recording of African Languages* published by the International Institute of African Language and Cultures, and gathered a considerable amount of other material. Although Larken's statement that 'the Barambo language is practically identical with the Pambia' is somewhat exaggerated, nevertheless great similarity exists between the two languages. To which group do they belong ? Fr. Giorgetti is of opinion that they may be classified as semi-Sudanic, and are to be linked with Zande. From his notes it appears clear that, at their present stage of development — at least as they are spoken in this part of the country — they resemble (although not very closely) Zande both in grammar and vocabulary. Lagae and Van den Plas have published jointly a catechism in Barambo. Even before Fr. Giorgetti had obtained a copy of it, he had received reliable information from the Sudanese Barambu that the dialect of their Congolese countrymen differs fairly extensively from theirs. After securing a copy, he did not change his opinion.

As far as Pambia is concerned, Van den Plas says: 'J'ai eu la bonne fortune de pouvoir constituer un petit vocabulaire du Pambiya; et cette langue, outre qu'elle paraît nettement soudanaise, me semble, du moins par ces racines, assez apparentée avec *Basiri* et le Barambo'. There is no doubt about the similarity between Barambu and Pambia, but, as far as *Basiri* is concerned, I am afraid that the author's statement cannot stand. I have compared my notes on Sere (called by these authors *Basiri* or *Basili*, as well as in the Wau area *Shere*), both Sudanese and Congolese, and could not find a single word in common between the two groups.

2. Bangbinda, Bukuru and Huma.

The names of these tribes are met with under different spellings; Larken writes Bangminda, Johnston¹ gives a very similar rendering, Van den Plas has Bangbinda, spelled Bangwinda (needless to say: *gie* stands for *gb*) by Calonne-Beaufaict. Fr. Giorgetti thinks both Bangbinda and Bangminda to be good spellings, as the former represents the Bantu pronunciation and the latter the Zande one. Likewise some write Buguru (Larken and Van den Plas) or (a)Boguru (Calonne-Beaufaict), whereas Giorgetti, who knows their language well, affirms that Bukur (plural Ba-bukur) is the right spelling. It is interesting to notice that his spelling corresponds exactly with Schweinfurth's (Babukur). Van den Plas and Calonne-Beaufaict give lengthy accounts of the history of these two tribes; both however seem to ignore the Huma, a fact that may suggest the doubt that, in some quarters, they might be looked upon as a subtribe of either Bangbinda or Bukur, and thus come under either denomination.

For my purpose it suffices to give an abridgement of Larken's concise notes. "The Bangminda before the Zande invasion occupied the Congo-Nile watershed between the headquarters of the rivers Kisi and Yubo (28.30 E., 4.30 N.)" whence "somewhere about 1830 . . . they came to Mount Bangenze . . ." and continued to spread out in a north easterly direction as far as the River Yiba. "The Buguru occupied a country on the left bank of the Were River, south of their neighbours the Bangminda and Huma . . . The Buguru are now to be found principally in the valley of the Sue River, north of Yambio . . . The Huma used to live round about Mt. Bangenze . . . whence they fled . . . settling eventually on the hills neighbouring Tombora."

Fr. Giorgetti's ethnological notes deal mainly with the Huma. He wrote on both languages, but studied Bukur more thoroughly. During

¹ Sir Harry H. Johnston, in his monumental work *Bantu and semi-Bantu Languages*, Vol. II, pp. 122-127.

his stay at Raffili he had several Bukur at the Mission,¹ with whose help, he was able to collect considerable material on their language, which he learned to speak fluently, to the admission of the natives themselves (1943).

I have the impression that Larken's statement about Bangbinda "though akin in some respects to [the language of] the Huma, Barambo and Buguru, shows a marked difference to these languages" is likely to be misleading. Fr. Giorgetti groups Barambo and Pambia together, as two closely allied dialects, as Larken does somewhere else; but they stand apart. Bangbinda has already been classified by Johnston² as a Bantu language belonging to the Ababua group together with Huma, which it resembles closely (at least in vocabulary), as can be seen by comparing the list of words given by the author in the two dialects. Fr. Giorgetti remembers having talked Huma on one occasion to some Bangbinda who thought he was speaking their own language. On my part, on a visit to Mt. Bangenze I wrote down a list of words from natives belonging to a tribe unknown to me at the time; as I knew about Bukur and Huma, I presume they must have been Bangbinda, whom Larken asserts to be living in that spot. Later, while writing, it struck me that I could remember having heard almost all those words a long time before. I then realized that they were the same as in Huma, a language on which I had written short notes as early as in 1933.

To end with a note on the tribes, Larken says that the Sudanese Bangbinda are "probably the biggest and most important tribe in the Yambio Sub-district to day." The Bukur and Huma are perhaps less numerous. I find in Tucker that there are 436 Bukur tax-payers in Meridi area, and the last figures available give 770 Huma-Bukur in Tombora sub-district. Larken remarks as a special feature of the Buguru that "they speak their own language to a great extent, and still retain many of their tribal characteristics": a statement in complete agreement with Fr. Giorgetti's findings, who thinks them to be the least *Zande-ized* of all the odd medley of tribes under Zande rule.

3. Vungura (alias) Vongara Language?

To make this survey of languages in the Zande area complete, a few words must be added on this question which is still *sub judice*.

The existence of a sort of jargon used by the Vungura chiefs, in order not to be understood by commoners, is out of question; vide

¹ There is a small settlement of Bukur on the Kojali Hills.

² Johnston seems to ignore Bukur, but knows Huma (or Homa). The Huma man from whom I got my notes pronounced it 'Um, with a sort of glottal stop in front, or Arabic *hamza*, or Cairene *q*, as in *qirsh* (piastre).

Van den Plas (p. 37), Larken (p. 242), etc. But is there a real Vungura language? Larken asserts that there is, adding that all his efforts to find out substantial information on the subject were in vain. Just by chance he succeeded in catching a few words, of which only three remained in his memory: *dua*, yes, *duarati*, no, *dimo*, bow. Van den Plas does not even suspect, it seems, the existence of such a language. Strange enough, one of the three words given by Larken, *duarati*, is probably the same as the one given by Van den Plas as signifying the well known Vungura jargon (Duworati). Evans-Pritchard¹ "feels certain" that no Vungura language exists.

Fr. Giorgetti states that it is now almost certain that no real Vungura language exists; but the jargon, spoken quickly, is enough to prevent the chiefs, when need be, from being understood by commoners. It must not be thought, however, that it consists exclusively of a simple reversion of syllables, as Fr. Giorgetti's notes on the same clearly prove. Monosyllables, e.g., that cannot come under the "reversion" rule, change according to an ill-defined system; moreover, especially in the case of common words, conventional terms (monosyllables) are used instead of the correspondent Zande ones. This is enough, together with the rapidity of their "reversed" speech, to make curious listeners lose the thread of their talk.

Giorgetti's notes, when published, will throw much light on this much discussed question.

B.—EASTERN BAHR EL GHAZAL.

Although this may seem to pass the limits of this article, I think it worth while, before passing on to the west to make a brief survey of this area. Then this study of the country will appear complete, although abridged; for, together with well known tribes, some little known ones will be included.

1. The Dinka.

The tribe is well known. The language of the north-eastern area has been studied by A. Nebel of the Verona Fathers, who composed (in collaboration with A. N. Tucker) a valuable *Dinka Grammar* circulated in duplicated copies. He published a *Dinka Dictionary* and *Abridged Grammar* (Verona, 1936).

2. The Luo Group.

It comprises the Jo-Luo (vulgarly called Jur) as the major tribe,

¹ C. G. Seligman, *Pagan tribes of the Nilotic Sudan*, p. 497 (on the Azande).

and the following, as minor tribes: Thuri *alias* Shatt; Bwodho *alias* Dembo; Luo *alias* Shilluk, to which we may add the Manangeer *alias* Jur-Wir. General information on this group is contained in my article '*Minor Shilluk Sections in the Bahr el Ghazal*,' published in *S.N.&R.*, Vol. XXI, Part II, 1938. Ethnological notes on the Jo-Luo (*Jur*) were ready for publication before the war, but probably nothing was done about them. A Grammar on their language was being printed at Verona, when the recent war broke out; its fate, too, is still unknown to me.

There is a new piece of information regarding the Shilluk-Luo hordes, for which I am indebted to Fr. Nebel. He discovered in Nyamlel area a tradition generally accepted by both Dinka and Luo, that the former inhabitants of that country were Luel, a Luo-speaking people. But so far neither Fr. Nebel's, nor my personal enquiries on the spot, have produced certain evidence as to the nature of the group; there is still doubt, I think, as to whether they formed a tribe apart or were just a paramount clan of the Thuri-Shatt. The language of my Luel informants was doubtless the same as the Thuri dialect. They evidently constituted the northernmost section of the Shilluk-Luo, who gradually receded before the invading Dinka-Maual; but whereas other hordes, like the Luo and Thuri, just shifted westward without losing their tribal entity, the Luel disappeared from the spot, with the exception of individuals only and a few tiny groups scattered here and there. There is a widespread tradition that they eventually took themselves to the Kiir (the Bahr el Arab plain), whence they crossed over to Kordofan. I wonder whether any one can find out anything about them in Kordofan.

3. The Belanda-Bor

Racially and linguistically akin to the Luo, territorially they stand between them and the Azande; in course of time they mixed with the Belanda-Bviri, a tribe of the Ndogo group. General information on them appeared in *The Belanda, Ndogo*, etc., *S.N.&R.* Vol. XVI, Part II, 1933, but there was little study of their language. This gap has been filled by Fr. Giorgetti with his *Grammatical Panorama*, still only in typescript which goes under the joint names of Zadra-Broggini-Giorgetti. The first collected valuable material on various points; the second, an old resident in Bor country, assisted in the revision of the whole work; Fr. Giorgetti, with a fair knowledge of Bor acquired during his stay at Raffili, completed it and gave it final shape. A perusal of Giorgetti's grammar, together with personal researches amongst the Bor intended for a comparative study of Bor-Bviri, have confirmed me in my old opinion that Bor is made up of a Luo body (vocabulary), a Bviri soul

(grammatical structure), dressed with some Zande sauce. Of the characteristic sounds of Nilotic languages, *dh* and *th* can still be heard, especially by old folk, but their use is nowadays decidedly irregular, leaving doubt as to whether it would be better to use or drop them. On the other hand the characteristic Sudanic sounds (nng, mb, mgb, gb, kp....) have all entered into Bor, thus rendering this language a hybrid mixture of Nilotic and Sudanic elements, a feature which has its counterpart in the multiform and often inconsistent aspects of the tribe itself.

4. The Bongo.

They are well known from lengthy information left by early travellers, especially by Schweinfurth, whose account, embodied with personal notes and edited by E. E. Evans-Pritchard, has appeared in *S.N.&R.*¹ But so far nothing is known of their language except the small vocabularies written by the same early explorers, and available to few readers (not to me). I set to work on Bongo long ago, and a small Grammar and Vocabulary should have been already printed, had it not been for the war, by the *Anthropos* Press. Bongo is mentioned here, because Bongo is akin to some of the little known and unknown languages of *Raga-West* (see later).

C.—THE NORTH-WESTERN TRIBES.

The largest lacuna that remains after Tucker's monumental work is in the north-western part of this country, in the Raga area. It can be judged by Tucker's own words, p. 20, No. 95: "The following Western District languages have so far not been placed: Feroqhe, Shayu (probably a dialect of Feroqhe), Mongayat, Indri (or Yanderika), Togoyo (now believed to be extinct)." p. 11, No. 49: "The Yulu, Kara and Binga Aja, and perhaps the Runga, and Ngulguli, show remarkable vocabulary resemblance to Bongo-Baka, although no grammatical material is as yet forthcoming...."

I may add that other small units have hitherto escaped unnoticed. Now a study of all this congeries of tribes and languages, however restricted within the limits of a general survey, is by no means easy and may even prove too much for a single man. Yet I mean to try it myself, trusting in the co-operation of other workers.

I have no doubt as to the usefulness of such a study. Although some of the tribes to be dealt with are represented now by tiny remnants, and some others are on their way to extinction, I do not think that they

¹ 'The Bongo,' Vol. XII, Part I, 1929.

should be overlooked or forgotten. At times the knowledge of a tribe or of a language, either disappearing or already disappearing, may throw more light in ethnological or linguistic research than that of a thriving one. This also may soon fall into the former's category, as it happened with the Bongo who may have counted (according to Schweinfurth) some 200,000 at the beginning of the past century, and are now reduced to some 4000.

There is no doubt as to the urgent need for such a study. If not undertaken soon, it may be too late. One of the early pioneers after the Anglo-Egyptian reconquest, Comyn, wrote: "Unless their lore, handed down verbally for ages, is collected soon, it will be lost For instance one tribe, the Beio, consisted of nine adults (1906)" ¹ This statement rings even more true and urgent nowadays, after forty more years have carried away more people and their lore.

To make my plan clear, I shall divide the tribes into four groups :—

GROUP I :—The *Ndogo Group*, reckoned so far as including four sub-tribes (Ndogo, Sere, Bai or Bari, and Bviri), already dealt with in my quoted article on the *Belanda, Ndogo*, etc. ² A fifth tribe, so far unknown, will have to be added; and perhaps some more will have to be linked up — although not so closely — to the same group.

GROUP II :—The so-called *Zande* of *Deim Zubeir*. A small tribe, but not deprived of interest.

GROUP III :—The *Raga Tribes*, which must be split into two sections :—
a) *Raga West* (i.e. tribes west of Raga) and b) *Raga East*.

GROUP IV :—Other Odd Tribes.

GROUP IV :—BANDA, GOLO, KRESH, WORO.

As these tribes lie partly outside the limits of my proposed studies, I shall content myself with a short note on them, thus making the survey of western tribes complete.

1. The Banda.

The great bulk of the tribe live in French Equatorial Africa, and, as many have written of them and their language, I shall add nothing.

¹ *Service and sport in the Sudan* by D. C. E. Comyn, p. 258.

² My ethnological notes on the same appeared in *Annali-lateranensi*, Rome, Vol. II, pp. 175-353, 1938.

2. The Golo.

Linguistically, and doubtless also racially, the Golo are kindred to the Banda. I compiled, with great effort owing to its peculiar difficulties, a small Grammar and Vocabulary of Golo, but — unluckily again — I am afraid that war has not yet allowed the work to be printed. In spite of their historical affinity with the Banda, the Golo happened to cast their lot with the Ndogo group with whom they lived for many years so as to form almost one tribal unit with them. Thus very much of what I wrote on the latter's customs and lore applies also to the Golo, who up to now live close to the Ndogo.

Of the new information available about this tribe, there is one point worth recording here, as it will be occasionally mentioned in forthcoming notes, viz. the division of the Golo into two sections: the Moci and the Vita, the former being those living on this side of the Nile-Congo divide, the latter those beyond it, mainly on the rivers Welle (called by them Wula) and Warra.¹

3. The Kresh (alias Kpala).

Although even the layman has heard about the Kresh (alias *Gbaya* or *Kpala*), no literature is available about this tribe. Their language, however, has been reduced to script by Father Simoni, an expert on this tribe. A Catechism and Prayerbook have been printed and several booklets duplicated, besides which a small but valuable Grammar was circulated by Fr. I. Simoni himself.

It was necessary to mention the Banda and Kresh, the main tribes of the Western District, because to them are linked up minor, very little known ones.

4. The Woro.

The *Woro* (more correctly ɔɔ) form a kind of subtribe of the Kresh with a more or less independent dialect of their own. Whereas the latter's sections were all united west of Raga, the Woro remained on the Kuru R., 20 miles east of Dem Zubeir. They claim the *deleba* (a big doleib-palm forest some 10 miles north-west of Dem Zubeir) as the home of their ancestors.

Further inquiries amongst the Raga tribes may bring to light some smaller units to be linked up with the two major tribes: Banda and Kresh.

¹ The Map I refer to in these notes is the Map of the Sudan, by the War Office, 1914, 3rd Edition 1934, Scale 1 : 3,000,000. In the same the Warra R. is shown as formed by two head-streams: the Goangoa, (the Ngoangoa to be mentioned later on) and the Welle (the Wula of the Golo). I suspect Warra and Welle to be the same name and river. [The map at the beginning of this article uses the French spelling—"Uela." Ed.]

GROUP I:—NDOGO, BAI, SERE, BVIRI AND A FIFTH UNKNOWN TRIBE

1. Ndogo and Bai (*alias* Bari).

Although additional material is available, I think the notes already published are enough. The only point worth further illustration is the history of these tribes ; but, in order to make the matter of wider interest, all kindred and neighbouring tribes should be included, so as to get a "bird's eye" view, a historical panorama, of one of the strangest medley of peoples, clustering of old round the Nile-Congo Divide, north of the Mbomu River.

2. Sere (*alias* Basiri, in Zande).

Literature is extremely scarce and information additional to my article in *Sudan Notes and Records*,¹ is negligible. Only one point is worth mentioning: Hutereau affirms that the Sere are called by the Azande "Sibari."² As they are always called *Basiri* by the Azande, I wondered what was the reason for the author's mis-statement ; but enquiry has revealed a satisfactory explanation. After the fall of Kalaga, the legendary king of the Sere,³ the tribe split into four sections that gradually came to be known under separate names according to their geographical position : Sibari, *i.e.*, those of the south ; Du-Gede, *i.e.*, the people of Mt. Gede, in the west ; Du-Mbomu, *i.e.*, the people of the Mbomu R. ; Mburugu, *i.e.*, the northern section (the least known of all). The two first sections are still known by those names to old Golo who used to live close to the Sere.

3. Bviri with the other section of the Belanda, the Bor.

I am glad that my article in *Sudan Notes and Records* roused interest, and that the discussions and consequent researches that ensued resulted in the production of a fairly wide correspondence locally. I studied this correspondence, but, after having weighed the opposition to my previous conclusion in the light of fresh research carried on both among the Bviri and the Bor (at Raffili), I think that my findings have not been seriously disproved. I agree, however, with the remark of Vincent H. Bazia (the educated chief of the Bor), that there is no essential difference between the names *Bviri* and *Bor*, and that they are two variations of the same word in the respective languages of the two tribes ; in fact

¹ Vol. XVI, Part II, 1933.

² Hutereau, *Histoire des Peuplades de l'Uelle et de l'Oubangui*, p. 318.

³ See *The Messenger* (Wau Mission newspaper), July 1933.

the oldest men, when speaking either language, in saying Bviri or Bor, include the whole of the Belanda. In spite of this it cannot be denied that the two names have already acquired a separate value, being widely used to distinguish between the two tribes; the new generations attaching to each word an exclusive value, contrary to the tradition of the old folk.

From chief V. Bazia's premises, we may conclude that these tribes have no real name of their own: a strange but not unique fact in this part of the world. This name that has still greater value is *Belanda*, from the Bongo *Beer-landa* (i.e. the Beer of the mountain), to distinguish them from the Luo (Jur), called by them *Beer-gusi* (i.e. the Beer of the east). From the Bongo name derive — very probably — the names Bor (more correctly *Boor*) and Bviri. From Beer to Boor and Beri, Bveri, Vveri, Vviri and Bviri,¹ the philological transfer is quite natural to those who have some knowledge of their languages.

A FIFTH UNKNOWN TRIBE OF THE NDOGO-GROUP: THE TAGBU.

(a) Preliminary Information.

I could not find mention of them in any of the previously quoted authors: Van den Plas, Calonne-Beaufaict, Hutereau and others. Their name is missing also in Tucker's survey. At first they formed part of the so-called Zande settlement of Deim Zubeir, where very likely they passed for Azande. Thither the Tagbu had fled in 1919-20; and a year later they were ordered to move to Raga, seemingly in order to be treated for sleeping-sickness, for they had come from a highly infected area. Owing to the fact that in the neighbourhood of Raga there live also the Togbo, a well-known section of the Banda, a good few people, misled by the similarity of the two names, mistook the former for the latter. In better informed quarters in the Raga area they are up to now known as Tagba (their name having been only slightly altered). In 1932, owing to the general plan of re-grouping the people according to tribes, the Tagbu were shifted on to Khor Hajar (the boundary of the former Wau and Raga Districts) near the local Golo settlement, apparently because they claimed to be Golo. In 1938 they followed the same to Abushaka, thus finally settling at Ngua, a locality three miles away from Mboro and Bisellia.

When I met the first group of Tagbu, I noticed that they spoke Zande and their drumming for their evening dance was Zande, a strange

¹ The Bviri have no "b" sound.

feature in Golo-land. On questioning them about their tribes, they told me that they were Golo, but a special kind of Golo; in fact a list of words I obtained from them turned out to be Golo. Feeling that there was some misunderstanding in their explanations, I called one of their elders and, by dint of patient trying, I got at last the first clue to the riddle. Subsequent visits to their homes enabled me to complete my study of the tribe.

(b) **The Language.**

Their language — in a few words — stands between Ndogo and Sere, resembling closely the former in vocabulary, but more closely the latter in phonetics. It is noteworthy, and at the same time strange, that the Ndogo readily deny any kinship with the Tagbu, not realizing the close resemblance of the languages; they usually say that they are Golo, and only the more 'learned' correctly admit that they are like the Sere. Their denial of relationship with the Tagbu is doubtless due to their recent move near the Ndogo, who for the most part ignored them, and to their living with the Golo whose language they speak perhaps more frequently than their own, which is not well understood by their present neighbours.

(c) **Historical Outline.**

The home of their ancestors lay on the headwaters of the Wula R. (or even of the Warra R.: see above under *The Golo*). They lived thus in the vicinity of the Golo-Vita (west), of the Golo-Moci (east) and of the Sere (south-east), with all of whom they lived on friendly terms. During the rule of Zubeir, many of them were deported to the neighbourhood of one of his Deims on the Kuru river, thus coming into touch with the Kresh and the Ndogo. After Suleiman's defeat they were allowed to go back to their old home, soon to be conquered by the Vungura chief Tikima Ikipira, who drove the bulk of the tribe near his headquarters on the Mbomu R. There, ill-treatment and disease — the terrible sleeping-sickness — thinned their ranks, until a batch of survivors who still had pluck and strength, travelled back to the country of their fathers, going as far as Deim Zubeir, the nearest inhabited centre. This happened in 1919-20. It seems however that some had preceded them long before; one of their elders told me that two years after his arrival at Deim Zubeir the 'Faranza'¹ reached Wau. To illustrate the time of their former moves, I noted that one of my informants, Gonyo, over 50 years of age, was born on the Ngurunga, a small tributary of the Welle; his father, Kamè, and his grandfather as well, named Ngoronyi, were born near Deim Zubeir.

¹ Probably one of the French expeditions at the time of the "Fashoda incident" 1898.—*Ed.*

(d) The Tribe.

The Tagbu, though having branched off from the original common stock and developed a well defined dialect of their own, never attained, it seems, the status of a solidly established tribal unit. The names of some chiefs are recorded (Guana, Gbazia, Zomo, Kubado) who ranked above the average clan-leaders; but on the whole the Tagbu were so dependent on their more powerful neighbours, the Golo-Vita, that in course of time, as explained above, they easily passed as Golo. This state of affairs ended with the coming of the Arab settlers, followed by the rule of Zubeir, the Egyptians, Karamallah (a brief spell), and lastly the Azande. Later on, after having again crossed the frontier to escape from a land of oppression and illness, faithful to their ancestors' tradition, they joined the western section of the Golo, the Moci, instead of their own kinsmen, the Ndogo.

It is difficult to judge the strength of the tribe in the past; all admit that they were less numerous than their neighbours. Now they do not amount to 100 souls. How many of them remained in the Zande country or were scattered here and there during the fights and moves of the past? No reliable information is available; my informants themselves admit that they are not numerous. In spite of all that, the number of clans extant suggests of a fairly numerous people. Here are their names:¹ — Widi (totem: jackal and dog), Nga (hyena and large black bird), Koda (*colobus guereza*), Kpuru (roan antelope), Zano, Mangi (python), Nde, the clan of some prominent chiefs (a fish), Nyi and Taga. It seems however that some clans originated from foreign groups or individuals, e.g. the Nyi (Golo-Vita clan) and Taga (the ruling clan of the Moci, to whom belonged their foremost chief, Mashidoko, often mentioned by early travellers).

The Tagbu openly profess metempsychosis, believing that the soul of their dead stealthily peers out of the grave to enter into the totem's body.

(e) Customs and Beliefs.

What I wrote in my brief monograph on the Ndogo-group in *Annali Lateranensi*² applied for the most part also to the Tagbu. Though not very fully, yet I went through all the main items of ethnological interest with my old informants, such as family (marriage, birth, death, etc.), sociology (mode of life, essentially agricultural; hunting, fishing,

¹ In naming one's clan, either the word *ya* (meaning: *clan*) or *nda* (—*nda*), the prefix for the plural, is prefixed to the proper noun (both are common also to Ndogo); e.g.: Ya-Nga, nda-Nyi, nda-Koda.

² *Annali Lateranensi*, Vol. II, pp. 175-353, 1938.

etc.), and religious beliefs both abstract and connected with practical aims (rain-making, cultivation, housing, etc.), and realized that, with the exception of some negligible Zande infiltrations, they present a genuine Ndogo complex.

Such are, in brief, the remnants of a tribe that may soon disappear — a strange group of people speaking with the same fluency Tagbu, Golo, Zande, and now, Ndogo as well, besides the indispensable Arabic patois (which the elders considerably improved during their stay at Raga) and — in many cases — some additional languages that individuals have learnt in the course of their long peregrinations.

GROUP II.—The so-called AZANDE of DEIM ZUBEIR

This is a settlement made up mostly of fugitives from the French Congo, with some ex-soldiers. Although few in number, they form an odd medley of peoples, some of whom are of special interest even to the non-professional ethnologist. A short note will be given on all of them, only one tribe dealt with at length.

1. Real Zande. They belong to various clans, one of which deserves mention here, its name being connected with a local race: the *Abandogo*. I cannot conceal the doubt that spontaneously struck me at first, that these people may have been originally a Ndogo clan, who happened in course of time to be absorbed into the great Zande nation. Such a fact should not cause surprise. Calonne-Beaufaict thinks the Zande A-Biri to be likewise a *Zande-ized* section of the Birri tribe (see below). But another plausible reason is given for their name: they are called so from the name of their totem, a small, reddish rat called *ndogo* by the Azande and shortened into *ndo* by the Bandia.¹

2. The Bandia. They form the bulk of the local settlement, counting 51 tax-payers. Much has been written on this tribe, especially by Calonne-Beaufaict and Hutereau. The leader of all the immigrants from across the Nile-Congo Divide was Jabr, a chief of their ruling clan. I am not in a position to make any statement above their original language, which seems to have died out unrecorded. Jabr's nephew, about 45 years of age, says that none of their fathers remembered their mother tongue, and that only their grand-parents were conversant with it.

¹ My conclusions agree with those of Fr. Giorgetti, who kindly carried out inquiries on the subject, at my request, in Zande country.

3. The Birri. Their name should be spelled Biri, or perhaps more correctly, Viri. The question whether they might be possibly identified with the Belanda section called Bviri,¹ has already been answered in the negative. The two names, undoubtedly very similar -- both might be spelled Viri -- differ mainly, not exclusively, in accent and tone, the latter being accented, with high tone, on the last syllable and the former on the first. There are here very few representatives of this tribe, who seem, besides, most backward; yet I hope, if further opportunity is given, to collect interesting material on this race. The only author as far as I know, who mentions them, is Calonne-Beaufaict (pp. 246-248); and he expresses his conviction that they are the descendants of the Proto-Momvu, the supposed ancient aboriginals of the Mbomu Basin. I could not gather any reliable information as to their actual number in their native land, on the Warra R. (they pronounced it Wùra, as do the Golo and other inhabitants of that area.) The only data I found are those contained in *From the Congo to the Niger and the Nile*,² where 4500 Biris are said to be living in Rafai's area.

4. Kare. Jabr, in his flight across that country towards Deim Zubeir, was followed also by some Kare. Here again, the almost unique authority on the subject is Calonne-Beaufaict (pp. 117-120); he says: "La langue est nettement bantou." I doubt whether it will be possible to gather further useful information from the few individuals of this settlement; so far I could not find any who speak their mother tongue. Ibrahim himself, the actual chief of them all after the deposition of their Bandia ruler, although Kare by birth, is ignorant of the language of the tribe.

5. A Bantu Tribe:—The Bòdò.

(a) AN UNKNOWN TRIBE? Not exactly. But unknown to me up to a short time ago; and it was under very strange circumstances that I first heard of it. The same day on which I made my acquaintance with the Tagbu, they, delighted with the interest shown in their language, brought me a member of their community who spoke, said they, quite a different language. Unfortunately the fellow was half-drunk, and I had only a few minutes at my disposal; but it was enough to clear two points: first, that the Bòdò have nothing to do with the B(w)òdhò

¹ S.N. & R., Vol. XVI, (1933), p. 179.

² Vol. I, p. 197, describing the Duke of Mcklenburg's travels; by Capt. Von Wiese and Kaiserwalden.

(a Jur-Luo sub-tribe); second, that they were a Bantu tribe, as I discovered from the close similarity between the list of words obtained from my informant and my previous notes on the Huma taken in 1933.

But where was the man from? Their home was in the territory of Gubere (son of Zemoi Ikipira, recently dead), close to the Sere, whence he eventually joined the Tagbu and Golo-Vita, on the Warra R., with whom he fled later to Deim Zubeir; since when, being looked upon as a member of the group, he had followed them to their present home at Ngua. When asked where his fellow tribesmen were, he said that there are individuals scattered here and there, but the bulk of their people belong to the Zande settlement of Deim Zubeir. Leaving the latter to be checked on the spot at the first opportunity available, I set out to search for the Bodo, but very few could I find; strangely enough, some Bodo families in Wau were not grouped with the Azande, but with the Sere. The fact of their ancestors having lived with the Sere accounts for their claiming a fictitious relationship with them and being looked on as such by many, a state of things eventually sanctioned by the local administration.

In order to find out whether anything was known about the tribe, I consulted the classics. Neither Van den Plas nor Larken mentions them; Hutereau too seems to ignore their existence. Only in Calonne-Beaufaict, whose keen eyes almost nothing escaped, was found some important information. He speaks at length (pp. 120-5) of a Bodo subtribe of the Amadi, accepting a local tradition of the Amadi's origin from Kare country; and, as the latter belong to the Bantu family, suspicion arises as to the possibility of linking these Bodo with our own. But Van den Plas, who was better acquainted with the Amadi, on information gathered in their own home, states that they are Sudanese who came from the east. More recent information, kindly supplied to me by reliable informants living on the spot, confirms Van den Plas' assertion.

Perhaps our Bodo should be identified with those spoken of by Calonne-Beaufaict (pp. 115-6), as the Mabodo — the name, deprived of its Bantu prefix, sounds exactly the same — although they are said to speak 'une langue bantou, influencée de soudanais,' which suggests relationship with our Bodo. Other points seem to indicate the opposite; and the question must still remain *sub judice*.

I think that the most probable reference to this tribe is to be found in Delafosse:¹ 'We have only the vaguest information about the

¹ M. Delafosse, 'Essai sur le peuple et la langue Sara,' quoted by Tucker, *The Eastern Sudanic Languages*, Vol. I, p. 53.

tribes almost entirely situated inside Sudan territory, the Kare or Kara, the Bodo, the Golo.... Of these tribes.... there remain in French territory no more than a few small groups....' Strangely enough, when speaking of these tribes here, we are often tempted to make the same statement, but in the opposite way, thinking that the bulk of these tribes must be found in French territory!

The Bodo are not shown on Van den Plas' and Calonne-Beaufaict's maps, but their name occurs on the map of the Sudan (1914-1934), mentioned above on the Oubangui-Shari (at 6° 30' N., 26° W.), between the upper Warra R. and its right-hand tributary, the Goangoa, just north of the Golo and Sere (Basiri). This agrees with the statements of my informants.

(b) **SOME GENERAL INFORMATION.** This was gathered at Deim Zubeir. There are here 21 Bodo tax-payers, but they all say that their fellow-tribesmen are more numerous in French territory, mostly in Gubere's area, on the Kere, etc., up the Goangoa (pronounced Ngoangoa by all these people), where they live close to the Sere, Tagbu and Golo. That was not, however, the land of their fathers and grand-fathers, who were all born at Mafaya (Ngurunga is also mentioned), a locality near the sources of the Kuru R., within the (former) Bahr el Ghazal Province, close by the above mentioned tribes. That is why, in their flight from across the border, they chose Deim Zubeir as their goal, being the nearest town to the old home of their ancestors; just as did the Tagbu. There they found Jabr, who had just arrived with his mixed people, and were soon joined by the Tagbu.

No tradition exists among the Bodo as to an older original land whence their race came, nor have they the faintest idea of any relationship with the Bukur and Huma, whose language resembles their own so closely. This fact is the more noteworthy, as there are a few Bukur and (perhaps one) Huma in Deim Zubeir settlement, whom they know well, and whose language they understand fairly easily. They likewise disclaim kinship with the Kare, who are spoken of by Calonne-Beaufaict as a Bantu tribe, although a group of Kare live with them (*see above*). Very likely, they happened to be separated from the other Bantu hordes in early migrations, eventually becoming surrounded at Mafaya by tribes of different stocks, with whom however, they made friends.

(c) **CUSTOMS AND BELIEFS.** Very little information can be expected from a tiny community, only a few of whom know anything

of their mother tongue, having been for over 150 years, at least, completely under the influence of neighbouring foreign tribes. With some elder informants I attempted, however, summarily to survey their main customs and beliefs, the result of which can be summed up thus: the Bodo stand at present midway between the Azande and the Ndogo group, partaking almost equally of both. No trace can be discovered of a real tribal organization; even more than the Tagbu, they depended on their stronger neighbours for protection. Yet they showed pride in some petty chiefs of their own, who seem to have attained some importance: Bazigba, Lawa, Gbongo. Their clans still extant are:—Viti (totem: the *ndurulu*), Koanjar (totem: *cu'uda*, a small frog), Nja, Gba, Nama, Boro, Molu.¹

Of particular interest (in connection with tribes already studied) is the Bodo name for God: *Balesi* or *Valesi*, which suggests relationship with the Bviri (*b*) *valesi* and Ndogo *baci*, both meaning 'spirit.'

A phonetical remark to be remembered in connection with Bodo is the interchangeability of *b* and *v*, not only in the name God, but in other names as well; e.g. the very name of the tribe, usually spelled Bodo, is almost invariably pronounced Vodo. Possibly Vodo is the original pronunciation (with bi-labial *v*), altered into Bodo under Zande influence.² The word means originally 'man.' A similar case is to be met in Sere (Basiri), a name that means, as a common noun, 'man'; as was noted also in connection with Barambu, according to Fr. Giorgetti.

(d) THE LANGUAGE. But the really interesting thing about the Bodo is their language, which is likely to die out (at least in the Bahr el Ghazal) in a few years. It is evidently of Bantu origin, and so to be added to the series of dialects recently studied by Fr. Giorgetti in Zandeland, (Bangbinda), Bukur and Huma. To show the close resemblance between them, I give a short comparison between Bodo and the Huma, according to notes taken at Mupoï in 1933.

English	Bodo	Huma	English	Bodo	Huma
Man	móto	móto	Tree	mòsá	mos (a)
Woman	mòkál	keri	Water	lubo	(Johnston: lubo)
Child	momini	miniki	Field	guvo	gùbó
Hand	ngbak (u)	baaku	Sesame	màvi	màbe
Eye	mòsú	musu	Meat	nvité	mbita
Head	mòrá	mòró	Salt	mùko	muko

¹ Names of clans, and of tribes as well, are always preceded by the Bantu prefix: 'ba.'

² The same applies to Biri (see above), which is pronounced Viri. This is confirmed by Fr. Giorgetti in Zandeland.

English	Bodo	Huma	English	Bodo	Huma
One	mótù	mòtù	Bow	iter	tər
Two	ngbáli	u'bári	Bird	nvúlú	mbúrú
Three	sáru	(mo) saru	Fish	vási	'bàs(e)
We	gboso	gbósu	Waterbuck	dùmbú	dàmbú
You (pl.)	gbono	gbon(o)	Buffalo	njàrù	nzari
Beer	mana	mana	Mosquito	(mo) tùvú	túbú

N.B.—*mo* is often a mere prefix (Bantu) for the singular, as 'ba, 'bu, etc., for the plural.

There are however many words that differ considerably in the two languages; in Bodo one notices some foreign loan-words; *e.g.*: crocodile = *mbemgbi* (from Kresh); guinea-fowl = *koro* (from Ndogo), etc.

Some phrases are added, either in both languages or in Bodo only, to give a somewhat fuller idea of the language.

I am bodo = me ni vodo

I am huma = am ma Hum (or: 'Um)

English	Bodo	Huma
I Cultivate (the field):	(me) ne guvo guvo	(am) náni gubo gúbó
We did not cultivate:	'bócò gùvà ká	'bos(o) na gubo kpa
You (pl) did not cultivate:	'bono guva ká	'boni na gubo kpa
Women are cultivating:	'ba-kél né 'bó gùvó	
Men are working on the road:	'bàlu 'ba-ziyá sunge ka fi (é)	
The woman is bringing (coming with) food	mo-kàl ada na tiya	

Bodo

Possessive intimate:—Declension of My Head, etc. Singular:—

1. moram. 2. mora. 3. more.

Possessive intimate:—Declension of My Head, etc.

Singular: 1. moram 2. mora. 3. mora.

Plural:— 1. morasu. 2. moroni. 3. mora'bu

Possessive non-intimate:—'My field,' etc.

Singular:—1. matiyo meme 2. m. mangwe. 3. m. me (a) ke

Plural:— 1. m. mekosu. 2. m. mo (a) konu. 3. m. mo (a) ka'bu.

The possessive particle 'of' is translated *ya*:—The pot of the girl = nvie ya menakel.

This is enough to show the linguist of the general nature of the Bodo language.

GROUP III:—THE RAGA TRIBES

This is only a brief survey, to show the position of these tribes; a fuller account will only be possible after further research.

SECTION A.—RAGA WEST.

As a starting point, I quote again Tucker (pp. 11, 49): "The Yulu (300 tax-payers), Kara and Binga (pronounced Binnga) (270 tax-payers),

Aja (200), and perhaps the Runga (150) and Ngulguli (280) show remarkable vocabularily resemblance to Bongo-Baka, although no grammatical material is as yet forthcoming."

Yulu, *Binga* and *Kara* evidently belong to the Bongo-Baka group (closer resemblance exists between the two first languages). The three tribes are all of foreign origin, having come from across the border, from the west, or from the north (*Binga*).

Aja.—Is Tucker's statement regarding *Aja* correct? On the assumption that the phrase "Bongo-Baka group" is to be taken in the broadest possible sense, including in it also *Kresh*, it may pass. According to the natives themselves, *Aja* stand midway between *Kresh* and *Banda*. Geographically and historically also, at least in recent times, we find them attached to these same tribes. In fact the bulk of the *Aja* used to live around Kafiakingi with the *Kresh-Naka*, and a section, the *A'a*, lived with the *Banda* near the Sopo R., both groups freely intermarrying with their more numerous neighbours. My notes on *Aja*, show, out of about 230 words, 12 in common with, and 5 similar to, *Kresh*, as compared with 11 in common with, and 5 similar to, *Banda*. From a grammatical point of view, *Aja* seems to stand closer to *Kresh*, showing Bongo-like elements; but as I have not yet any knowledge of *Banda*, my assertion may be open to doubt. The bulk of the language of this tiny tribe differs, however, strikingly from all others that I know.

SECTION B.—RAGA (NORTH-EAST).

Here again Tucker may be quoted (p. 20, 95): "The following Western District languages have so far not been placed:—*Feroghe* (850 taxpayers), *Shayu* (probably dialect of *Feroghe*), *Mongaiyat* (100), *Indri* (or *Yan-derika*) (100), *Togoyo* (believed now to be extinct)." Roughly speaking we may assume that all these tribes form one group, deserving further study. The *Mongaiyat* (more correctly *Mangaya* or — even better — *Manga*; although all these are names foreign to their language) have been rightly included in the group, although not living in that area, but 20 miles south-east of Raga. The *Ngulguli*, though geographically belonging to 'Raga-East,' do not belong either racially or linguistically to that group: nor should they be linked with the 'Raga-West,' as Tucker placed them. They are a tribe of foreign origin, and will therefore be dealt with separately.

THE NJALGULGULE — A PRELIMINARY ACCOUNT

In *Eastern Sudanic Languages* A. N. Tucker states (p. 11, No. 49) : "perhaps the Runga and Ngulguli show remarkable vocabulary resemblance to Bongo-Baka" From the first I doubted the truth of this statement. In January 1936 I spent about half an hour at Bora, on the left bank of the Sopo River (just before the Sopo-Boro confluence) with the local natives, the Njalgulgule, as they are called by most people here ; and, though finding it difficult, I tried to pick up a few words of their language, and that was enough to leave me with the impression that it is not related to Bongo.

(a) The Name.

There seems to be a lack of uniformity even amongst the natives themselves in the pronunciation of their tribal name ; this fact may partly account for the variety of spellings under which it appears. The neighbouring tribes, though with slight variations due to the nature of their own languages, call them by the name of their mother-tribe : the Feroche call them *Bègi*, the Mangaya *Bègé*, and the Togoyo *Beko*. Of other tribes, most say Njalgulgule ; some Njangulgule, and official lists have Ngulgule. My inquiries, too, carried out in different places and at different times, brought at first discordant results ; but I now think the following is fairly certain. Nyoolnice is used for the singular, Nyoolge for the plural, and Nyoolne for the language. As far as the meaning of the word itself is concerned, the natives relate it to *nyoolle*, which means 'left-hand' ; because, they say, in the splitting of the original tribal stock as they came from the east, they turned off to the left, thus going south-west, to their present home.

(b) The Tribe.

In the last line but one of the *Report of the Rejaf Language Conference*, 1928, we find Bego (Ngulgule) reckoned amongst the languages of the Western District, Bahr el Ghazal ; while G. K. C. Hebbert speaks of them as an offshoot of Bego.¹ So their kindred tribes should be sought in the north, in Darfur and Kordofan. Of my informants, some claimed descent from the Bego, and one from the Dago, locally called Daju.

For some idea of their history, origin, etc., one should consult the following articles published in *S.N.R.* : H. A. Mac Michael, 'Nubian Elements in Darfur', Vol. I pp. 30 and *Darfur Linguistics* Vol. III,

¹ *Sudan Notes and Records*, VIII, 187.

pp. 197-216; a specially interesting comparative study of Daju of Darfur, Daju of Sula (*alias* Sila) and Baygo;¹ 'Notes on the Dago' by S. Hillelson, Vol. VIII, pp. 59-75, where he states: 'The linguistic material collected from the Dago in Kordofan I hope to publish in another place'; 'Nubian Origins' by S. Hillelson, Vol. XIII, pp. 137-148; 'Note on the Dago Tribe' by E. H. Macintosh, Vol. XIV, pp. 171-8; and *The Languages of the Nuba Mountains* by P. A. and D. N. MacDiarmid, Vol. XIV, pp. 149 ff.

(c) The Language.

Following the clues derived from these articles, I will now endeavour to indicate, by way of comparison, the relationship of Njalgulgule and Bego. For this purpose I have used the linguistic material contained in the above articles, and some notes compiled with the help of an elderly Daju from Dar Sila. The circumstances under which my information was gathered were unfavourable, especially so in the case of the Njalgulgule, and it is therefore probably not entirely correct.

The explanation given of the name Njalgulgule by my Daju informant, that in the splitting of the tribe, the Nyɔgɔle (he pronounced their name thus) went to the *right* ('right-hand' is *nyɔgɔlé* in Daju) contrasts strangely with the parallel story given by the Njalgulgule themselves).

ENGLISH	DAJU-DARFUR ²	DAJU-SULA ²	BAYGO ²	WAU-DAJU	NJALGUL-GULE
(N.B.—In the table below long vowels are shown in Roman type. Ed.)					
<i>one</i>	<i>nuani</i>	<i>ung-un</i>	<i>nuani</i>	<i>ungul</i>	<i>nuan(n)e</i>
<i>two</i>	<i>fadda</i>	<i>biddak</i>	<i>fidda</i>	<i>bedak</i>	<i>pidakh/pedaha</i>
<i>three</i>	<i>koddos</i>	<i>koddos</i>	<i>koddos</i>	(= D-S)	<i>kodos</i>
<i>four</i>	<i>kashfei</i>	<i>tishek</i>	<i>teshwet</i>	(= D-S)	<i>tes(h)fet</i>
<i>five</i>	<i>muddak</i>	<i>muddak</i>	<i>middik</i>	<i>muduk</i>	<i>medik-modok</i>
<i>six</i>	<i>arann</i>	<i>arann</i>	<i>arann</i>	—	(h)aran
<i>seven</i>	<i>fahtindi</i>	<i>faktindik</i>	<i>fatindi</i>	(= D-S)	<i>bakhtindi</i> <i>pakhtindi</i>
<i>eight</i>	<i>kosonda</i>	<i>kohandak</i>	<i>kosonda</i>	<i>kohondak</i>	<i>kosanda</i> <i>kosonde</i>
<i>nine</i>	<i>wishtanda</i>	<i>bistandak</i>	<i>tabishtenda</i>	(= D-S)	<i>tebishtanda</i> (- dande)
<i>ten</i>	<i>assing</i>	<i>assin</i>	<i>assin</i>	(= D-S)	<i>hasin</i>
<i>man</i>	<i>yohé</i>	<i>yogi</i>	—	<i>yoge</i>	<i>pabange</i> ³
<i>woman</i>	<i>wurrei</i>	<i>wurrei</i>	<i>wurrei</i>	<i>wure</i>	<i>hure</i>
<i>boy</i>	<i>chichei</i>	<i>tchatchung</i>	<i>firachei</i>	<i>cace</i>	<i>cace</i> ('child'?)
<i>girl</i>	<i>farshagalei</i>	<i>tchatchung</i> <i>wurrei</i>	<i>shalei</i>	<i>cace-wure</i>	<i>cacure</i>

¹ Baygo is now usually spelled Bego. (Sometimes Beigo. Ed.).

² H. A. MacMichael, S.N. & R., Vol. III, pp. 197-216.

³ *pabange* — man; *yokh* or *yohe* — husband.

ENGLISH	DAJU-DARFUR ¹	DAJU-SULA ¹	BAYGO ¹	WAU-DAJU	NJALGUL-GULE
ancestor	kukku	kukku	—	kuku	
fire	masi	masi	masei	masi	masi
water	ungei	ungei	magi	unne	maghe/ma'e
mountain	mangei	—	—	ngaje (stone)	ngaince
corn	kunjei	kunjei	kunjei	kunje	konje
tree	ettei, pl. ewagei	attei	—	ette, pl. ewega	hete, pl. heweghe
rain	korei	murrei	kornei	morre	korni
cattle	teinyei	teinyi, pl. teindiggi	teinyei	tenye	tenye
horse	murtani	murtei	murtannei	murle	mortan
dog	isi	isi, pl. isingi	isei	ise	hise, pl. (hisige)
milk	mengi	mengi	mengei	menge	minye
meat	iyei	iyei	iyei	iyē	iyē
snake	kokani	kokei	—	koke	kok (h)
hyena	lebdi	ngarei	seletchei	ngane	selekye
foot	erungei	erengei ²	ernei	erne	herne
chief	bogei	bugei	buci		(') bu'e
I (pronoun)	aga	ananga	anga	ananga	(gh)ang
you	igi	ining	i		inggi

What is your name? D-D = *angina mina*? D-W = (gh) *angginga mina*? NJ = *angani mine*?

The horse is yours. D-D = *murta munga*. D-W = *murtana nangga*. Baygo = *murtanei ninga*. NJ = *murtane nangga*.

The horse is mine. D-D = *murta nung*. D-W = *murtana ningga*. Baygo = *murtanei nanga*. NJ = *murtan ngga*.

You stole the cow. D-D = *ik kifil teinyei*. D-W = (gh) *ininggi kibah tenye* (*nangga* = 'my cow'). NJ = *inggi kipi tēnyé*.

I did not steal it. D-D = *ak kifil ba*. D-W = *iningga ali nogore ca*. NJ = *kipil ba*.

The chief died. D-D = *bogei kirsā*. NJ = 'bue kirsing.

The chief (sultan) is alive. D-D = *bogei aiye*. NJ = 'bue andi nyaha.

Where did he die? D-D = *kirsā tia*? NJ = *kirsing andi* = ?

He died at the village. D-D = *kirsā tetugudei*. NJ = *kirsing, ti bowo*.

I married the woman. D-D = *ama eingi gozen*. NJ = *ang kawar ure*.

Where is the road? D-D = *sogi antia*? NJ = *soe andi ti'e*?

There is the road. D-D = *sogama*. NJ = *so'e andi te*.

The man and the woman. D-D = *yohei la wurrei*. NJ = *pabang nga ure*.

How much is this? D-D = *man anni kerem*? NJ = *ngadi kirém*?

How many men? D-D = *yugei kerem*? NJ = *ngga kirém*?

Where are you going? D-D = *igдохотia*? NJ = *nda tie*?

I do not want a rifle. D-D = *aga angeba fudugnei*. NJ = *angga bundulne ba*.

He refused. D-D = *aba kassa*. NJ = *kasakh*.

I am afraid. D-D = *ag anya gatcha*. — NJ = *ang nyia (e) ca*.

I am not afraid. D-D = *ag anya gatchaba*. NJ = *ang nyiace ba*.

¹ See footnote 2 on opposite page.

² I think that these words really mean 'my foot,' which in Njalgulgule is *hernang*.

The following sentences are meant to illustrate further the relationship between *Daju* and *Njalgulgule*. *Daju* is here taken by me from my *Wau Daju* :—

ENGLISH	WAU - DAJU	NJALGULGULE
I am a	<i>anangga</i> ' <i>Bokorinje</i>	(gh) <i>ang Nyɔɔlne</i>
This man is	<i>an yoge na</i> ' <i>B</i>	<i>pabang Nyɔɔlne</i>
This woman is	<i>an wure na</i> ' <i>B</i>	<i>ure ma Nyɔɔlne</i>
The are many	' <i>Bokori</i> (ng) <i>gewoiyi</i>	<i>Nyɔɔlne meti</i>
. Country is far	<i>Dar</i> (Ar.) ' <i>Bokori</i> (ng) ¹	' <i>bo Nyɔɔlne tirang</i>
	<i>tiranga</i>	
Call that man	' <i>bang ma yoga-na</i>	<i>bang yohe ma</i>
Let Him come	<i>u-wun</i>	
The man came	<i>yoga-na ku-wun</i>	<i>pabange awindin</i>
Call those women	' <i>bang wurge-na</i>	<i>bang uruwe</i>
Let them come	<i>u-wuna</i>	
The women came	<i>wurge-na ku-wuna</i>	<i>uruwe awindin</i>
This pot is the woman's	<i>kololè-na an wure-na</i>	<i>pa' ure ma</i>
Give the pot to the woman	<i>ashtice kolole-na ku wure</i>	<i>pa'e ma tei ure ma</i>
This hoe is the man's	<i>an turie-na ni yogè-na</i>	<i>herdilei pabange ma</i>
Give the hoe to the man	<i>ashtuma turie-na ku yoge-na</i>	<i>tei k. pabange</i>
This tree is big	<i>an ette-na mitaga</i>	<i>hete ma kilang</i>
That is small	<i>adde njikega</i>	<i>hete ma shoe</i>
Cut the big tree	<i>ette mitang-na diwa</i>	<i>time hete ma kilang</i>
Cut the small tree	<i>enjeke na wangga</i>	<i>time hete ma shoe</i>
The trees are big	<i>eweige-na mittagi</i>	(h) <i>ete ge kilang</i>
Cut the big trees	<i>enjeke ka wangga</i>	<i>time (h) ete-ge kilang</i>
The house of the chief is new	<i>agice lu 'buge weera</i>	<i>shade 'bue taja</i>
He built a new house	<i>ma kanany agice wiro</i>	<i>ho oloi shade taja</i>
This man is strong	<i>a yuga-na deldel</i>	<i>yokh cagai</i>
This man is not strong	<i>a yuga-na wala</i> (Ar.) <i>deldel</i>	<i>yokh cagai bu</i>
POSSESSIVE INTIMATE	WAU-DAJU	NJALGULGULE
My Husband	<i>yoga</i>	<i>yokha</i>
Your husband	<i>yoging</i>	<i>yokhonggi</i>
Her husband	<i>yogice</i>	<i>yokhoce</i>
My wife (woman)	<i>wure nanngga</i> ²	<i>urang</i>
Your wife	" <i>ningga</i>	<i>uringgi</i>
His wife	" <i>numa</i>	<i>urene</i>
Our wife	" <i>nushka</i>	<i>urushko</i>
Your wife	" <i>niwe</i>	<i>urunggo</i>
Their wife	" <i>niha</i>	?

¹ Both in *Daju* and *Njalgulgule* the end vowels often change, e.g. from *a* into *e*, and vice-versa.

² *Daju* uses here the possessive non-intimate.

DAJU (WAU) :—' My father,' etc. = *meshka, menge, meha*; pl. = *mengunushka, menginiwe, menginiha*. ' My head,' etc. = *ise-nganga*, etc. ' The head of a donkey ' = *ise ni kace*. (N.B.—In the table below long vowels are shown in Roman type. Ed.)

ENGLISH	DAJU ¹	SHAT ¹	LIGURI ¹	WAU-DAJU	NJANGULGULE
Nose	<i>munang</i>	<i>munigi</i>	<i>muni, munung</i>	<i>mone(nangga)</i>	<i>manungga</i>
Hair	<i>abaxti</i>	<i>abaxtigi</i>	<i>abax</i>	<i>abake</i>	<i>abake</i>
Tongue	<i>kuldang</i>	<i>nyibirigi</i>	<i>libixang</i>	<i>nyirbe</i>	<i>nyibirte</i>
Chest	<i>cimarang</i>	<i>auwagi</i>	<i>tosakang</i>		<i>cimrang</i>
Blood	<i>tamci</i>	<i>tamij</i>	<i>temak</i>	<i>tamuke</i>	<i>tamke</i>
Sun	<i>ronge</i>	<i>uxong</i>	<i>uxong</i>	<i>ronge</i>	<i>ronge</i>
Rat	<i>nyingze</i>	<i>nyingis</i>	<i>nyingis</i>	<i>nyigize</i>	<i>ningize</i>
Sand	<i>chakchakgidee²</i>				<i>kcakcaide</i>
Spear	<i>malushte²</i>				<i>maleshte</i>
Goat	<i>ashke²</i> (D.W. = <i>ashke</i>)				<i>aidze</i> (pl.) (<i>h</i>) <i>ashke</i>

A Few Additional Notes on WAU-DAJU and NJANGULGULE pronouns

DAJU : Sing. I am (here) = *anang a' baldas*. Plur. 1. *koshka a' balde*.
 " (2nd person) = *ining 'baldas*. " 2. *iwe 'balihe*.
 " (3rd ") = *ma 'baldas*. " 3. *ha a' balde* (also : *sah*)
 (Feminine = *ce* . . .)

NJANGULGULE : Sing. 1. *ang (g) andi* Plur. 1. *wishko ati*
 (same phrase " 2. *ing (g) andi* " 2. *onggo ati*
 as above) " 3. *o(g) andi* " 3. *ana (a)ti*

POSSESSIVE PRONOUNS :—Mine, Yours, etc.

DAJU :—See above :—' My wife,' etc. 1. *nangga*. 2. *ningga* (*ninggang* ?). 3. *numa*
 (Feminine : *nice*). Plural : 1. *nushka*. 2. *niwe*. 3. *niha*.

NJANGULGULE : Sing. 1. *nangga*. 2. *ningga(ng)*. 3. *nangga* (?)
 Plur. 1. *nishkoa*. 2. *ninggo* (*ninggu* ?). 3. *nanggo* (?)

The construction of the Possessive Case

' Of ' is translated *ni* ; *ni* seems common to both languages, but Njangulgule seems to dispense with it fairly often :—' This hoe is of that Man ' :—D.W. = *an turie-na ni yogè-na*. N.J. = *kerdilei pagange ma*. This Pot is the Woman's : D-W. = *kololè-na (gh)an wure-na*. N.J. = *pa' ure ma*. Donkey's Head : D-W. = *ise ni-kace*. The eye of the bull is big : D-W. = *(gh)ononje ni-tenye mitaga*. The Field of the Chief is far : D-W. = *tabe ni 'buge tiranga*.

¹ Sudan Notes and Records, Vol. XIV. ' The Languages of the Nuba Mountains,' by P. A. and D. N. MacDiarmid.

² Sudan Notes and Records, Vol. XIV. ' Note on the Dago Tribes,' by E. H. Macintosh.

The possessive non-intimate is formed by joining *ni* to the pronominal suffixes:—*ni* + *aning* = *nanng*, etc.

The possessive intimate is formed by joining the pronominal suffixes to the nouns they refer to (as customary with Sudanic languages) Njalgulgule abounds in the use of the possessive intimate, whereas Daju-Wau seems to make use of it sparingly. (See above the declension of 'My wife' in Daju-Wau, which is given in possessive non-intimate, whereas it is given in Njalgulgule a possessive intimate). Even the noun 'Name' is declined with the possessive non-intimate in Daju-Wau: 1. *anngga nanngga* 2. *anngga ninngga*, etc.; whereas in Njalgulgule even such a name as 'field' is constructed with the possessive intimate. 'Field' = *shalckya*. Possessive:— 1. *shalekyang* or *shalakang*. 2. *shalekingga*. 3. ?. Plur. 1. *shalicshko*. 2. ?. 3. ?. 'Horse' *murtane*. 'My Horse' = *murtangga*. 'His Horse' = *murtangga*. 'Home' = *tebane*. 'Our Home' = *tebanishko*. 'Your Home' (pl.) = *tebaninggua*. 'Their Home' = *tebanana*.

In both Daju-Wau and Njalgulgule the third person feminine has a distinct form for the personal pronoun, and, consequently, for the possessive suffix = *ce*. In Njalgulgule (? also in Daju-Wau) there is another special form for the 3rd person singular, the suffix *ne*. I think it is the form common to other languages, *e.g.* in Bongo (where *ne*— exactly the same—is to be found) used for the reported speech, and, sometimes used also in common speech to mean 'one's own' to distinguish it from 'his' (somebody else's):—Njalgulgule:—*shade-ne shoi* = 'his (own) house is small.'

Syntax. The sentence seems to be constructed directly as a rule, viz. subject + verb + object (if any):—Njalgulgule:—'I came,' 'you . . . ' = *(gh)ang awin, inggi awin, awindin*. Pl. *wishko, awindin, inggo awindin, ho awindin*. (Further study is needed to explain the change from *awin* to *awindin*). 'They ate the porridge' = *ho siya sire*. 'He drank water' = *(a)wiré mayè*. 'He drank beer' = *(a)wiri burke*. 'I want to see the man' = *angga konor pabange*.

The negative particle (postposition) is placed at the end of the sentence:—*awindin ba* = 'they did not come.' *(gh)ang nyiace ba* = 'I am not afraid.' The same holds good, in part, for Daju-Wau. Some sentences have already been given. With intransitive verbs, the subject precedes:—'He came yesterday' = *ma kaci kur*. 'The women go tomorrow' = *uwurge-na muge nabala*. 'They came and went' = *sah kuwuma, ka balaha*.

With transitive verbs the sentence runs thus (at least in some cases): subject + object + verb: *e.g.*:—‘I ate porridge’ = *anang(ga) sera kasi*. ‘You ate porridge’ = *iningga sera kasi*, etc. For Negation my informant was using the Arabic particle *wala* in front of its verb: ‘he ate’ = *ma kisi*; ‘he did not eat’ = *ma wala kisi*.

Notice the construction of the Imperative:—‘run’ = *decci*, pl. *deccice*. Negative:—*ali wiye*, pl. *ali wicang*. ‘Speak’ = *ngada*, pl. *nga(da)ce*. Negative:—*ali ngade*, pl. *ali ngadace*.

Phonetics. I simply record here my hurried impressions.

Sounds common in Arabic, such as *sh*, *kh*, are frequently met with. But the tribesmen do not seem to be consistent in their pronunciation, which differs in quantity more than quality, or — let us say — in grade of sounds. Thus some pronounce “*tesfet*” ‘four’ with just a very strong *s*; others pronounce it “*teshfet*.” Some pronounce *pidaha* ‘two’ with just a strong *h*, whereas others pronounce it *pidakh*. In some cases pronunciation may vary according to the position of the syllable in question; *e.g.* ‘Husband’ alone is pronounced *yokh*, whereas when in composition with, *e.g.*, a possessive suffix, becomes *yohe*.

The sound *gh* in its weak form is like the Arabic ‘*ein*’, and in its strong form like the Arabic *ghein*: both sounds are common in Nilotic languages, but are either missing or rarely found in Sudanic languages.

Such sounds as *ny*, *ng*, ‘*b*’, *d* (retroflex *d*) are common in Njalgulgule (and the same applies more or less to Daju).¹

Vocabulary. Neither the words given above nor those in my manuscripts seem to show any resemblance to Bongo-Baka. The only possible word is ‘Dog’ = *hise*.

RUNGA.

I was unable to find individuals speaking good Runga, the Raga settlement having left the country long ago. The only man who gave me any information on the tribe and language had forgotten much. In the scanty vocabulary at my disposal I fail to trace any likeness between Runga and Bongo-Baka. I find one word similar to (not the same as) Yulu, one similar to Aja, one similar to Ndogo, etc. My informant said he knew all these tribes (Yulu, Binga, Kara), because their fathers used to raid them to sell them as slaves, and added that

¹ Owing to lack of type faces capable of making clear distinction between phonetic variations, we have been forced to omit a few lines relating to the sounds near to “*ng*.” — Ed.

the only tribe showing affinity of race and language with them are the *Burgu*;¹ a statement which I leave to others to check.²

THE TOGOYO.

I will close this preliminary survey of the Raga tribes with a short account of this almost unknown people. They are mentioned by Tucker as 'believed now to be extinct.' But I succeeded in discovering the existence of the last representatives of this almost dead tribe. The following information, however, was gathered partly also from outsiders.

There exists a tradition as to their ancestor's origin, Cokwol, who is said to have fallen from heaven on Mt. Lefi, the Liffi often mentioned by early travellers (Gessi, etc.). There they dwelt during their golden age, and there they were still dwelling during the last century when the whole region was desolated by war, slavery, famine and plague. The Togoyo's ranks, not very numerous, became thinner and thinner till, owing to a prevalent skin disease, they were reduced to a mere handful of men, waiting day by day for their final doom. It would be a pity if their lore and language died out unrecorded, as they might throw some light on historical and linguistic problems concerning the whole group of Raga-East, a still virgin field for research.

The clans still existing are: the Mbaga (formerly their ruling clan, the descendants of Cokwol), the Felee, the Buru, the Lutu, the Tàna. Most of the male tribesmen still living (I could ascertain the existence of only 12) belong to the Mbaga, one to the Buru; they have all except one, married outside the tribe. There are, of course, a small number of women married here and there: one to a Woro, at Kuru R., two or three to Manga men, one to a Feroqhe, etc. I heard of only two daughters in Togoyo families.

They are a people of the past, ideally centred round Mt. Lefi, which in their loving memory they like to depict as surrounded by a halo of glory from heaven, whence their ancestors came. There their fathers used to perform the solemn rain-making ceremony of the tribe by sacrificing a goat on the sacred stone; there their elders still linger on occasions to dream of a glorious past and to weep over a sorrowful present, full of the forebodings of death.

¹ Maba of Wadai, Ed.

² More recently, I was lucky enough to find, for a short time, a Runga informant well acquainted with his language. The result, a list of some 200 words, shows three common with Kara, besides one only similar; one similar to Bongo; two similar to Aja; one in common with, and two similar to, Ndogo; two almost the same as in Jut-Luo (Nilotic). As far as grammar is concerned, the material is too scanty to base any competent judgement on the same; there seem, however, to exist some vague resemblances to the Bongo-group in the conjugation of verbs.

It may be of interest to know that their tribal name, in their own language, is *Aihî*.

INTELLIGENCE TESTING IN THE SUDAN.¹

By G. C. Scott.

(Read to the Philosophical Society of the Sudan, 24th Feb. 1948).

WHEN somebody asks me what I do, I say "I am trying to find out how to measure Sudanese children's intelligence." Then he often says "Ah, but what is intelligence?", and I reply "Nobody knows;" and he goes away shaking his head, or sometimes even tapping it. I hope to persuade you that such an attitude is a little unfair.

It was possible to measure electricity before physicists had any very clear idea of its nature; and the same may be true of intelligence. Still, one needs a rough idea of the sort of thing it is; and that I can give, if pressed. It is, one might say, the ability to form clear concepts, to grasp the relations between them, and to manipulate them with dexterity — if one can be said to manipulate concepts. But that description is about as true and as useful as the description of electricity as "the stuff which makes sparks and gives shocks"; and it is on nothing such that intelligence testing is based. After all, science does not start with definitions of phenomena, but with their observation and measurement; and therefore an approach to what the psychologist means by "intelligence" can best be made through getting an idea of how he observes and measures it.

Certain types of questions and puzzles are put to people. They are of considerable variety, and are both verbal and non-verbal, though they all have a general family resemblance. A few of the many types (to take some verbal examples) are: classifications, like — "pick from these five words the one whose meaning is different from that of the others — love, hate, envy, wisdom, pity." Or analogies, like — "Always is to Sometimes as Whole is to — complete it." Or progressions, like "Rearrange in their proper order — sentence, page, book, word, paragraph." Or instructions, like "Draw a circle partly overlapping a square, and draw a triangle wholly inside the square and partly inside the circle."

Large numbers of such puzzles have been put to many thousands of people, and the results statistically analysed. The most interesting fact which emerged was that the ability to respond correctly increases, certainly from the age of two, and presumably from birth, until the

¹ The following footnotes are extracted from a private letter from Dr. P. E. Vernon, to whom this paper was sent for comment, and to whom I am deeply indebted for previous instruction and advice. G.C.S.

age of between fifteen and sixteen years, when it ceases to increase. There is as yet insufficient evidence¹ as to whether the ability thereafter remains constant until senility or death, or whether it decreases again in middle age. (Most young men I know certainly believe that intelligence declines after 40, but this is perhaps too subjective a judgement). Secondly, it has been found that the ability to solve these puzzles correlates with children's scholastic success. Norms are made of the average intelligence-test score of all persons of each age; and when an individual achieves a score which is the norm, for example, of persons of 13 years of age, he is said to be of the mental age of 13, whatever his chronological age. His mental age is then divided by his chronological age, and the resulting ratio (multiplied by 100 to eliminate fractions) is known as his intelligence quotient. A person of average intelligence thus has an intelligence quotient of 100. The third fundamental fact which has emerged is that though the mental age increases, as has been said, from birth to fifteen or sixteen, the intelligence quotient, or ratio between mental age and chronological age, remains constant. This is the main support for the hypothesis at present accepted that intelligence, as that term is used by the psychologist, is inherited and not acquired. As for the question with which we started, how that term is understood by the psychologist—I hope that the answer has by now emerged. He means by it merely those phenomena which can be detected and measured by a particular kind of instrument which, for want of a clearer name, is known as an intelligence test. Or, to put it in better English, intelligence is what intelligence tests test. If the phenomena thus observed behaved inconsistently with themselves or with other scientifically observed phenomena, there would be a presumption that they had little basis in reality, but were the outcome of faults in the detecting and measuring instruments, like Schiaparelli's canals in Mars. It is very hard indeed—as I know from experience—to eliminate faults in intelligence tests; but in Europe and America the problem has now been studied by many workers for more than forty years, and tests have there been evolved which report phenomena as consistent as those on which other sciences depend. It would be unreasonable, therefore, to deny them validity as bases for scientific hypothesis.

Unfortunately, however, intelligence tests which are valid in one

¹ We really do know quite a lot about age changes now—the tendency is for verbal abilities to keep up till well over 40, but for more abstract ones to start declining quite early. But much depends on the amount of education and intellectual stimulus after 15; hence no simple generalisation would be adequate. P.E.V.

country are not valid in another. The requirement is to measure mental power; but mental power can only be expressed in terms of one's environment, and environment differs from country to country. It is not merely the difference of language — and the correlation between intelligence and verbal fluency is high — but of the content and extent of experience, and of the opportunities afforded by the environment for the realisation and expression of potential mental power. When, therefore, I was given the job of starting the measurement of intelligence in the Sudan, I had no ready-made measuring instrument, though, as I shall describe, I thought at first that I had. I am no expert now, and when I started I was even less of one. In fact, the only reason I was given the job was that the late Principal of the Gordon College and the Director of Education knew just as much about the subject as I did. But I hope nevertheless that a summary of some of my experiments may do more to clarify the nature of intelligence testing — though certainly not of intelligence itself — than further undocumented generalisation could do.

I wanted to start with an orally-given test, not only to avoid the long delays of printing, but because speech seemed a safer medium than writing for children many of whom live in an illiterate environment, some of whom, when tested, would have been learning to read for no more than two years, and all of whom were being taught to read and write a language differing considerably from their native tongue. I found a version made in colloquial Egyptian Arabic by Ismail Bey El Gabbani of an English oral test made a good while ago by P. B. Ballard, one of the pioneers, and an established authority. I thought that this test would, with adaptation, be valid in the Sudan. I prepared a Sudanese version of it, altering the dialect from Egyptian to Sudanese, and adapting 20 of its 54 items to suit, as I thought, the Sudanese environment. I learnt the test off by heart, and then — in my ignorant and light-hearted optimism — proceeded, as I imagined, to standardise it, by administering it to nearly 900 children, from 3rd year elementary to 4th year intermediate. My object, of course, was to work out age-norms from which the mental ages and intelligence quotients of the children could be calculated. But when I sat down to work the norms out, I had an unpleasant surprise. In the intermediate schools, it is true, there was a noticeable correlation between chronological age and score. But the difference in mean score per year of chronological age averaged only $1\frac{1}{2}$ points; and no teacher needs telling that a difference of 2 or 3% in any examination is almost wholly without significance. And in the elementary schools it was even worse.

There, no correlation at all could be observed between age and score.

With some reluctance I then considered it rather more probable that there was something wrong with my test than that Sudanese children's intelligence, unlike that of European and American children, did not increase with age. So I did what I should have done earlier, and made a detailed statistical examination of the responses to individual items. I found that 30 of the 64 items were quite valueless either because everybody got them right or because everybody got them wrong, or because of a complete absence of correlation between correct response and age, or ability at lessons. Fourteen more were of very little value for similar reasons. This left only 20 of the 64 items of possible validity, so that the lack of correlation between age and score in the test as a whole was amply accounted for. I should add that this result reflects criticism on me only, and not at all on Ballard or Ismail El Gabbani. I had altered their test, and I had used it on children whose environment was different from that of those for whom it was designed.

But I had learnt a little, and in making my next test I was more careful about both content and presentation. First, as to content, I prepared 327 items, tried them on 100 children in 3rd and 4th year elementary, and rejected all those items which showed less than 20% or more than 80% correct responses in the 4th year class, or which failed to show a percentage of correct responses in 4th year significantly greater than that in 3rd year—where the children were, of course, on the average a year younger. This at once reduced my 327 hopeful items to 162. These 162 items I tried out on 224 other children in 3rd and 4th year elementary. This time, in addition to the two criteria mentioned above I applied also a consistency criterion, that is to say, I rejected an item whenever there was only weak correlation between the tendency to respond correctly to it and the tendency to score a high total for all the items. This further reduced my items to 77, which I then tried out on 160 children in an intermediate school. I found, as was to be expected, that there were not enough difficult items for these older and cleverer children. I therefore made up and tried out on 160 intermediate school children 65 other items, and picking by the same means the best 20 of them, I was finally able to put together a test of 88 items—the survivors of 392.

I had paid considerable attention to the weighting of the test, that is to say to the proportions of the various types of items. I tried out altogether 22 different types, out of which as the result of the experiments I picked 11 types for the final test, and tried to include them in proportions similar to those of proved English tests.

So much for the content of the test. As for its presentation, I made, as the result of experiment, considerable changes in the manner of it. First, I had found that children frequently made an incorrect response to an item not because they were incapable of solving it but because it had not been made clear to them what it was they were required to do. I therefore adopted the well-proved method of placing all items of one type together in a battery, and preceded each battery not only with clearer explanation but with more unscored practice items. Secondly, I found that many children went wrong not through lack of intelligence but because their attention wandered. They were looking out of the window, or thinking about dinner, or were fascinated by my white, hairy knees. So I made efforts to make the test more like an interesting game, and took to wearing trousers instead of shorts. Thirdly, I found that the children's responses were liable to be affected by irrelevant emotional factors, chiefly fear either of me or of doing badly in the test, or just being generally flabbergasted at the newness of the experience. So I preceded every test with a "warming-up" period to familiarise and reassure them, and took great trouble with my "patter." I gradually became better at this business of getting children in the right mood for the test, and keeping them in it: and in the end enjoyed sometimes their accosting me in the street with "Hey, effendi, do come and test us again!" Finally, the Gabbani-Ballard test had supplemented and illustrated the oral questions, and assisted the children in the writing of the answers, by words and numbers written on the blackboard. For these I substituted previously prepared placards, which not only saved time but increased the uniformity of presentation. This and the battery system of arrangement saved between them so much time, that I was able to present within the same period 88 test-items instead of the 64 of the Gabbani-Ballard test, in spite of the much increased amount of explanatory matter and practice items. And, of course, the more items there are in a test the more reliable it is likely to be, since there is a greater chance of a child's good luck and bad luck cancelling each other out.

When all the preparatory experiments had been completed, and the test put together, I made a preliminary standardisation of it by trying it on 620 children. I chose this sample as carefully as I could, but I could not of course approach the accuracy of sampling which is attained in Europe and America. There, the aim is to base the standardisation on a fair sample of the total population of the country, and this is often achieved with great accuracy. But here, to start with, only a small percentage of children are available, because only a small percentage

go to school. And of these again only about half can be used for experiment, because the ages of the other half are unknown. Also, there are no statistics here such as are available in Europe and America concerning the proportions of rich and poor, professional, commercial, artisan and labourer, townsman and countryman. It was impossible to get a fair sample of the total population, and all I tried for was to base my norms on a fair sample of the elementary school population—which may, of course, be something very different. I had to chance the possibility that children who had birth certificates might tend to be more intelligent than children who had not ;· but I could and did make allowances for the varying degree of competition for entrance to different schools.

The statistical results of this second test were better, though they were far from those which theory required a really good test to show. The unadjusted difference in mean score per year of chronological age averaged 4 points (compared with the previous $1\frac{1}{2}$) in the intermediate schools, and 2.7 (compared with nothing at all) in the elementary schools. It should, by the way, have been the other way round—that is to say, with the larger difference in the elementary schools ; because it is well-established that intelligence increases with decreasing velocity. Still, it was something to have any kind of a correlation between intelligence and age, so that I was able to work out provisional age-norms and intelligence quotients.

As might be expected from the above, the distribution of the scores was unsatisfactory. It is established that intelligence amongst children (like weight, success in school subjects, size of shoes, musical ability and other things) is distributed in accordance with a "normal" curve. But the score-curve for my elementary school children, though not a long way from the normal, was positively skewed. That is to say, the more intelligent children tended to score further above the mean than the less intelligent ones tended to score below it. Conversely, in the intermediate schools the curve was negatively skewed. That is to say, the lower scores were further from the mean than the higher ones. I had progressed far enough in the subject by this time to realise that these skews in the curves did not call attention to some strange peculiarity of the distribution of intelligence in Sudan schools, but were simply due to faulty measuring. There was in fact an insufficient number of comparatively easy items for the younger and less intelligent children in the elementary schools, so that while the older and more intelligent children in those schools had scope to show their intelligence, there was a tendency to bunch together those of average intelligence and those below average. Conversely in the intermediate schools there was insufficient number of compara-

tively difficult items, so that those of high intelligence had insufficient scope to show it.

So much for the distribution of the scores. The curves for the distribution of the intelligence quotients fitted better with theory, and showed, as required, a nearly normal curve for the elementary school children — who are a comparatively unselected sample, — and a positively skewed curve for the intermediate school children — from among whom the stupider children have been weeded out, while the more intelligent ones are still there. All the same, these theoretically correct curves for the intelligence quotient distribution were more than a little suspect when considered in the light of the theoretically incorrect curves for the score distribution. They were due, I'm afraid, in part at least to exaggerated adjustments which I had made in the age-norms to allow for sampling errors.

Other statistical facts alleged by the test were fairly satisfactory. For instance, if one took the mean intelligence quotient for all children in the same standard throughout the various schools, it was 100 in each standard in the elementary schools, and 114 in the intermediate schools. There was no difference between the mean intelligence quotients of boys and girls; and schools with a higher degree of competition for entry showed a higher mean intelligence quotient.

And now, before worse follows, let me pause and apologise. I am a bungling amateur at statistical mathematics, and I know that some of my audience are experts at it. Others, on the other hand, have never had occasion to study it at all. I therefore tend to fall heavily between two stools. I must be annoying the experts both by labouring the obvious and by withholding the essential, apart from the actual mistakes they are probably detecting. While as for the non-mathematicians — if I am too much of the schoolmaster they will be saying "We didn't come here for a lesson in mathematics." And if I am too little of him, they will be muttering "Why can't the fool talk English?" And so with a frantic apology all round, I plunge in to flounder about in the deep waters of the correlation coefficient.

There is a mathematical formula by the use of which the degree of correlation between two frequency distributions — for example, the scores of the same batch of children in two examinations — can be expressed as a figure. If the positive correlation is complete — that is to say, if the results of the two examinations are identical — then the figure for the correlation coefficient works out at at plus one. If there is no correlation at all, the correlation coefficient works out at 0. And if the negative correlation is complete — that is to

say, if the order in one exam is the exact reversal of the other — then the figure is minus one. This technique can be used to measure the reliability of a test, that is to say, the consistency of its results. Six months after ninety of my children had taken the test, I gave it to them again, and worked out the correlation coefficient between the two sets of results. When the figure came out, I gave myself a hearty pat on the back, for it was plus 0.98 — far higher than that for any ordinary school examination, and as high as, or slightly higher than, that for the best English and American intelligence tests.

But my self-satisfaction was short-lived. One of the troubles about the correlation coefficient is that it is very much affected by the homogeneity or heterogeneity of the sample. Obviously, if the sample consisted only of children whose true intelligence quotients were all crowded between 98 and 102, a fortuitous reduction of only 4 points could send a child from the top to the bottom. Thus the reliability coefficient of even the best intelligence test would work out very low. Conversely, if the sample consisted of children whose true intelligence quotients varied between 60 and 140 at intervals of 5 points, a fortuitous alteration of 4 points would make no difference at all to a child's rank-order, and the reliability coefficient of even a bad test would work out high. It is usual, therefore, to work out reliability coefficients for each age-group separately, and this I had done. But I had forgotten that by including in one sample both the comparatively unselected children of the elementary schools and the highly selected children of the intermediate schools I had unfairly increased the heterogeneity. Somewhat deflated, I sat down to correct for this, and found that for children below 13 the true reliability coefficient was plus 0.93, and for those above 13 only plus 0.87. This may still sound quite respectable; but a coefficient of plus 0.87 means (if I have used my probability tables correctly) that only half the children tested will come out within 4 points of their true intelligence quotient, while 15% of them will be out by at least 6 points, 2% of them by at least 12, and one in 700 will be out by at least 18 points.

You are perhaps thinking: "Well, we've heard a lot about this test's frequency distribution and its consistency with itself, but what about its validity? What evidence is there that it really did test intelligence — even intelligence in the strange sense understood by the psychologist? Here one is up against the usual difficulty — *quis custodiet ipsos custodes*? You can only check a foot-rule by comparing it with another foot-rule. Similarly, you can only check an intelligence test by comparing it with another intelligence test, or perhaps with some

other means of measurement — a teacher's estimate of intelligence, which is subjective, or a school examination, which admittedly measures many other things besides intelligence. In Europe and America it is usual to gauge the validity of new tests by correlating their results with those of the national version of the Binet-Simon test, which has been so much studied, revised and cross-checked for so many years that it is now generally recognised as a standard of validity. But there was no Binet-Simon test for the Sudan; my test was the only one. So I tried correlating the results of my test with teachers' estimates of intelligence. I got a bewildering variety of correlation co-efficients, varying from plus 0.2 to plus 0.9. The average correlation was plus 0.6; but I had no means of knowing whether this average correlation was that between my test and the truest teacher's estimate, or merely that between my test and the most frequent teacher's estimate, which might well not be the truest. In fact, I could work out (errors and omissions excepted) that there were odds of only two to one against the correlation between my test and the truest teacher's estimate being either more than plus 0.85 or less than plus 0.35. All that I had proved was that either my test, or the teachers' estimates, or both, were unreliable.¹ Well, I knew that the reliability coefficient of my test was about plus 0.9, so it looked as if most of the fault lay with the teachers; and I partly confirmed this by getting other individual teachers, without consultation between themselves, to estimate the intelligence of children whom all of them taught. On comparing the results, I found that the correlation coefficient between the various teachers' estimates averaged only plus 0.6. And, of course, even if I had found that the test agreed closely with the teachers, that would not have proved that it tested intelligence, but only that it agreed with the teachers, who might be wrong.

I also correlated children's test scores with their scores in school examinations, and found that the average correlation coefficient was only plus 0.54, although here again there was considerable variation. In assessing this figure it must be remembered, first, that ordinary school examinations have often been proved to have reliability coefficients far below those of intelligence tests — rarely exceeding plus 0.7 and sometimes as low as plus 0.5. (This is not due to anything in the nature of the subject matters of the examinations and the intelligence tests respectively, but to the far greater time and trouble spent over the preparation of the intelligence tests, and to the fact that owing to

¹ I daresay you realise that you are using "reliability" a bit loosely. Both the test and the judgements might have very high statistical reliability, and yet inter-correlate to 0.5, because they don't mean the same thing by 'intelligence' P. E. V.

the way in which their questions are framed their correction calls for no judgement whatever by the corrector, who is merely a routine scorer who cannot err, except through carelessness). Secondly, success in school examinations depends on many variables other than intelligence — school attendance, good teaching, industry, care, liking for the subject, desire to excel — all of which are cut out out by a good intelligence test.

Summing up, then: it was not possible to prove the validity of my test by comparing it either with another test, with teachers' estimates of intelligence, or with examination results. But neither, I think, was its validity disproved by these comparisons. There remained a presumption that it had some degree of validity, for two reasons. First, it was closely modelled on British tests whose validity was proved, and it was therefore likely to be able to measure to some extent what they measured. Secondly, phenomena, as measured by it were in fact found to behave not very dissimilarly to phenomena as measured by valid tests — which made it quite likely that I was measuring the same sort of thing.

This test, however, was not nearly good enough to present on a plate to the Director of Education. When I made it, the practical requirements were that it should be effective with 4th year elementary school children, because from among them intermediate school pupils are selected, and with 2nd year intermediate school children, because from among them, under the projected Brown Plan, secondary school pupils were to be selected. But the children of 2nd year intermediate average 13 or 14 years of age, and I have mentioned that the reliability of the test for children of this age was only plus 0.87. Moreover, it had now appeared probable that the Brown Plan was not, after all, to be introduced. Selection for the secondary schools, therefore, would be from 4th year intermediate, where pupils were 15 or 16 years of age; and the reliability of the test for selected children as old as this was only plus 0.8 or less, owing to the large number of items which everybody got right. Figures showed that it would not be possible to devise a test which could be valid for both 4th year elementary and 4th year intermediate; because if it was suitable for the former it would be too easy for the latter, and if suitable for the latter, too difficult for the former. This was due not only to the four years difference of age, but to the fact that the intermediate school children were highly selected.

It was clearly necessary, therefore, to have two types of test — one for elementary and one for intermediate schools. This plan would have many advantages. First, not having to cater for such a large range of age, I could by reducing the range in the difficulty of

items increase the difference in mean score per year of age, and so increase the reliability. Second, the elementary school test could be made to cover 3rd year as well as 4th year children; — the first test was too difficult for these youngsters, and this had been the main cause of the undesirable phenomenon mentioned above, that in the elementary schools the difference in mean score per year of age was less than it was in the intermediate schools. Third, the old test was an orally administered one; and although such a test has several marked advantages, it has one great disadvantage — that it can be administered only by a specialist, and not by any teacher. I had never thought, for reasons already given, that a written test was practicable in the elementary schools, and I had confirmed this opinion by making a printed version of the first test, and trying it in 4th year elementary. Many quite intelligent children got thoroughly muddled up with it, and it correlated with the orally given test in the neighbourhood of plus 0.5 only, showing — since the content of the two tests was almost identical — that the reliability of the printed version was very low. In the intermediate schools, on the other hand, the correlation of the oral and printed versions was between plus 0.7 and plus 0.8, and I thought that with improvements in arrangement, presentation and content, it should be perfectly possible to produce a reliable printed test for these older children. I therefore decided to make an oral test for elementary schools and a printed one for the intermediate schools.

I started with the oral test. Making up 150 new items, I reduced them — by trials of the kind already described — to 53, added 34 proved items from the original test, and made the whole up into a new test of the same general pattern as the first but easier, and incorporating a number of improvements in technique, learnt by experience. The standardisation of this test, and the statistical examination of its results, are not yet completed; but there are indications that its reliability may be higher than that of group-tests (that is to say — tests given to more than one child at the same time) now in use in England. If this hope is realised, it will be due undoubtedly to the use of oral presentation — the group-tests used in England being presented by means of print.

Turning to the intermediate school test:—though this was to be a printed test, I decided that every item must first be proved orally, both because this method was more certain, and because I thus avoided the delays involved in printing large quantities of experimental stuff. I have already mentioned experiments made with the printed version of the first test, which gave me a lot of useful information about the effects of converting an oral item to a printed one. I used only 16 of

the items of the old test, and added to them 87 new ones, which I had weeded out by extensive oral trials from an original 230. It may seem that I am a very bad guesser, in that even after considerable practice little more than 1 in 3 of my items turns out to be useable. This I fear is true, but I can plead that there are many requirements. First, each item has got to be neither too easy nor too difficult. Second, it has to evoke figures proving the possibility of its validity. Third, no item must afford either a clue or a misleading suggestion concerning an adjacent item. Fourth, the items of each type have to show a regular progression from easy to difficult. Fifth, the mean difficulty of all the items in each type has to be the same as that of all the other types. Sixth, the different types must be included in proportions found by experiment elsewhere to be valid.¹

Having selected the items orally, I set about drafting the printed version. This is full of snags, but I had learnt something from experiments not only with the printed version of my first test but also with a printed Arabic version which I had made of another British test. The main difficulty is so to draft the test that even the youngest and stupidest child understands what he is asked to do (even if he can't do it), tries his best to do it, and doesn't get depressed if he fails. Another difficulty is the time-factor. In an orally-given test one can control exactly the time allowed for each item; but with a printed test this is impossible, and one has so to present the test that neither the careless dasher nor the careful plodder is unduly penalised. I have no time to describe the devices which are evolved to counteract such difficulties. The need for them, and the form which it appears they should take, are found by the statistical examination of experimental tests; then the efficiency of the devices has, of course, to be checked by further experiment.

The new test is now about to be printed, and meanwhile I am proceeding with the standardisation of the oral version. This has a double purpose. First, the oral version — of which I have good hopes — can be used as a second string if the printed version turns out a failure. Second, the correlation of the two versions ought to provide data which should not only be of practical use in the making of future tests, but which may also, I hope, be of service to unapplied research.

¹ I doubt whether proportions of types of items found elsewhere to be suitable is a good criterion to apply to your choice. It might well be that, say, classification items are relatively better at measuring intelligence than analogies are among Sudanese, and the reverse among English and Americans (or vice versa). Either factor-analysis, or correlation with some really trustworthy external criterion of intelligence is the only sound way of determining optimum proportions; and as you could hardly use either of these, your judgments, based on your experience of various types of items among Sudanese, probably provide as good a basis as any. P. E. V.

I have summarised the main part of my experiments, and have no time to mention the rest, which includes some work on non-verbal tests. Nothing I have done yet enables me to claim that I have accurately measured intelligence. I feel like a surveyor who is told to go and survey a plot of land. Years later someone remembers him and says "Hey, what about that plot? Didn't you ever survey it?" And he says, "Well, I haven't actually surveyed it yet, but I've got a plan for designing a chain which I believe may in the future be able to measure it with some approach towards accuracy." I hope, however, that I may have given you the impression that intelligence-testing does not consist of the whimsies of psychiatrists, but has some claim to be a small part of a science. It still has a long way to go, even in Europe and America. But at least it tries to proceed only along the path of careful experiment and observation.

And it is useful already. Many educational and other authorities in Europe, America and elsewhere regularly employ it. In fact, there is even perhaps a danger at present that too much importance may be given by some teachers, parents and employers to intelligence tests. It is true that they are more accurate tools of measurement than ordinary examinations; but they are by no means completely accurate, and certainly no child should be labelled as stupid simply on the evidence of a single intelligence test, of whatever reputed accuracy. Moreover, they are far from measuring the whole personality. They measure only one part of it. And not only may citizens whose intelligence quotient is below par lead useful and happy lives, but even in those lines of life where intelligence is most desirable, many other mental qualities also are of course necessary for success. But intelligence tests, if properly employed, are a useful addition to the teacher's stock of tools. Together with other mental tests they help him to improve the education not only of the clever but of the stupid, and to give rather more accurate advice to young people about the careers in which they are most likely to be useful and happy.

Finally, I thank you for listening to me so patiently, and apologise sincerely for errors, omissions and obscurities. All these are entirely my own work. It is only for fear of boring you that I refrain from mentioning the names of the many people to whom I am completely indebted for anything of value either in my work or in this paper, and among the first names should be included those of the 2433 children who have submitted so tolerantly — if sometimes with raised eyebrows — to my antics.

A LIST OF COMMON FISH OF THE UPPER NILE WITH THEIR SHILLUK, DINKA AND NUER NAMES

By Sabet Girgis.

THE accompanying table was prepared during a tour in the Upper Nile Province in June 1947. Names of fishes were collected from various sources including fishermen and fish merchants, a slow and rather unreliable procedure. At Atar, Mr. K. O. Williams, Headmaster of the Government School assisted greatly by providing English-speaking students representing four Nilotic Tribes. Fishes were produced and names recorded by the students. They also identified and named several species from the excellent drawings in Boulenger's *Fishes of the Nile* 1907. As the students' spelling of some names is slightly different from the ordinary, I have endeavoured to write the pronunciation between brackets rather than change their spelling, yet minor changes had to be made, such as changing an open 'O' into O, (ng) united into ng separated, and ignoring dots on some vowels.

The Bahr El Ghazal Dinka names are taken from a collection of water coloured paintings made by Mrs. Stubbs, wife of Mr. J. M. Stubbs, formerly District Commissioner Bahr El Ghazal District. These paintings are now in the hands of the editor of *Sudan Notes and Records* and it is hoped that they will shortly be published.

It is noticed that whenever only slight differences occur between species of the same genus, or even of different genera, such differences are not noticed and a common name is given.

I was told that all species of fish are eaten by natives, and that it is quantity rather than quality which matters most to them, yet some Shilluk would not touch *Tetrodon* and some Nuer would not come within arm's length of *Calotropis*.

Fish is dried by natives for future consumption. *Tilapia* seems to be most favoured for drying; but other fish, including the Nile Perch *Lates* are also similarly dried. Drying is brought about by gutting, followed by splitting the fish longitudinally (dorso-ventrally) and hanging it. Autumn is a bad season for drying, as insect larvae infest the fish and spoil it.

Salting fish for export is undertaken by Arab merchants.

Alestes sp., *Hydrocyon* sp., and some of the *Mormyridae* are the chief types for salting. *Hydrocyon* fetches the best prices as salted fish (*fasikh*).

I visited the fish market at Malakal on a few occasions and recorded the number and size of the species which were exhibited there. The relative abundance of different species as noticed by fish merchants at Malakal, Tethbil and Bor is shown in the table.

Professional fishermen use cast nets and hooks, while practically everybody else depends for his fishing on spearing. An ordinary spear is a rod with a fixed sharp iron head. A common variety of fishing spear has a detachable iron head attached by a cord to the base of the wooden rod. Hooks, traps, baskets and damming up small streams are also commonly used.¹

I am deeply indebted to Mr. H. Morrice and Mr. J. Winder for granting my colleague Dr. J. Rzoska and myself the free use of their steamer to collect information and material between Malakal and Bor.

I wish to express my deepest gratitude to Mr. and Mrs. K. O. Williams and the students of Atar School for their most valuable help.

¹ For more details on fishing methods see :

(i) Boulenger G. A. *Fishes of the Nile* 1907.

(ii) Bloss, J. E. F. *The Sudanese Angler, Sudan Notes and Records*, Vol. 16, Part 2, 1945.

FAMILY	LATIN NAME	ARABIC NAME (Khartoum Arabic)	SHILLUK
Polypteridae	<i>Polypterus Senegalus</i>	Dabih el Hut or Abshire	Otwel (Ot-well)
	" <i>bichir</i>	"	"
	" <i>endlicheri</i>	"	"
Lepidosirenidae	<i>Protopterus aethiopicus</i>	Samak el teen	Luth
Mormyridae	<i>Mormyrops anguilloides</i>	Taraza	Adolo (adol-lo)
	<i>Petrocephalus bane</i>	Ras el hagar	Aben (aa-ben)
	<i>Hyperopis bebe</i>	Sawya	Aben
	<i>Gnathonemus cyprinoides</i>	Um shelfa	"
	<i>Mormyrus hasselquistii</i>	Khashm el banat	Adolakok (ado-la-kok)
	" <i>canume</i>	" "	"
	" <i>cashiye</i>	" "	"
	<i>Gymnarchus niloticus</i>	Weer	Mok
Osteoglossidae	<i>Heterotis niloticus</i>	Nok	Olak
Characinidae	<i>Hydrocyon forskalii</i>	Kas or Kalb el Bahr	Kyeth (Kyoth)
	" <i>Brevis</i>	" "	"
	" <i>lineatus</i>	" "	"
	<i>Alestes dentex</i>	Kawwara	Kodo
	" <i>baremore</i>	"	"
	" <i>nurse</i>	Kawwara Safsaf	Agamikak (A-ga-mi-kak)
	" <i>macrolepidotis</i>	" "	"
	<i>Ichthyoborus besse</i>	—	Cwak (t-shock)
	<i>Distichodus niloticus</i>	Khraish	Caro (Chaa-ro)
	" <i>rostratus</i>	"	" "
	" <i>brevipinnis</i>	"	" "
	" <i>engycephalus</i>	"	" "
	<i>Citharinus citharus</i>	Betkoya	Othago (othaago)
	" <i>latus</i>	"	" "

(NG)OK DINKA	BOR DINKA	NORTHERN BAHR EL GAZAL DINKA	NUER	Abundance
Di(ng)	Di(ng)	Agwer or Ding	Juath (d-yoth)	
"	"	"	"	***
"	"	"	"	**
"	"	"	"	**
Luth	Luth	Luth	Lot	***
Akinkin (A-kin-kin)	Lipthok	Tooic	Not	**
Akonthok (A-Kon-thok)	Akonthok (A-kon-thok)	Yar akuth	Kuath (Kwōtt)	***
Ayieth	"	Audol	Kuath	***
Akonthok	"	Akon Opio or Apem	"	***
Ugot	Ashambil	—	Letril (lat-reel)	***
"	"	—	(lat-reel)	***
"	"	Got	"	***
Cot (K-yot)	Riaal	Rial	Reel (R-yell)	*
Lek	Lek	Lek	Lek	***
Joklek	Nya(ng)lec (Nyan-letch)		Jioklec (Gyok-lesh)	***
"	"		"	**
"	"	Angleic	"	
Cin (chin) or Alerio	Nya(ng)diaar	Lang Ager or Gudo	Cien	****
"	"	"	"	***
"	"	Melek	Legga(ng)ni	****
"	"	"	Legga(ng)ni (lek-gahni)	***
—	Alekagurgur	Atem Duor	Nyan(ng)man	
Apuro	Aciar (a-char)	Ayath	Lieth	**
"	"	"	"	*
"	"	"	"	*
"	"	"	"	*
Abal	Apurut (ap-root)	Pur	Tangrail or Polong (tang-ryaal)	***
"	"	"	"	*

**** Very Abundant
 *** Common
 ** Less Common
 * Occasional.

FAMILY	LATIN NAME	ARABIC NAME (Khartoum Arabic)	SHILLUK
Cyprinidae	<i>Labeo niloticus</i>	Dabs	Acany (A-tchen)
	" <i>Horic</i>	"	" "
	" <i>Coubie</i>	Tutkum	—
	" <i>forskalii</i>	Massas	—
	<i>Varicorhinus beso</i>	—	Akikin
	<i>Barbus bynni</i>	Binni	—
Siluridae	<i>Clarias anguillaris</i>	Garmut	Cogo (cho-go)
	" <i>lazera</i>	"	" "
	<i>Heterobranchus bidorsalis</i>	Surta	Coro
	<i>Eutropius niloticus</i>	Shilba	Atyeno
		or Shilbaya	(at- yaanno)
	<i>Schilbe mystus</i>	"	" "
	" <i>uranoscopus</i>	"	" "
	<i>Bagrus bayad</i>	Bayad	Adwar
	" <i>docmac</i>	Kabaroce	"
	<i>Chrysichthys auratus</i>	Abu rial	Dip
	<i>Clarotes laticeps</i>	Bamseika	Ko (ng)o
	<i>Auchenoglanis biscutatus</i>	Homar el Hut	—
	" <i>occidentalis</i>	" "	—
	<i>Synodontis schall</i>	Gargur	Okok
	" <i>frontosus</i>	"	"
	<i>Synodontus caudovittatus</i>	"	"
	" <i>serratus</i>	"	"
	" <i>sorex</i>	"	"
	" <i>clarias</i>	"	"
	" <i>batensoda</i>	Galabaya	"
	" <i>membranoecus</i>	"	"
	<i>Malopterurus electricus</i>	Barada	adi(ng)o (Ad-di-no)
Ophiocephalidae	<i>Ophiocephalus obscurus</i>	—	Ojul (od-jule)
Anabantidae	<i>Anabas petherici</i>	—	Oguno
	<i>Anabas muriei</i>	—	"
Serrauidae	<i>Lates niloticus</i>	Igl	Gur
Cichlidae	<i>Tilapia zillii</i>	Bulti or Khadem mirie	Owedho
	<i>Tilapia nilotica</i>	"	"
	" <i>galilaea</i>	"	"
Tetrodontidae	<i>Tetrodon fahaka</i>	Tambera	Apudo

		NORTHERN		Abundance
(NG)OK DINKA	BOR DINKA	BAHR EL GAZAL DINKA	NUER	
Nyanlipnom (Nyan-lip-nom)	Ukuro (Oo-kora)	—	Didhotmonyrac (Di-dot-moni-rach)	***
"	"	—	—	*
—	—	—	—	
—	—	—	—	
—	—	—	Kaleknyang	
—	—	Akaic Macor	—	*
			Pet ciek (black)	***
Cik	Cik	Attek	Pet der (red)	
"	"	"	"	****
Cur	Cur	Cur	Cur (T-shure)	*
then (thann)	then	then	thean	***
" "	"	"	"	***
" "	"	"	"	**
Alau	Alau	Agir	Lam	**
"	"	Alar	"	**
Agok	Dip	—	Dim	*
Pu(ng)	Aceir	Akum	Pu(ng)	*
—	—	—	—	
(Ng)ok (Nok)	(Ng)ok	Ngork then	Tu(ng)da(ng)ok (tun-da-nok) or Yiew (Yeww)	***
ugok	ugok			
"	"	"	"	
"	"	"	"	***
"	"	" padumy	"	
"	"	"	"	
"	"	"	"	
"	"	"	"	
"	"	" abu	"	
Der	Der	Diar	Danei (dan-yey)	*
Abioth	Abioth	—	Jul (d-jule)	
Rilmocnom	Ayo(ng)kon	—	Gerbang	
(Ril-mush-nom)	(a-yon-ku)			
" "	" "	—	"	
Ceil	Cal	Gwet	Cal (Chall)	**
Aturo	Atur (A-tor)	Ator	Rueth	
"	"	"	"	***
"	"	"	"	
Buliak	Buliak	Biliak	Buliak	**

WEIGHT EQUIVALENT OF SUDAN FOODS SOLD BY MEASURES OF CAPACITY

By N. L. Corkill.

IN Khartoum in 1945 the writer had occasion to ascertain the prices and weight equivalents of certain Sudan foodstuffs usually sold by measures of capacity. Grain, pulses and certain dried vegetables are examples; a rather peculiar exception was the common lentil (*Lens esculenta*, *ads ada*) which was sold by the *oke*. The measurements were made in the Khartoum grain market. The copper measure in which such a foodstuff was retailed was heaped up to the rim and the surface was then rounded by a further addition to a gentle convexity; this, I was assured, was conventional practice. These weights and prices may be of interest to those engaged in dietary or sociological surveys and are tabulated below.

Sudan measures of capacity are 1 *ardeb* (standardized at 198 litres) = 12 *keila* = 24 *ruba* = 48 *malwa* = 96 *kadah*. The Sudan Almanac (1942, p. 109) gives an *ardeb* of 12 *keila* as having the following values for the goods shown in *rotl* weight (1 *rotl* = .68 lbs. = 449.28 gms.)

FOOD		<i>Rotls</i> per <i>ardeb</i> (12 <i>keila</i>)
Dura millet,	<i>Sorghum caudatum</i> .	336
Dukhn millet,	<i>Pennisetum typhoideum</i> .	360
Simsim,	<i>Sesamum orientale</i> .	264
Earthnuts,	<i>Arachis</i> or <i>Voaindzeia</i> ?.	160
Wheat,	<i>Triticum vulgare</i> .	334
Maize,	<i>Zea mays</i> .	360
Barley,	<i>Hordeum vulgare</i> .	267

The following relationships between Sudanese, English and metric weights may also be of interest:—

1 dirham	= 0.115 ozs.	= 3.12 gms.
1 ounce	= 9.1 dirs.	= 28.35 gms.
1 gramme	= 0.037 ozs.	= 0.32 dirs.

TABLE

WEIGHT AND PRICES OF SUDAN FOODS SOLD IN
KHARTOUM IN 1945 BY MEASURES OF CAPACITY.

Identity	Arabic	English	Unit of sale	Weight in gms.	Price in milliemmes per 100 gms. (32 dirham)
<i>Sorghum caudatum</i>	<i>feterita</i>	white millet	<i>malwa</i>	1574	—
<i>Zea mays</i>	<i>'esh el rif</i>	maize	<i>ruba</i>	6510	0.9
<i>Vigna unguiculata</i>	<i>lubia abiad</i>	cowpea	"	5260	2.2
<i>Vigna unguiculata</i> (var)	<i>lubia helu</i>	cowpea	"	6570	1.8
<i>Dolichos lablab</i>	<i>lubia afin</i>	field bean	"	6640	0.9
<i>Pisum sativa</i>	<i>basilla</i>	garden pea	<i>malwa</i>	1649	—
<i>Cicer arietinum</i>	<i>kabhabeig</i>	chick pea	<i>ruba</i>	6750	3.1
<i>Lupinus termis</i>	<i>termus</i>	lupin	"	6620	2.7
<i>Vicia faba</i>	<i>ful masri</i>	broad bean	"	6590	3.3
<i>Cajanus cajan</i>	<i>ads sudani</i>	pigeon pea	"	6435	2.1
<i>Phaseolus vulgaris</i>	<i>fasulia</i>	haricot bean	"	6900	2.4
<i>Arachis hypogea</i>	<i>ful sudani</i>	peanut	"	2950	1.0
<i>Sesamum orientale</i>	<i>simsim</i>	sesame	"	3450	2.3
<i>Allium cepa</i>	<i>basal</i>	onion	<i>malwa</i>	1274	—
<i>Hibiscus esculenta</i>	<i>weika</i>	dried hibiscus	"	261	—

Note.—The common lentil (*Lens esculenta*, *ads ada*) was sold by weight, the cost of 100 gms. working out at 3.5 m/ms.

ARCHAEOLOGICAL DISCOVERIES DURING WINTER 1947-48

Amarah West.

DURING the past winter the Egypt Exploration Society with Mr. H. W. Fairman as their field director have been carrying out excavations at the ancient site of Amarah West.

Excavations commenced on this site before the war when a temple of Rameses II (1296 B.C.) was uncovered, and sufficient evidence found to make it clear that there was a town of considerable importance there. The work this season was concentrated on the town and revealed four periods of occupation. The earliest of these levels was from three to four metres below present surface level, and dates from the reign of Seti I (about 1314 B.C.). Within the town the main work was on a large building that is thought to have been the palace of the governor, and the storerooms and workshops belonging to the temple.

The palace consists of a series of stores as well as the public and private rooms. A considerable amount of inscriptional material was found in these rooms and the names of a number of governors have been discovered.

The palace workshops are of particular interest each one of them having been devoted to a specialised craft. In one of them the remains of gold working were discovered, indicating that in addition to its political importance Amarah may also have had considerable economic significance as a centre of gold production.

The town gate which was also excavated this season is of importance as reliefs on it record a previously unknown campaign of Rameses II in the northern Sudan.

The main importance of the excavation of Amarah from the point of view of the history and archaeology of the Sudan, is that it is the most elaborate and important town site of the Pharaonic period yet excavated and may throw considerable light both on the Egyptian administration of the Sudan during the period of the greatest extent of the Egyptian Empire, and on the ordinary town life of the period. It is perhaps this latter aspect which is of the greatest significance, for although the political history of the period is to some extent already known, very little information has been available for a study of the social history.

P. L. SHINNIE.

EXCAVATIONS IN THE SECOND CATARACT AREA.

The Department of Archaeology of Gordon Memorial College excavated in the Wadi Halfa area from December to February inclusive. The problem of the expedition was to discover if rock-drawings could be dated by proving statistically that the drawings and the pottery and stone implements found in their immediate vicinity were made by the same people.

The main work was done at 'Abka where the expedition found over 40 previously unrecorded rock-drawing sites in an area less than two and half kilometres square. No paintings were found and the drawings are artistically surpassed by those from several other sites, but for quantity and variety the site is certainly one of the richest in the World. There are thousands of drawings dating from the Early Neolithic to the Christian and Islamic periods. The majority were done before the end of the Egyptian Dynastic period.

Not only was associated material very plentiful but it was stratified in most of the sites. The Neolithic date of the earliest drawings is already proven, and it is almost certain that when the finds have been studied fully it will be possible to date the majority of the series and to fix the Nile levels and climatic conditions for the different periods.

To extract all the available information from the area and to reproduce all the drawings will require a much larger and better equipped expedition for a longer season or seasons.

O. H. MYERS.

BOOK REVIEWS.

SUDANESE COLLOQUIAL ARABIC. By J. Spencer Trimmingham, M.A., *Oxford University Press* : 1946. 7/6.

The first edition of this book has for some years been familiar to those beginning the study of the colloquial Arabic of the Sudan. This new edition shows considerable improvements on the older one, both in the arrangement of the work and in the subject-matter. About four-fifths of the material is entirely new. More space than formerly is given to conversations of a type which will be useful to persons newly arrived in the Sudan, but grammatical points will require further explanation from a teacher than what is given here.

The lay-out of the pages is a little confusing, and it would have been better if the grammatical notes to each chapter could have been given a page of their own. However the paper shortage probably prevents a more spacious arrangement. There are a few misprints in the Sudanese text which may be misleading to the new student. Also it is unfortunate that on pp. 98-99 one of the speakers should be called Hamza (sic) and that the subject should be verbs with the first radical hamza, while no difference is shown in the transliteration of *hamza* and *hamza*.

The chief difficulty in a work of this kind is to decide how the colloquial language shall be written. Mr. Trimmingham has chosen phonetic script, which seems the obvious choice theoretically but does not work so well in practice. The book will chiefly be used by persons serving in the Sudan and many of these, as well as their Sudanese teachers, are unfamiliar with the script. This however is a controversial point and Mr. Trimmingham is to be congratulated on a very sound grammar. It would be interesting to have from him a more advanced philological study of the Omdurman dialect.

P. M. HOLT.

SUDAN GEOGRAPHY. By R. A. Hodkin. 160 *pages*; *maps, diagrs., illustrations, index*. Education Department of the Sudan Government, 1946.

The following is extracted from the Geographical Review published by the American Geographical Society of New York — dated April 1947 :
 "This book is intended primarily for the first two years of Sudan secondary schools, but it could be studied profitably by any geographer as an example of method and read for its contents by anyone interested

in a land that now ranks among the problem areas of the world ; for it clearly reveals the variety of internal problems that confront any government whatever the solution of the current political situation (cf., *Geogr. Rev.*, Vol. 36, 1946, pp. 682-683).

"The book begins with Khartoum and Omdurman (What makes a capital ?). Succeeding chapters take up the Kababish nomads (camels, goats, and sheep) of the northwest ; the cultivators of central Kordofan (water supplies) ; the Nuba region of plains and hills ; Darfur and the Baggara (cattle nomads) ; the grass-lands of the Butana (east of Khartoum) ; the Red Sea Hills and the semi-nomadic Beja ; the Gezira and cotton ; the Shilluk and a journey to Juba ; the land and life of the Azande of southern Equatoria ; a year with the Dinka (cattle nomads half of the year, grain cultivators the other half) in the swampy plains south of Malakal ; the south and Sudan trade ; the coast and Red Sea ports (Suakin and Port Sudan) ; the Northern Province (irrigation) ; and a final chapter on the Nile and the Sudan. There are several sketch maps and many delightful little drawings *sui generis*. Appendix I is a vignette of the Sudan quoted from an inaugural lecture by the late Sir Douglas Newbold, which begins "No one can get to love a country without seeing it properly ; all true affection rests upon vision. Vision again rests upon knowledge.... Knowledge must pass into vision, that state of mind and heart which does not merely swallow evidence, but changes that evidence into a judgement, an appreciation, a living picture of a country."

PROBLEMS OF AFRICAN DEVELOPMENT: Part I, Land and Labour. By T. R. Batten, *Oxford* 1947. *Pages* 178.

This is the first of two small volumes of "an introductory survey of some of the problems that must be solved before the goal of British policy — self government for the colonial peoples — can be reached." The present volume deals with economic problems, the present and future prospects for agriculture, land tenure, the need for capital and for a higher level of internal as well as external trade. The second volume will deal with problems of health, education, finance, and local and central government. Although the scope is nominally restricted to British Colonial Office territories, many of the problems are common to most tropical or undeveloped countries, including the Sudan.

Within his small compass Mr. Batten, who is well known as Vice Principal of Makerere College, cannot attempt to deal in other than very general terms with the many aspects of the problems and the

territories concerned. However for those who want a concise introduction or who have not time or facilities to read more detailed or specialized studies, as well as for African students themselves, this book is valuable, if somewhat depressing.

British colonial governments may be said to have concentrated their energies mainly on justice, health and political development, and to have shown to the least advantage in the economic field despite individual advances, for instance in agricultural science. It is therefore perhaps not the author's fault but that of the discouraging African material and the unsatisfactory governmental approach to economic problems that there is a noticeable lack of dynamism here. Apart from government installations (mainly railways) and a few large firms in each territory, in both cases oriented primarily for export and import trade, there is still little to show towards discovery of the secret of indigenous economic development, which is essential if the populations are to reach and maintain standards which are now considered desirable. Mr. Batten presents the difficulties all too well: perhaps it is psychologists who are now needed, rather than economic experts, if the greatest of all obstacles is to be overcome — namely the mental attitudes of the peoples concerned.

T. H. B. MYNORS.

AL SUDAN FI QARN: ١٨١٩-١٩١٩ (The Sudan in the Century from 1819-1919), By Mekki Shibeika, *Matba'at Lagnat al ta'lif wa al Targama wa el Nashr; Cairo.*

This book is a work highly creditable to its author and one which fulfils a most useful purpose.

In spite of the comparative wealth of historical material on the Sudan in the 19th. and 20th. centuries, no general history of the country has previously been available. The chapters in MacMichael's "Anglo-Egyptian Sudan" give only a brief sketch of the period before the establishment of the Condominium. The Arabic history of the Sudan by Na'um Shuqair is old and now almost unobtainable. Anyone who had to study or to teach the history of the Sudan in this period will know the difficulty of finding a starting-point for his reading. The publication of Mekki Eff.'s book has solved this problem.

The book opens with a short account of the Sudan before the Egyptian Conquest — a fascinating subject about which one would like to read more. The course of the conquest is then traced and in

the subsequent account of the Turkiya a large section is devoted to the expansion of the Egyptian empire in the time of Khedive Ismail. The account of the Mahdist Rising and the rule of the Mahdi and the Khalifa Abdullahi is very full and interesting. The later chapters cover the Reconquest and the first twenty years of the new administration. One hopes that in a later edition the period will be continued to a much later date, if sufficient material is available.

The book covers a period which is a subject of controversy and deals with problems which are often a source of bitter dispute. In these circumstances the fair-mindedness of the author is a notable achievement. This fair-mindedness is very clear if one compares Mekki Eff.'s treatment of the Khedive Ismail, El Zubeir Pasha and General Gordon. All three were controversial figures during their lives and since their deaths they have received more than their due share of adulation and of criticism. Yet Mekki Eff. succeeds in presenting them, not without sympathy, but with an historical impartiality which sometimes throws a new light on their characters and motives. May this impartiality and fair-mindedness be a characteristic of Mekki Eff.'s successors, the future historians of the Sudan!

In a second edition of this book, there are a number of changes which should be made to increase its utility to students. The chronological outline is not clear, as far too few dates are given. If the author does not wish to intrude many dates into the text, they might be printed in the margin beside the paragraph-headings. A book of this kind, which covers in fairly broad outline the political history of a large period, is likely to be used as a starting-point for more detailed research. In this event, the student would be greatly assisted by a list of the authorities and sources used for each chapter. Mekki Eff. gives references for the new material he has obtained from the despatches preserved in Cairo but a fuller list of authorities is desirable in a pioneer work. An index, at least of persons and places, is necessary to supplement the very full table of contents. The maps are very disappointing. They give no indication of the relief of the land, many places mentioned in the text are not shown, and they are inadequate to a work of this importance, both in quality and quantity.

All these criticisms, however, deal with matters which may be remedied when the book is reprinted. They do not impair the value of its contents. The book will no doubt be widely read in the Sudan. It might be worth the author's while to consider the possibilities of an English translation, since there is at present no comparable work in English.

P. M. HOLT.

JOURNAL OF THE MIDDLE EAST SOCIETY.

We welcome this addition to the list of periodicals which, like ourselves, endeavour to throw light on local history and local problems.

The object of the Middle East Society, which was founded in 1946, with its headquarters at Jerusalem, is to be found in the introduction to the first number of the Journal as the provision of a forum for the free exchange of ideas and opinions on the problems of the middle East. It is perhaps open to question whether Jerusalem is the ideal spot from which to deal with those problems; what is not open to question is the claim that proximity, like detachment, has its virtues, and that those who live in the centre of events have, to say the least, a valuable contribution to make towards our knowledge of them.

The geographical purview of the Journal is stated to be limited to the Arabic speaking countries, Turkey and Persia, but if the Middle East Diary, printed with the first number of the Journal, is to be taken as a guide, the Society's interest ranges from Afghanistan to Algeria and from Turkey to Ethiopia. We should perhaps therefore, have expected more geographical range in the subject matter of the Journal itself. The greater part of the material concerns Palestine and the Levant States, and for this the fact that many of the articles are reprints of lectures delivered to the Society is no doubt largely responsible.

Within these limitations, the Journal shows a commendable variety of subjects, all of which are of interest to the students of Middle East affairs. The articles in the first two numbers include historical notes on the Textual History of the Qur'an, the Religion of Abraham, and two interesting economic contributions on the Sterling Balances as they affect Palestine and the reactions on Arab Nationalism of the present race for oil in the Middle East.

A particularly useful feature of the Journal is the reprint of documents of current interest in this part of the world such as the text of the pact of the League of Arab States, the text of the Anglo-Egyptian Treaty, 1936, and an explanatory note on Statutory Martial Law under the Palestine Emergency Legislation.

G. E. R. SANDARS.

THE MIDDLE EAST JOURNAL: Volume 1, Nos. 1-3. *Washington, D.C. : the Middle East Institute, 1947. Six dollars per Annum.*

Here are the first three numbers of a new lavishly-produced quarterly of the type the Americans do so well, which is designed to provide a forum for studies of problems and conditions in the Middle East, here defined as including the countries at the eastern end of the Mediterranean Sea from Turkey to Arabia, but not without reference to the closely related peripheral areas of North Africa and Western Asia. Besides articles giving free expression to varying points of view, the criterion being the provision of sound, informative matter without undue emotional bias, there are a chronology of events, a conspectus of published documents, a bibliography and book review.

The scope of this Journal appears to be primarily political, social and economic, and as such it should help to fill a noteworthy gap in English language publications in this field provided that a supply of well-informed and up-to-date material can be assured from a sufficiently wide field of contributors. Too often in recent years American publications on the Middle East have displayed more erudition than experience, and a lack of adequate "background" against which to test their material. Besides its prime object of informing American public opinion about an area in which American interests are displaying mushroom growth, this Journal could be of great value to countries such as the Sudan where there is a sad lack of knowledge of, or interest in, the wider area with which inevitably its fortunes are entwined. It is to be hoped that dollar shortage will not hinder the maximum publicity for this new publication.

T. H. B. MYNORS.

KNOWING THE AFRICAN. By Edwin W. Smith. *Lutterworth Press* 1946. 6/-.

The greater part of this book consists of lectures delivered in 1940 at the Canadian School of Missions at Toronto, but although directed primarily to an audience of missionaries it has a wider appeal and importance for all those Europeans who have to deal with African peoples, whether as missionaries or as officials, traders or settlers.

The author deals with aspects of African religion, indigenous forms of education, the function of folk-tales, the question of sexuality and marriage customs, but above all with the necessity for a realistic and

equalitarian approach to the people themselves, as human beings, and for the abandonment of rigid preconceived ideas of religion, based rather on European *mores* (themselves largely a product of Greek and Roman civilisation) than on a specifically Christian ethic. In these days of hyper-nationalism, religion must not be dissonant with local conditions, even though fundamentally it should know nothing of national or class distinctions.

Dr. Smith claims that the tribal rules and sanctions attached to sexual relationships, although they differ from the Christian ethic very considerably, yet do not justify the allegations sometimes made that Africans are grossly immoral or promiscuous: he asks rather that indigenous patterns of sex relationships be studied dispassionately in order that we may try to eradicate what appears morally dangerous and to promote what appears sound. Above all we must remember that the Christian idea of sin often attached to the sexual act is absent from pagan religion, as it is also from Islam.

Dr. Smith takes the same line when maintaining that in the "primitive" state Africans do have a form of education for boys and girls, which we should not necessarily despise or utterly reject, and that folk-tales have a definite purpose and value. On the vexed question of languages he rather hesitantly supports the "group-language" policy, as opposed to teaching as *lingua franca* a European language or an "area" language such as Swahili. He rightly stresses the point that to strive to express in writing every slightest nuance of pronunciation, tone etc. results only in a hopelessly overloaded script: recoiling from the extreme example of the English language, where spelling bears a minimum of relationship to pronunciation, one need not go further than the script of the International African Institute to find a reasonable solution.

In his anxiety to encourage the study of indigenous patterns of behaviour and their use as a medium of approach for teaching the Christian religion, it may be asked whether Dr. Smith does not seem to attribute to them greater coherence, system and comprehensiveness than they possess, and to oversimplify the difficulties of transmuting a way of life to something which is different both in externals and fundamentals. But at least his thesis deserves serious attention.

T. H. B. MYNORS.

THE NUBA. By S. F. NADEL. *Published by the Oxford University Press. With 49 half-tone illustrations. 1947 42 Sh. net.*

This book is the first systematic study of the Nuba peoples of Kordofan by a skilled anthropologist. It is the result of investigations made during the years 1938-41 on behalf of the Government. Though the total population of the Nuba tribes is only in the region of 300,000, yet it is sub-divided into over fifty different ethnic groups. The author selected ten of these groups for investigation. To three of the tribes, Heiban, Otoro and Tira, he devoted over a year, while to the remaining seven only an average of some two months could be spared for each tribe. The mass of material which Dr. Nadel has managed to collect among the ethnic and linguistic diversity of the Nuba Hills during the short time at his disposal, and the comprehensive and systematic manner in which he has presented his information, could only have been done by an exceptionally able field worker with a remarkable gift for learning languages.

Realising the limited time at his disposal, the author concentrated mainly on the social and economic structures of the tribes he visited. For practical considerations he attempted to divide the tribes into cultural groups using the following three criteria for this purpose :—

- (1) Kinship structure, more particularly, the system of reckoning descent in paternal or maternal line.
- (2) The nature of the clan organisation — presence or absence of a strong all-pervading clan system of a " symbiotic " type.
- (3) Presence or absence of a certain shamanistic spirit-possession cult.

Dr. Nadel's research into what he calls " Social Symbiosis " is of particular interest. By " symbiotic " he understands a form of social segmentation (more especially clan-structure) in which every section, as a section, assumes certain specific duties (religious or political) on behalf of the community at large.

The Nuba peoples are intensely religious, and one of the primary functions of their religion is the formulation of rules and standards of social behaviour. To understand the Nuba peoples, and as a preliminary to the study of their legal systems, it is necessary to give some description of their religious belief. In his introduction Dr. Nadel affirms that he has recorded sufficient information about the religion and magic of the tribes he visited to understand their social systems, but that a separate and specific study of Nuba religion must be left for another occasion.

It is a great pity that a deeper study of the Nuba religion was not included in this book.

In addition to exploring the tribal culture as a student of primitive society, Dr. Nadel also views it from the angle of "applied Anthropology" and assesses his data for political use. The final chapter, where the author considers future trends and prospects, is the weakest part of the book. There is little new in what the author has to say on Primitive Law, and the problems to be faced in the Nuba Hills are not unique. Similar problems concerning the evolution of the social and the political structure are to be found elsewhere in Africa *e.g.* among the Ibo of Nigeria, the Tallensi of the Gold Coast and among some of the Nilotics of the Sudan. Like the Nuba, these societies lacked centralised authority administrative machinery and judicial institutions. Membership of the local community and the privileges and duties which go with it were normally acquired by genealogical ties, and the lineage principle took the place of political allegiance. The value of Dr. Nadel's book, which was primarily written to be of use to administrators, lies in the mass of valuable material which provides important guidance for the future administration of the Nuba. The book reveals the immense importance of the kinship structure and the nature of the clan organisation. From the author's careful study of the Nuba social systems we can learn how and on what foundations to build our political structure. In the effective segments of society we have the fundamental units of law, morality and authority. The kin must be allowed to settle their own disputes in the traditional fashion, and the appropriate segments should be made the channel by which taxes are assessed and collected. The author warns us against the promotion *in toto* of customs and "manners" to the dignity of "laws." Many disagreements could, and should, be settled out of court in the family or kinship group. To achieve all this, there will have to be a de-centralisation of the existing systems of administration, and the setting up of lesser councils at the appropriate level. Voluntary political federation is a natural process of evolution and is to be encouraged, but let us beware of building up autocracies around the personality and influence of individual chiefs. Local government based on more democratic institutions, would appear to be more suited to the indigenous Nuba social structure.

D. HAWKESWORTH.

THE NILE BASIN. Vol. VII : *Ministry of Public Works. M.O.P. Press, Cairo. £E. 1.250 mms.*

The most recent addition to this "Encyclopaedia" of the Nile introduces the idea of "Century Storage," and for the first time considers the ultimate water requirements of Egypt and the Sudan. The general scheme is outlined in the first chapter in non-technical language. The following twelve chapters describe in detail the present régime and all future probable developments, and some improbable ones which so far have received only cursory examination. The developments which have been studied in detail are now shown to be required in the much nearer future than seemed likely a few years ago. There are fourteen appendices supplying statistics referred to in the text, a complete set of graphs of the Nile flood from 1870 to 1945, and a rather poor index. It was unlucky that the 1946 flood came just after the book had gone to press ; but the authors have managed to include some very interesting photographs of the inundations between Atbara and Khartoum.

In estimating the ultimate water needs of Egypt, a cultivable area of 7.1 million feddan is adopted, and a population figure rising possibly to 32½ millions by 2000AD. During the months of shortage, February to July, the water required is shown to be 28 milliards.¹ When considering the Sudan there is not so much a shortage of land which could be irrigated, as a shortage of, and lack of information concerning, good land. The round figure of 2 million feddans is adopted as representing the Sudan's irrigable area. Of this only 1.1 million would be under cultivation at any one time and only half of this requiring water between January and July. The water requirement is therefore taken as 2.8 milliards, or 2.2 measured at Aswan. (the point used for all measurement).

The problem of forecasting the supply from January to July (the *timely* period) is one of great importance and difficulty. The timely water may be as high as 25.7 milliards or as low as 5.0 milliards with a mean value of 10.5. The January to May supply may be forecast in December from the combined Roseires-Malakal discharge. Towards the end of May, the June supply is indicated by the February to May discharge at Aswan. The Aswan natural river in June is some slight indication of the July discharge, but the many uncertainties necessitate a reserve being held until July. This is taken as 3.8 milliards. Thus, even in an exceptionally high year the needs are greater than the supply, and in a normal year hopelessly inadequate for ultimate development.

¹ N.B.— One milliard equals one thousand million cubic metres of water.— *Ed.*

The main control and storage works are Aswan (5), Sennar (0.6), and Gebel Aulia (2.5), giving a total storage of 8.1 milliards now existing. The projected new works are a Main Nile dam (8), Lake Albert (125), Lake Tana (20). They are to serve three purposes, annual storage for use during the timely period, "overyear" storage, and flood protection. A further work of great importance and size is the Sudd Canal which will carry the steady discharge from Lake Albert through the swamps without undue loss.

The authors adopt an unusual method of determining the size of the century storing reservoirs. Instead of relying on past records which go back 41 years, in the case of Lake Albert, a formula is evolved based on the laws of chance. It contains the term $V \sqrt{N}$ where N is the number of years. Thus the longer the time over which average conditions are to be maintained, the larger must be the capacity of the reservoirs. The period of a century is chosen quite arbitrarily.

Another version of the Lake Albert reservoir, is to split the capacity between Lakes Victoria and Albert. Each of these has its special points of interest. Victoria is to include a hydroelectric scheme at the Owen Falls. Albert is associated with the great canal by-passing the Sudd region from Jonglei on the Bahr el Gebel to the mouth of the Sobat on the White Nile. The probable site for the dam is at Mutir on the Albert Nile, and there may possibly be a barrage across the Bahr el Gebel at Jonglei. Lake Tana could also include a hydroelectric scheme and its storage may be augmented by lowering as well as raising the water level in the lake. This would involve cutting down the level of its outlet channel. It is from this source that the future water supplies for the development in the Sudan will come. Tana has a special rôle to play in "over-year" storage because its stored water is more quickly available than the waters of Victoria and Albert.

The application of full control to exceptional years in the past is made without the use of knowledge after the event, to test the validity of the principles applied. The great difficulty of forecasting here emerges, and the heavy responsibility which will rest on the shoulders of those whose duty it is to decide how to operate the controls is clearly shown.

Flood protection is the other urgent need of Egypt, and to some extent, of the Sudan also. The main Nile Dam, somewhere near Merowe, will be used for flood protection as well as for storage. It is known from past experience that 670 millions a day is the safe maximum downstream from Aswan, except for spates of very short duration. In the highest known flood 8 milliards would require to be stored. Added protection is given by the cleaning effect this reservoir would have on the "red"

(*i.e.* silty) water, thus permitting the regulation of the Aswan dam at the peak of the flood, now prohibited on account of silt (but actually done during the 1946 flood). Gebel Aulia cannot help, except by shortening the flood after the peak has passed. The silting of the Main Nile Reservoir appears to be ignored. The filling of depressions away from the Nile Valley, in the hot desert regions where evaporation is rapid, is another form of flood protection examined, in particular the proposal to use the Wadi Rayan. It is noted that ultimately the Sudd region will no longer be a place for the disposal of spare water in a high year, since it may well be reclaimed for pasture or cultivation.

These are some of the bare bones of this most valuable book. There is much more in the book including methods of research which are better studied than described. With post-war development in the forefront of our minds it is an opportune time for this book to appear, laying the problems which confront the progress of Egypt and the Sudan so clearly before us.

H. BELL.

SUDAN NOTES AND RECORDS

FOUNDED 1918.

السودان في رسائل ومدونات

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Sudan Notes and Records exists to promote the collection, exchange and publication of information about the Sudan in every aspect of its history, its people and its institutions, including not only the social but also the natural sciences.

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An Index of the first twenty volumes, compiled by Mr. F. Addison, is printed at the end of Vol. XXI (1938) Part II.

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Transliteration of the Arabic Alphabet

adopted by the Editors of *Sudan Notes and Records*

ا	{	at beginning of	ذ	dh (coll. d)	غ	gh
		word omit, hamza (')	ر	r	ف	f
		elsewhere	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 or g	ض	ḍ	ن	n
ح		h	ط	ṭ	ه	h
خ		kh	ظ	ẓ	و	w
د		d	ع	'	ي	y

VOWELS.

fatha	a,	lengthened	ā
kasra	i,	"	ī
ḍamma	u,	"	ū

DIPHTHONGS.

ى	—ai (as in aisle).
و	—au (as in mauser).

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

The silent *t* (ط) is omitted.

NOTES.

1. The system is not applied to well-known names, such as Khartoum, Omdurman, etc.

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 alternative to show the long *ē*.

EDITORIAL NOTES

READERS of this Journal will have noticed an innovation in Part I of the current volume, namely the printing of the title in Arabic as well as English. This is a token of our wish to encourage Sudanese readers and contributors. In the Arabic rendering the form of the title has been slightly recast in the interests of euphony: a literal retranslation into English would be "The Sudan in Notes and Records."

For the sake of international circulation the Journal must continue to be published in English, but a group of interested Sudanese is studying the possibility of extending its value to the Arabic-speaking public. They propose to publish a series of books in Arabic containing articles or extracts from past volumes. It is hoped that this might also stimulate contributions from Sudanese, who often have access to historical or sociological material of great value.

A new feature in this number is a list of recent books and articles relating directly or indirectly to the Sudan. We hope to publish a similar bibliographical note at least once a year, in addition to the usual reviews of the more important publications. Whilst a few items have been included from earlier years, no attempt has been made in general to go back further than 1947 and even so the list is doubtless far from complete at present. We would welcome the cooperation of our readers in pointing out omissions, especially of articles in scientific and technical journals. It is hoped that these lists may facilitate future researches. In this connection we may deplore the absence of a Sudan Government Stationery Office or of any convenient means for ascertaining what Government publications are issued from the various sources in the Sudan.

* * *

It is learnt from Professor Tucker that he is now working on Vol. II of *The Eastern Sudanic Languages* and hopes to have it ready for the printer by the end of the year. This volume will deal exclusively with the Bongo-Bagirmi group of languages.

* * *

We publish in this number the brief record of a "sample survey" made in the Moru tribe of Equatoria Province. As far as we are aware this is the first published record of any such survey made in the Sudan.

It is understood that a census of the population of the Sudan may be attempted in the not too distant future. But even if this is carried out, there will still be an almost complete lack of scientific information on how the bulk of the people really live, especially in the economic sphere. The obstacles to censuses and surveys are many—suspicion, religious scruple, private interest, inertia, to name only a few, whilst casual private observation is easily distorted. The need for accurate records and statistics is now becoming greater than ever and if there are unpublished investigations on these lines in existence, the Editors will be very glad to hear of them. It is also to be hoped that the growing numbers of Gordon College students will be encouraged to take an interest in such things.

* * *

Whilst this Journal does not set out to chronicle current affairs as such, we feel that passing mention must be made of the prospective setting up at the end of 1948 of the new Executive Council and Legislative Assembly, with all that this may bring for the future of the Sudan. We hope that the people's representatives may be fully conscious of the value of the Arts and Sciences which this Journal tries in its own way to serve. We hope in our next number to publish a paper on the difficult problem of communications in the Sudan, and that this may be followed by other studies of national problems.

* * *

We heartily concur with the hope expressed by the reviewer of Mekki Eff. Shebeika's history of the Sudan, that he will consider bringing out an English edition. Apart from Sir Harold Macmichael's survey, which is limited in various aspects, no general history has been written in English in recent years, and there is great need of one. But one may suggest that if any such venture is attempted, it should survey Sudan history as a whole, and not fall into the error, so common amongst the majority, of thinking of that history as virtually beginning with the conquests of Mohammed Ali, or perhaps in a vague way with the Kingdom of Sennar. A much better perspective view of the country might be obtained by considering the history of the Nile Valley and its surrounding lands from the earliest times, a task for which we now

have a considerable body of material, and the Sudanese would benefit if they could hear in the schools something of their history beyond the last hundred years.

* * *

A kindly (we hope !) reviewer of Volume XXVIII in the *Sudan Star* has suggested that our predecessor erred in advocating the building of a proper museum as an urgent measure for education and for preservation of Sudan antiquities. The relative value of museums and other things is a matter of opinion, and we leave our readers to form their own. But the same reviewer argues that attempts to widen the circulation of this Journal are doomed to failure unless it becomes much more "popular" in its appeal, so as to attract those not interested in learned articles. There is some truth in this, but we prefer to try to maintain a high scientific level on the whole, looking to the growth of the educated element in the Sudan to supply both contributors and readers. A greater difficulty is the present almost too wide range of subjects covered which may cause boredom or disappointment to readers who find perhaps only one item of interest in a whole volume, and much that they would do without. But this seems to be inevitable until it becomes possible to publish specialised parts or two different Journals.

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SUDAN NOTES AND RECORDS

 Vol. XXIX

Part. II.

 1948

THE KINGDOM OF TEGALI, 1921-1946

By J. W. Kenrick.

IN his article "The Kingdom of Tegali" (*Sudan Notes and Records*, Vol. XVIII, Part I) R. J. Elles wrote of the advent of government inspectors, "Thus did the Kingdom of Tegali lose the independence which it had retained for 350 years, even during its century of nominal subjection to the Fung."

Disrupted by the Mahdia to such an extent that only a small portion in the north remained in the dominion of Mek Geili, the process of disintegration was carried still further under the first British inspectors, who cut off and administered separately Tukam and Moreib, half Balula, Um Talha and Turjok. When Geili died in 1916 he had nominal power only in and around the Kajakja Hills and half Balula.

Speaking of the accession in 1921 of the 19th and present King of Tegali, Mek Adam Geili, Elles wrote:—

"His accession seems a suitable point to leave the chronicle of Tegali, for more recent events cannot yet be commented on. We may however note that for the last few years the Government has pursued a policy of piecing together the broken fragments of the old kingdom and restoring the authority of the hereditary ruler." It is as the 'inspector' who saw the end of this restoration and witnessed the metamorphosis of Tegali from a species of 'empire' to a Rural District Council in January 1947 that I take up the chronicle of Tegali where Elles had to leave it.

Empires can be of two kinds. Either they are highly centralized, permeated by the will of a directing brain, that of a single dominant personality or of a small clique or group, or they are of the loose-knit commonwealth type consisting of diverse largely autonomous units held together by some common tradition and certain common interests.

The men who set out, in Elles' phrase "to piece together the broken fragments of the old kingdom" were forced by circumstances to create an 'empire' of the second kind. Mek Adam Geili himself was not the forceful dictator. The "broken pieces" were of the most diverse types, comprising Arab Baggara tribes, arabicized Nuba, ex-slave settlements, settled westerners and pure pagan Nuba groups. Moreover, the area stretched far from north to south (230 miles), and communications during the rains were at the pace of a bull. The early administrators saw that the only possible method was to proceed slowly, grafting from the north southwards, and allowing the broken pieces to grow together assisted by two main influences, common economic interests (which already existed) and the old tradition of the Tegali crown, which was very real in the north but became weaker in proportion to the distance travelled southwards.

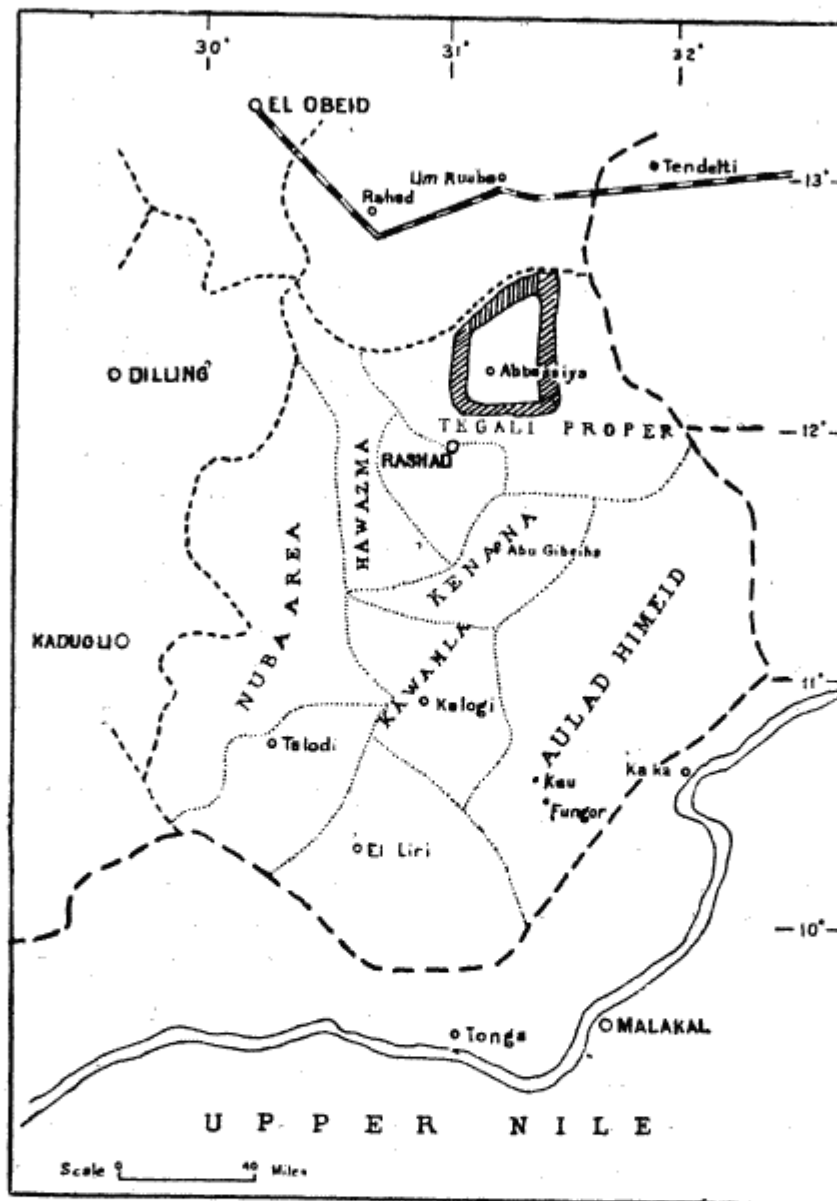
The essential prerequisite that all the pieces should be within a single administrative district was fortunately supplied on April 1st 1931, when Southern Kordofan District was broken up and the Talodi Subdistrict added to Eastern Jebels District. Thereafter a common district headquarters, common judicial and taxation systems, frequent meetings of the heads of the various divisions, and the possibility for the Mek himself to visit even the most southerly of the areas once owing allegiance to his forbears, slowly but inevitably worked towards the same end, to bind the various parts into a greater whole without making them feel they were losing their local or tribal identities.

Such was the general programme, and this is how it was carried out. The first, apparently irrelevant step, on which however the historian must lay considerable emphasis, was the move of the Mek's capital in 1929 from Kiraia in the Kajākja Hills down to Abbassiya on the plain to the north east. This was made on the advice of the District Commissioner, because the old capital was unsuitable for economic development, and the move has been justified. A well laid out small market town has grown up with a thriving trade, and good communications to the east and south, and to the railway at Um Ruaba.

In the same year 1929, a motor road was opened from Rashad to Abbassiya direct, thus saving 35 miles on the former route. A Tegali Court was constituted under the presidency of the Mek with subordinate courts in various omodias. Thus the Mek was provided with an improved capital, improved communications to the south, and judicial powers, before any expansion was undertaken. [See Map I.]

This process began in 1930 when the two Kawāhla and one Kenāna omodias of Balūla, Abu Gereis and Um Tālha in the east were restored

to the Mek's jurisdiction. The kingdom received thereby an increase of population of some 4,100.



MAP I

In 1932 Moreib and Tukam came in with some 3,300 people, and in 1933 Turjok and Tagoi were added with some 2,500. With the exception of the Rashad mekship, the Tegali kingdom now comprised a compact little area bounded on the west by the Hawāzma, and on the south by the Aulad Himeid—Kenāna administration of Nazir Radi Kambāl. In 1934 it received a preliminary form of N.A. budget with a revenue of L.E. 1265, and the Mek began to bear some financial responsibility.

The next great step forward came in 1935, when Tegali acquired jurisdiction over the Rashad mekship and, more important, over Nazir Radi Kambāl's Aulād Himeid and Kenāna and the Kawāhla of Kalōgi who were under him. Rashad was an additional 7,800, but the latter brought in some 13,200 more people.

The incorporation of the Aulād Himeid administration was a fascinating diplomatic coup. Nazir Radi Kambāl was an able and not unambitious man, who had won high honours and had made a great local reputation. Moreover he was much older than Mek Adam. Nevertheless, thanks to his unselfishness and wisdom it was arranged that he should acknowledge the suzerainty of Mek Adam and pay his taxes into the latter's chest, that Mek Adam should delegate to him powers as his *wakil* in the Abu Gebeiha area, and that he should retain his considerable judicial powers.

This amalgamation was vital to all that was to follow. The area under discussion in this note could be divided politically and geographically roughly into two parts, from Rashad northwards and from Abu Gebeiha southwards. In the southern half Nazir Radi Kambāl was the dominant personality. Had he refused to bring himself and his tribe, and with them the Kalōgi people, into the Tegali kingdom it is doubtful whether the adherence of the Ellīri and Talōdi people would have been obtained later.

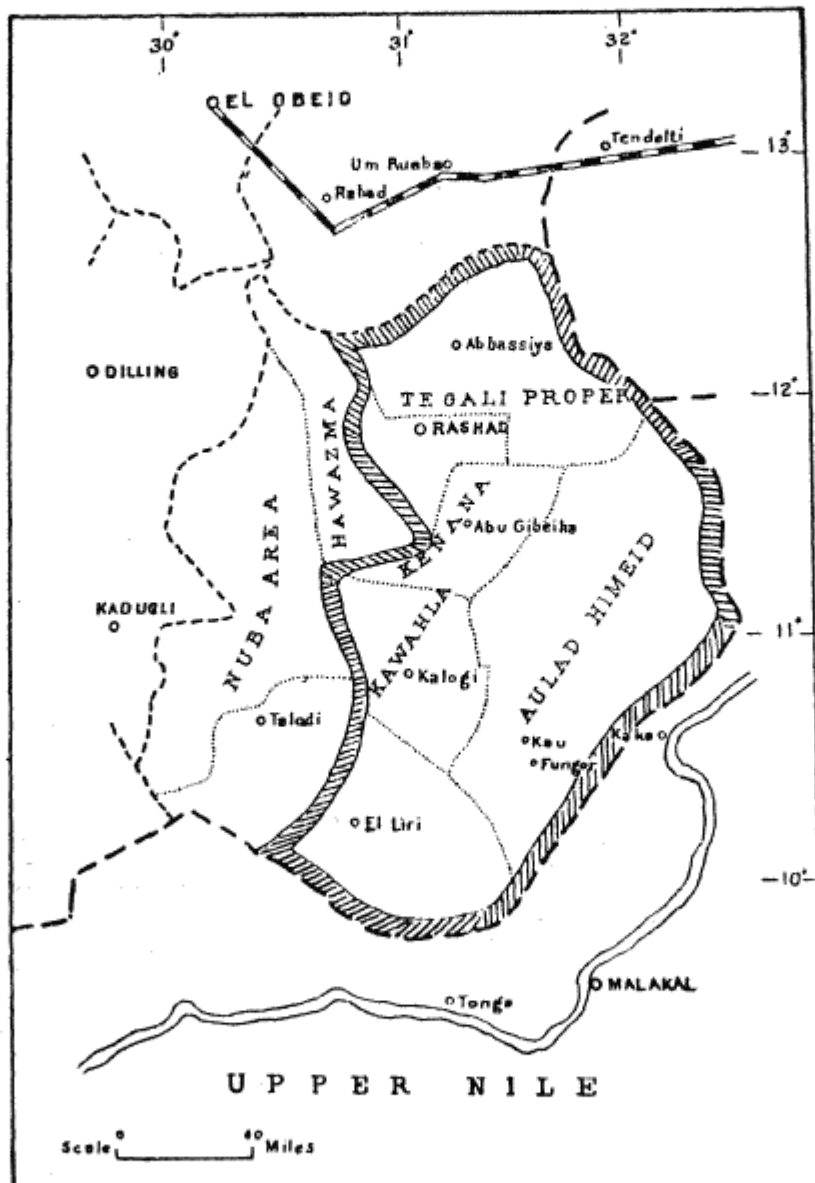
Once the Aulād Himeid and Kalōgi areas were joined to the kingdom, with the Grand Old Man working loyally with the Mek, it began to assume important stature. Its area was now some 12,000 square miles and its population some 47,000 souls. The N.A. imprest chest was promoted to the status of an independent budget with a revenue of some L.E. 3,500. The next two years were necessarily devoted to consolidation.

The list of the diverse peoples now once more within the jurisdiction of the kingdom of Tegali includes tribes as distinct from each other as Baggara Arabs (Kenāna, Kawāhla and Aulād Himeid), the arabicized Nuba of Rashad, westerners from Nigeria and beyond, and the pagan Nuba of the Kau-Nyaro hills.

In 1937 it was the turn of Nazir of Ellīri to be brought in. His people, lying due south of Kalōgi, had many connections with the Kawāhla, and many of them were of old Baggara Arab slave stock. This brought to Tegali three more omodias and ten Nuba sheikhships and extended the kingdom from the Gawāma'a boundary in the north down to the Upper Nile Province boundary north of Tonga. [See Map II.]

Six years now passed before any further amalgamations or additions

to Tegali were made. This was partly due to administrative preoccupations during the early part of the war, and partly to the need for a period of organization and consolidation, during which the sub-unit courts were fitted into a single court system with the Mek's court at the apex. Sub-chests were created in the various *gisms*, as the sub-units have come to be called, and economic and administrative ties were fostered and strengthened.



MAP II

Nevertheless it was possible to get the Hawāzma Halāfa to join

Tegali in 1943, bringing in four *omodias* who paid some L.E. 1600 tribute annually. Shortly afterwards an innovation in line with developments in other parts of the Sudan was introduced. The heads of *gisms*, with a few of the more important *omdas* and a merchant representative from the market town of Abbassiya began to meet together at regular intervals under the chairmanship of the Mek (with the District Commissioner as advisor) forming an unofficial council for the Tegali Administration.

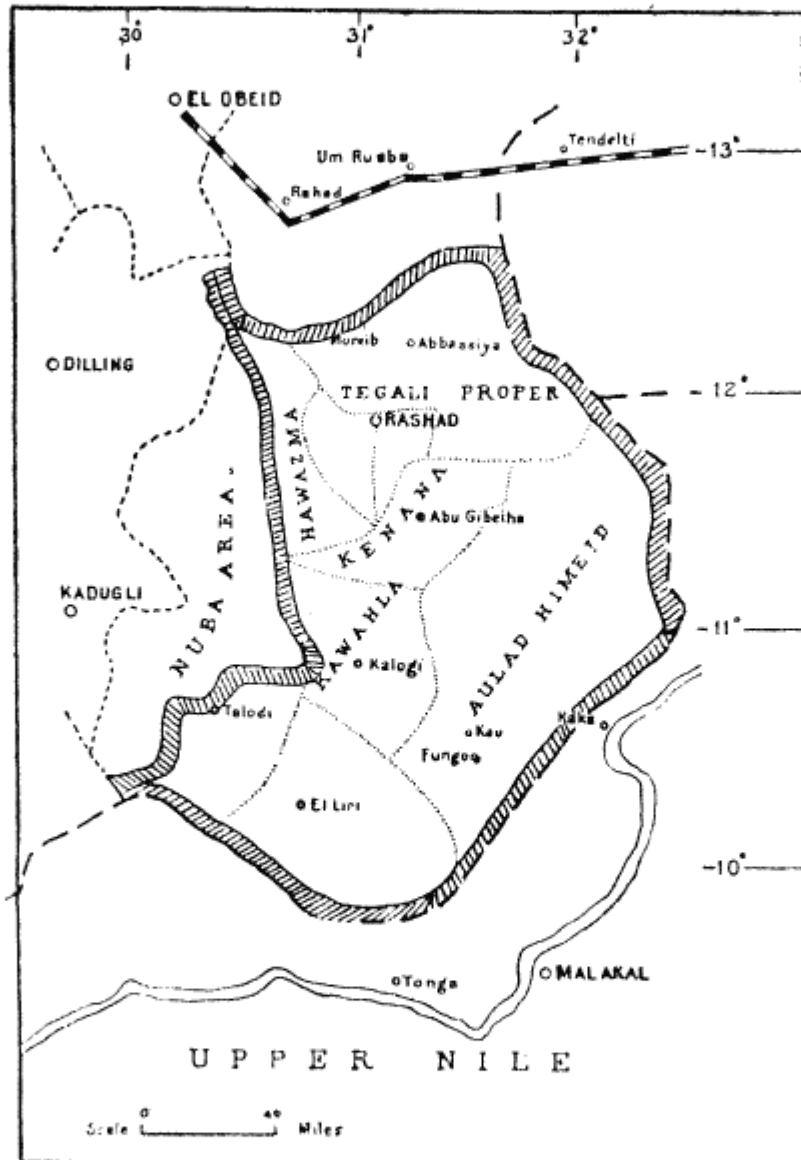
Finally, in 1945, Talodi Omodia was brought into Tegali, and the kingdom now covered the whole of Eastern Jebels District with the exception of the purely Nuba groups, running down the west side from the Koalib at Delāmi to the Korōngō in the far south of the District. These had their own separate administrations and were amalgamated with western Jebels District in April 1947. The kingdom's budget now balanced at some L.E. 15,000, and it comprised some 140,000 people in an area of some 15,000 square miles. Elles' "broken fragments" had been pieced together over a period of 24 years. [See Map III].

The administrative and judicial set-up of the kingdom governed by tribal division and geographical accident was remarkably symmetrical. It was divided administratively into two *idara* and subdivided into seven *gisms*. The northern *idara* consisted of three *gisms*, those of Tegali proper, the Hawāzma, and the Rashad — Tagoi — Turjok group. The Mek's brother and *wazir* Sheikh Hag el Tāhir Geili was his *wakil* for this *idara*. The southern *idara* consisted of the remaining four *gisms* of the Aulad Himeid — Kenāna, the Kalōgi Kawāhla, Ellīri and Talōdi Omodia. The Mek's *wakil* for this area was Nazir Rādi Kambāl.

Judicially the framework was similar. Appeals from *gism* courts went, in the first instance, to the courts of the heads of the two *idara*. Appeals from their decisions could be taken to the Mek himself, as president of the Tegali Court.

Administratively and judicially each *wakil* was responsible for touring and coordinating the *gisms* in his *idara*. From time to time the Mek himself made a tour or 'progress' through his dominions to show himself, hear complaints and give advice. With his council, and the system of administrative devolution down to and through heads of *gisms* already described, his position resembled that of a constitutional, rather than a despotic monarch. This rôle suited the personality and inclination of Mek Adam, who prefers the giving of council and advice to executive action. In fact, in 1946 he tried to resign in order to retire to a quiet private life. This move produced an interesting reaction

from the members of the Administration. The Mek's son was not yet old enough to take his father's place, and none of his brothers commanded the necessary support throughout Tegali. He was therefore constrained by the unanimous exhortations of all the various tribal heads to continue in office. His own personal position was confirmed and



MAP III

strengthened thereby ; more significant, it was proved that the unifying effect of the tradition of the Tegali Mekship and the amalgamations which had been made over the last 25 years to restore the territorial unity which that tradition represented, were appreciated by the diverse elements of which the Kingdom was composed.

A radical change now ensued. No sooner had the Government successfully completed its "policy of piecing together the broken fragments of the old kingdom and restoring the authority of its hereditary ruler" than it transformed the kingdom into a warranted Rural District Council in 1947. The powers granted to the new council were considerably greater than those of the old kingdom.

This is an example of how political thought in the Sudan has changed or developed since the early 1920's. But so democratic in trend was the rebuilding of the Tegali Kingdom and the restoration of "the authority of the hereditary ruler," and so well did this combine with the character and outlook of the hereditary ruler himself, that the change from kingdom to Rural District Council, which became legal on January 1st 1947, was made with the minimum of dislocation.

As already described, during the last three years an unofficial 'council' had been operating at the head of the affairs, during which time experience was being gained on council and committee procedure, and it was a simple matter of adjustment to form a Rural District Council. This consisted, to begin with, of a main element of tribal representatives nominated by the Governor, three members representing outside interests, also nominated by the Governor, and a commercial element elected by the business interests of the three chief market towns of Abbassīya, Rashād and Talōdi.

Mek Adam seized this chance to relinquish his nominal control of affairs by refusing to serve as chairman, and the Council thereupon itself suggested that he and his heirs, as Meks of Tegali, should by virtue of their tradition provide the only *ex-officio* member of the Rural District Council. They then elected his brother, Sheikh Hag el Tāhir Geili, head of the northern *idara*, to be Vice-chairman, and decided that the District Commissioner, at least for the early years of the new Council, should be chairman. The administrative set-up, as already described, remained unchanged, the area being still divided into two *īdaras* and seven *gisms*.

Founded in the 16th Century, reaching its zenith in the 19th, disrupted by the Mahdia, and rebuilt by the present Government in the 20th Century, the Kingdom of Tegali has now ceased to exist. It is not however dead; rather has it undergone a natural metamorphosis in line with modern trends in the Sudan.

FURTHER NOTES ON THE DEATH OF A RETH OF THE SHILLUK (1945)

By W. P. G. Thomson.

THESE notes are intended to amplify the article "The Death of a Reth of the Shilluk and the Installation of his Successor" by Mr. P. P. Howell and myself published in *Sudan Notes & Records* Vol. XXVII, 1946.

No attempt is made to describe the ceremonies in full. The general pattern followed that of 1944 and these notes are chiefly concerned with the differences observed on this occasion, and the reasons given by the Shilluk for these differences. It was interesting to observe that in several cases where points of ceremonial differed, the procedure reverted to that of January 1918 described by Munro in *Sudan Notes & Records* Vol. I, 1918.

The disposal of the Body and Soul of Reth Anei.

The course of events was as follows:—

Reth Anei Kur died on November 10th 1945. He had been ill for some days, apparently from an attack of relapsing fever, which was prevalent among the Shilluk at the time; he was known to have a bad heart, and had in fact had a heart attack some months previously in Malakal hospital. A Shilluk medical assistant, present at Fashoda at the time of the *reth's* death, reported that he died in his arms of heart failure. This is as good evidence as we are likely to obtain that *reth* Anei died a natural death.

I was invited, as in 1943, to pay my last respects to the corpse. This I did on November 11th, and the scene was similar to that of 1943, but simpler. The corpse was fanned by sisters of the *reth*, and his wives were not in the house with the corpse. Several were observed outside. The reed mats were not so elaborate as in 1943 and there were no cloth curtains.

The corpse was not immediately buried, as happened in 1943, but was taken on the night of 11.11.45 to a small hamlet belonging to the village of Fadwol, (the village of the Bang Reth Kur — slaves of *reth* Kur, the father of Anei) some three quarters of a mile from Fashoda, and sealed up in a hut. These proceedings were naturally secret, and I was not invited to enquire into details. This method of disposing of the corpse was a reversion to tradition: there is no evidence that a

maiden was sealed up alive in the hut along with the corpse, which is also said to be traditional.

Fafiti Yor died in September 1943, and his funeral dance was held in November. Anei Kur died in November 1945, and his funeral dance was not held until October 1946. This longer interval was also more in accord with Shilluk custom, which holds that there should be an interval of about a year between the death of a *reth* and the installation of a successor. The installation ceremonies should follow quickly upon the funeral dance for the deceased, and should take place after the harvest is ripe.

Two days before the dance, the remains of *reth* Anei were brought secretly, and by night, from Fadwol to Golbainy where his private village had been, and were buried in his house. The remains were brought by Ororo under the supervision of Gol Nyidhok, the descendants of Nyidhok, the grand father of Anei. The dance took place there and only occupied two days. It was less well attended, and the contingents not so well marshalled as in 1943, but the essential characteristics were the same, and there were the same arguments about how long it should last. The ceremonies were in the hands of the eldest son of the deceased, and of Kwanyireth Bol Acien, the chief of Lul, who had taken a large part in 1943. The chief of the Kwareth, who was senile in 1943, had died in the meantime, but his successor in office, a young man, took no part. The *reth* remained purposely in Fashoda, and did not come to Golbainy at all. It was noticed that, as bulls were slaughtered, the horns and tails were hung on to the palisade surrounding the house where *reth* Anei lay buried, and his cattle bells and other ornaments were displayed by *bangreth* in front of the tomb, spread out upon a bull skin.

The election of Reth Dak Fadiet.

On the death of *reth* Anei the electoral college were summoned, as in 1943, by Jago Tabo of Golbainy for Gol Dhiang and Jago Yorleiker of Kwom for Gol Nyikang, the two great ceremonial divisions of the Shilluk kingdom. The composition of the college was the same as in 1943, except that the chiefs of Bur Nyilieci and Owalin Obwa could not attend owing to illness. It was clearer to me than before that the choice rests entirely with the chiefs of Gol Dhiang and Gol Nyikang. I doubt whether even the chief of the Kwareth has any influence: he and the other members of the college have only to listen to the decision.

Reth Anei had not lived long enough to adopt a *nyireth*, as *reth*

Fafiti had done. Opinion was decided that the succession lay with the sons of Fadiet, and as the electors gathered at Fashoda, so the sons of Fadiet left their homes and came within easy reach. This was a breach of tradition, which demands that all *nyireth* at such a time should remain quietly at home. It gave rise to certain fears among the chiefs that some *nyireth* might try to instal himself in vacant Fashoda by force. There was no evidence in the event that any *nyireth* had had such an intention.

The sons of Fadiet were not well known to the chiefs; unlike the sons of Kur, they had a reputation for being quiet and unassertive. There was no obvious choice designated, as Anei had been designated by Fafiti. The two king-makers reduced the sons of Fadiet to a short list of four names, and waited for a lead from me, as they could not decide upon any one of these four. After my suggestion that Dak Fadiet of Falo, one of their short list, would be a good choice, the chiefs at once agreed to him. There had been rumours of bribery, as in 1917, and two bribes were known to have been offered to, and refused by, Jago Tabo of Golbainy, the chief of Gol Dhiang. One had been offered by *nyireth* Nyikang Kur, a "princess" of evil repute, who wished her uterine brother, a son of *reth* Fadiet, to succeed. It appeared from a discussion with the two kingmakers that bribery on such a solemn occasion would result in certain death for the recipient at the hands of Nyikang and was out of the question. This may be so, and would be a reasonable tribal sanction to ensure an unbiassed choice. There was a suggestion from the southern Shilluk, where most of the sons of Fadiet live, that the electoral college with its northern bias would choose a *reth* from the north. There was no sign of this, because it was agreed at once that a son of Fadiet must succeed, and no one of these sons lived north of Fashoda. The feeling in the south that the north has more influence in Fashoda probably arose because the lines of *reth* Yor and *reth* Kur both come from the north and only that of *reth* Kwathker and his son Fadiet from the south. Fashoda itself is considered to be in the northern half of the kingdom.

Dak Fadiet was initially installed, and ceremonially washed and shaved by Ororo girls in Fashoda on 18.11.45. He was followed by a large crowd of some hundreds of armed men from Gol Nyikang and particularly from his own area of Fanyidwai and all the Colo chiefs present. His following was much larger than that of Anei in 1943. The crowd may have been expressing simple gratification that at last a *reth* had come from the south; they may have been there to try and prevent a candidate from the north being installed. But the ceremony

was completely peaceful, and the people of the villages surrounding Fashoda were not much in evidence.

The method of summoning the new *reth* was interesting. Dak like other sons of Fadiet was not far away, and the chief of Gol Nyikang sent his son by night to get him. Whether or not there is a mock fight between the selected candidate and the messengers I do not know, but the traditional form of words announcing the choice was told to me. It is an interesting example of Shilluk "understatement" when talking of the *reth* (c.f. Pumphrey *Sudan Notes & Records* Vol. XXIV, p. 44) — "You are our Dinka slave, we want to kill you" which means "You are our chosen *reth*, we want to instal you in Fashoda."

It was said that the installation of *reth* Anei had been hurried and many things had been forgotten. This was interesting in view of Anei's short tenure of office, which may have been due, in Shilluk eyes, to the omission of essential ceremonies connected with the installation. It was also said, and this was true, that Anei had hurried his installation through fear, in his anxiety to get it over. The new *reth* determined that in his case there should be nothing lacking and that the proper interval of time should be allowed to elapse. That this period is a time of ritual danger, as we suggested in the previous article, was frequently confirmed in 1946. The *reth* became more and more worried as the installation approached. There were rumours of rivals being harboured by important chiefs, and of preparations made for his assassination. They culminated in a strong rumour that a *nyireth* had declared his intention of assassinating the *reth* on the first day of the installation ceremonies. Mr. J. C. N. Donald, who followed the *reth's* party in their march to Fashoda on that day, confirmed the *reth's* nervousness. After the installation ceremonies were safely over, I asked the *reth* about this, suggesting that his apprehensions had been ill-founded, and he admitted, for the crisis was then over, that he had never had concrete evidence of any plot.

The actual preparations followed similar lines to those of 1944. It appeared that it was important that the ceremonies should take place on a waxing moon, and in the event this delayed the installation for about three weeks. As the time approached, there was the same apprehension that Nyikang would not start from Akurwa.

On 27.12.46 Nyikang and Dak arrived at Adodo Nyigir at sunset, carried by Kwanyikwom, the sacred clan from Akurwa who always have this duty. They entered the village, as they had done in 1944, over the body of a black sheep, and after dancing round the village, they went into the same house. They had come, as before, after

beating the bounds of Shilluk land at Moro, north of Kaka. The details of their progress were similar to that of 1944.

The only observed difference between the preliminaries for Nyikang's journey was the embassy to Fanyikang to get *dom* fibre for the ceremonial ropes. This year it was performed by 'Anongo,' one of the uncrowned sons of Nyikang, and not by Dak as in 1944. The embassy this year only went to the *dom* palm forest at Obai Dego, which is 15 miles downstream of Fanyikang.

On 28.12.46 the *reth* was still at Fashoda, and not yet fled to Debalo Kwom. It was expected that he would go before dawn on 29.12.46. Fashoda was full of his personal supporters from the southern Shilluk. I noticed that the *reth* had apparently made friends with the *nyireth* whom he had recently suspected of trying to ambush him.

The *reth* started for Debalo secretly at about 3.00 a.m. on 29.12.46. After resting half way, he entered Debalo, after the village had ceremonially resisted him three times. He stepped over a black sheep, held by Ororo. When he entered, his supporters all broke into one of the songs of Nyikang. This was a mistake, as the whole proceeding should have been secret. The *reth* stayed at the same broken down house as in 1944, and the same royal house was prepared, and left empty.

Jago Yorleiker, the chief of Gol Nyikang, was in charge of the ceremonies. All the fires had been put out before the *reth's* arrival, and preparations had been made to light new fire by the ceremonial method of *pic mac*. This method is later used at Fashoda and is described in our previous article (op. cit. p. 65). A bull was brought by Jago Yorleiker, which was to be speared when the *reth* came out of seclusion to be greeted by the assembled chiefs of Gol Nyikang in the evening. The chiefs of Gol Dhiang had no business in Debalo, and if they came, they would come as observers. Some sheep were brought by self-confessed adulterers. The *reth* insisted that only adulterers whose cases had not previously been opened could avail themselves of this privilege of amnesty, but in the event a few men tried to avoid a judgment debt by paying a sheep. There is some confusion about the ownership of these sheep. It seems clear that they belong to the *reth*, but are presented by him to the chief of Debalo Kwom (himself the chief of Gol Nyikang) as a recognition for his services in sheltering the *reth* in Debalo. In 1944 the chief of Gol Nyikang appropriated the sheep without permission.

That evening the drums of Nyikang were heard from Nyigir, and the *reth's* drums from Debalo. The procession carrying the sacred beads *Ocoro* from Lul arrived at about 8.00 p.m.

The next day December 30th, *Adul*, the temporary camp outside Fashoda, was built by Jago Yorleiker. This time he built both huts, and the chief of Gol Dhiang had no part.

On the 31st the *reth* and Nyikang were ready for the installation ceremonies. Nyikang and his army left Nyigir at about 9.00 a.m. and went straight to the village north of Fashoda, where they had to wait some two hours for the *reth* to start from Debalo. The army of Nyikang moved steadily this time and seldom turned back in countermarch as it had done in 1944. The *reth* was delayed ceremonially till about midday. His form of procession was similar to 1944, and the cattle which were bride-wealth for Nyakwer were observed being driven along beside his army.

There had been an abnormal White Nile flood in 1946, as in 1917 at the time of the installation of *reth* Fafiti, and the Khor Arepajur, which was dry in March 1944, was now an expanse of water about 80 yards wide. When the *reth* arrived at the khor, the *Golbainy* dragged the small black bull to the southern bank. The *reth*, taking Nyakwer by the hand, stepped over the bull and into a canoe. He was paddled across the khor with Nyakwer sitting behind him, while his followers forded the stream.

As the two parties of Nyikang and the *reth* approached each other Nyikang dashed forward and captured the *reth* without a struggle and began at once to carry him off to Cerfuc (op. cit. p.p. 61 & 78) Fashoda. This corresponded with Munro's observation in 1918 (*Sudan Notes & Records* Vol. I), but not with what we had seen in 1944, when there had been a spectacular mock battle with millet stalks. I was told that they had "made a mistake" in 1944, and also that owing to the hardness of the millet stalks they were afraid of injuring someone. This latter reason had not cancelled the fight in 1944. There is another possible reason: the *reth* himself was feeling in a state of acute personal danger, owing, as he thought, to the likelihood of someone making an attack on his life. He may have issued orders at the last moment that the battle was not to take place, in case someone should take advantage of the confusion to attack him. This seems more possible because the *reth's* army were all carrying millet stalks as they crossed the khor, as if in preparation for the mock battle.

The rest of the ceremonies closely followed precedent. *Reth* Dak, while enthroned on the stool was "possessed" by Nyikang, in the same way as *reth* Anei had been. He was afterwards led away to seclusion in *Adul* leading Nyakwer by the hand. An incident which may be of interest occurred while the *reth* was being led to *Adul*. The

sheep over which he had to step on entering *Adul*, defaecated on the way. The man holding the sheep picked up the droppings and rubbed them on the sheep's back. After he had done so he made gestures showing that he had restored the situation, indicating that the sheep was no longer defiled.

For the following account of the final ceremonies I am indebted to Mr. H. A. Nicholson, then Deputy Governor Upper Nile, with whom I witnessed them.

The final ceremonies of the installation of the new *reth* of the Shilluk took place at Fashoda on 3rd and 4th January. This time there were no large crowds, but only the chiefs and leading notables and the attendants of Nyikang and the *reth*.

On the evening of the 2nd, the *reth* had come out of the special grass hut into which he had been led with the small girl, his symbolic bride, Nyakwer, 'the girl of the ceremonies,' after the spirit of Nyikang had entered into him and he had been ritually seated on the sacred stool or throne. He had come out to go up into Athudowic, the hill of the throne, the great mound which dominates Fashoda, on which are set the four sacred houses which constitute the shrine of the Shilluk kings. With him was a girl, but it was not his bride. In accordance with tradition her place had been taken by a girl of the Ororo clan who had enticed him away. Next morning, when he discovered this, the *reth* sent out to search for his wife, and eventually learnt that she had been taken by Nyikang to his shrine. He sent envoys to ask for her return, and when Nyikang refused, he came out, stepped over a sheep, marched down the hill with his army, stepped over a grey-white bull and challenged Nyikang to battle. Nyikang's drum was then heard, sounding a distinctive beat, the lion call, and Nyikang accompanied by his sons Dak and Cal (a smaller figure made of the grey feathers of a female ostrich) came out from his shrine at the head of his army. After marching round his shrine, from right to left, he advanced to meet the *reth* and his party, who were waiting on the open ground in the middle of the village. Twice Nyikang advanced towards the *reth* and retired again to march round the shrine, while his drum sounded a new insistent beat. The third time the armies joined battle armed with millet stalks, and also, in the case of Nyikang's men, with special rope whips. This time the *reth* prevailed, and seizing Nyakwer who was with Nyikang's army, drew her with him at a run up into the hill, while Nyikang and his men withdrew to his shrine at the other side of the village.

Next morning the stage was set for the last act, the *kel tong*

piny, the planting of the spear in the ground, when the new *reth* appeared before the chiefs and notables, received their homage and addresses of exhortation, and in reply gave his undertaking to be a good and just ruler and to work for the welfare of the Shilluk people. The ceremony was simple but impressive. First of all the chiefs and leading notables lined up near the base of the hill, squatting on the ground with their legs tucked beneath them in the decorous and respectful manner which is distinctive of the Shilluk. Behind them was a similar group of men of lesser importance. Then Nyikang's shield with bells on it, (which is said to be of silver), his long spear, and his throne (the *kwom*), all wrapped in new white cloth to conceal them from the gaze of ordinary men, and his drum, were brought out and taken to the bottom of the hill in front of the waiting chiefs. Here the throne was set up on a giraffe skin. Shortly afterwards the *reth* appeared, clad in a white *lau*, and wearing the royal skin of the female Mrs. Gray antelope, and a new ivory armlet, which had been specially made for the occasion. After stepping over a sheep, he walked down the hill accompanied by Nyikwer and a small party of attendants, and protected by the royal fan made of the wings of the saddle bill stork in the form of a shield. When he reached the throne, he was lifted on to it by two men of the Ororo. The bearer of the fan held it over the *reth's* head to protect him from the sun, while the bearers of the shield, spear and drum stood in front. When all was ready, the shield-bearer advanced towards the rows of chiefs shaking the shield so that the bells jingled, and marked out the first speaker. This was Yor Leiker, the chief of the south, on whom together with Jago Tabo, the chief of the north, who spoke second, had lain the main responsibility for the choice of the new *reth*. These two were followed by some two dozen others, ending up with the chiefs of Tonga and Mwomo (Kaka), the wardens of southern and northern marches. The speeches took the form of exhortations to the new *reth* to deal justly with his people without fear or favour, that the spirit of Nyikang was in him and the people looked to him for good crops and good fortune. And as each speaker finished he stabbed his spear into the ground and left it there. When a speech met with approval, it was acknowledged by the shield bearer and the drummer coming forward and walking round the speaker shaking the bells and beating the drum respectively. When these speeches were over, the *reth* rose up and addressed the company, went over to the bull and stabbed it, and returned once more with his party into Athudowic.

The ritual was over. The new *reth* was secure in the occupation

of his throne, the spirit of the divine Nyikang, which had been as it were in suspension since the last *reth* Anei Kur had passed over a year ago, had entered into Dak Fadiet, and once again the Shilluk people could resume their normal life.

NOTES.

1. *The body of Nyikang.*

It was explained in our previous article that the body of Nyikang consisted of a bundle of bamboos brought from the Nuba Mountains. I now believe that this is not the case and that only Dak's body is of bamboo. It is more likely that the bundle is of ambatch, indeed this is generally believed. The Shilluk believe that the soul of a mortal can pass into a stick of ambatch, and I am informed by Dr. J. A. Heasty that if a Shilluk dies away from his home his relatives hold a ceremony to make his soul pass into a stick of ambatch, which they take back to his village and bury there.

2. *The vigil of the Beads 'Ocoro,' which are tied on to the reth's ankle.*

I interviewed the old *nyireth* who is responsible for these beads. She was reluctant to tell me much, and refused to show me the beads. I asked her, for she had great experience of these matters, how it came that some beads appeared with holes in them, and she told me that as she sat over them at night the ones which appear with holes went 'pop.' She told me that four had appeared with holes for *reth* Fafiti in 1918, and one for *reth* Anei and five for *reth* Dak. She said four or five were about right, one was too few, and more than five was too many. The beads with holes are tied on to the *reth's* ankle only during the ceremonies, and after that they apparently close up.

3. *Nyakwer.*

It was not clear in 1944 what became of Nyakwer. It now appeared that she became *bareth*, i.e. will become a wife of the *reth* when she grows up. The girl who was Nyakwer in 1944 still lives in Fashoda, and is now about 13 years old. There was of course a different girl in 1946.

4. *Fashoda.*

The sacred village of Fashoda was most beautifully cleaned and repaired for the installation. All the houses had had their fences renewed, and courtyards replastered with mud, though none of them was rebuilt. The whole of the mound on which the royal shrine of

Athudowic stands had been plastered with smooth mud from top to bottom.

5. *Fanyikang*.

As in 1944 the sacred shrine of Nyikang at Fanyikang was thrown down and rebuilt after the ceremonies.

BIRDS CAUSING CROP DAMAGE IN THE SUDAN

By C. E. Wilson.

THE purpose of this article is to give a brief account of species of birds which may cause damage to cultivated crops: only a few of these cause serious damage, but many may cause noticeable damage in some localities. The most serious pest, the Sudan Dioch (*Quelea quelea aethiopica*), has already been the subject of a separate account, so it will only be noted here.

As these birds occur over such a wide area, information at present available is rather incomplete, and is lacking from the country south of the ninth parallel of latitude. It is hoped that those who are interested may be able to supply further information especially from the south, both as regards habits and, distribution, and also as to local vernacular names of the different species, which are extremely useful in interpreting reports of damage from various districts. Any information should be sent to the Entomological Section of the Agriculture & Forests Research Division at Wad Medani, where an exhibit illustrating this article is on view in the headquarters building.

The Sudan Dioch (*Quelea quelea aethiopica*).

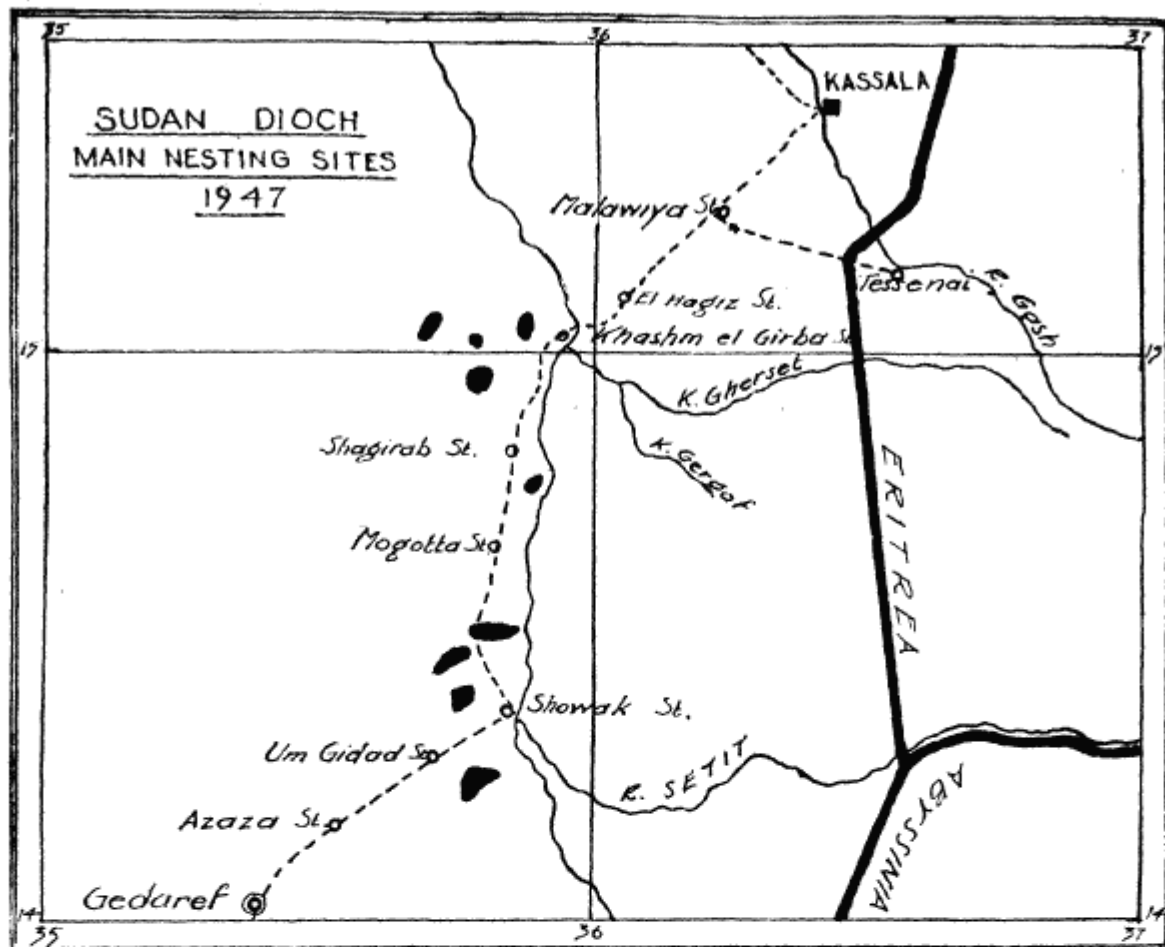
The habits of this species have already been dealt with in a previous article.¹ As it is a species of considerable economic importance it has a variety of local names, of which the following are a selection:—General, *Gadum Ahmar*. Blue Nile, *Abu Nadara*. Fung, *Abgier*. White Nile, *Azein*. Northern Darfur, *Abu Hatab* (also applied to Cut Throat Weaver). Southern Darfur, *Geigei*. The map of the main nesting area of 1947 is for comparison with that of the 1946 season illustrating the previous article.

Owing to the poor rains this season, nesting took place in general further south than last year, and also about 18 days later, but otherwise was the same.

The Nile Masked Weaver (*Sitagra taeniopterus taeniopterus*).

This species occurs on the River Rahad, and the White Nile, south of latitude 14°; in some districts it does some damage, but this is overshadowed by that caused by the Sudan Dioch, which also occurs in the same districts. It may on the whole be beneficial, through eating insects at some seasons, but this is not yet known for certain.

¹ S.N. & R. Vol. XXVIII p. 151.



It nests during September in the northern part of its range, and builds woven grass nests in trees such as *Sunt* (*Acacia arabica*), and *Talh* (*A. seyal*), where these are situated in flooded areas. It differs from the Sudan Dioch in usually having standing water under the nests. The nesting sites may cover several square kilometres, and individual trees may contain from 5 to 50 nests. Three eggs is the normal clutch, though four is not uncommon. Swarms also are not so dense as those of the Sudan Dioch.

The eggs of this bird show unusual colouration, they may be light blue, light brown, green, speckled green, or speckled brown on white. The colouration of the males during the breeding season is as follows:—Beak black; head and throat black; breast, upper abdomen, and back russet brown; lower abdomen yellow; wing and tail feathers dusky with yellow borders. During the dry season the black and russet brown portions change to brownish yellow, and the yellow areas become paler. Length, male approx. 145 mms., female 135 mms. When flying

during the breeding season, the males appear to be much more yellow than close inspection would indicate. Local names are *Chilluk* or *Dukhān el Azabat*, both used fairly generally.

There are also several other species of weavers similar to the Nile Masked Weaver, and which may be confused with it. They are all generally yellow, with a black face mask, though most have less black, and more yellow instead of the russet brown, and they build rather similar nests. The Nile Masked Weaver however occurs in greater numbers than any similar species. They are not sufficiently important to describe in detail, and are only listed here.

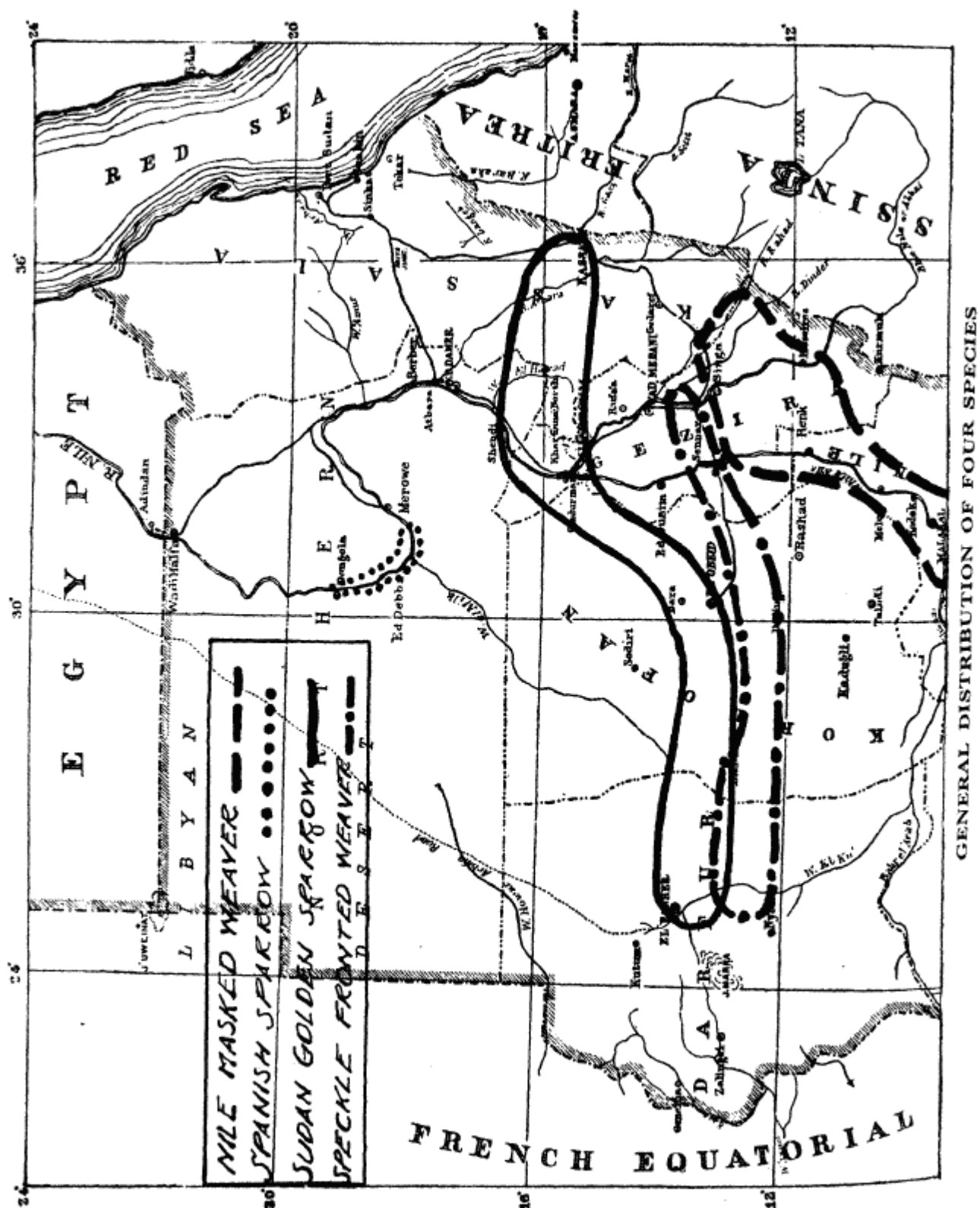
Little Weaver (*Sitagra luteolus luteolus*) a common resident. Uganda Yellow-Collared Weaver (*Sitagra capitalis dimidiata*) not common. Heuglin's Masked Weaver (*Sitagra heuglini heuglini*) not common. Abyssinian Masked Weaver (*Sitagra intermedius intermedius*) not common. Darfur Masked Weaver (*Sitagra taeniopterus furensis*) not common. Vitelline Masked Weaver (*Sitagra vitellinus vitellinus*) a common resident. Cinnamon Weaver (*Sitagra badius badius*) not common. White Nile Cinnamon Weaver (*Sitagra badius axillaris*) fairly common. Ruwenzori-V-Marked Weaver (*Textor cuculatus feminina*) a common resident. Abyssinian V-Marked Weaver (*Textor cuculatus abyssinicus*) a common resident. Uganda Spectacled Weaver (*Hyphanturgus ocularius crocatus*) a common resident. Ruppell's Weaver (*Hyphantornis galbula*) a common resident.

Grey Headed Social Weaver (*Pseudonigrita arnaudi arnaudi*).

This is mainly a southern species, but occurs as a minor pest in Southern Darfur, and in the vicinity of the White Nile. It is a smaller bird than most weavers; but builds a larger nest than usual, with two entrances pointing downwards. These nests are used throughout the year for roosting, but during the nesting season one entrance is blocked, and the eggs are laid above the blocked entrance. The eggs are usually three in number, and may have a white, or pale pink background, and may have reddish or brown spots, either evenly spread, or grouped in a ring at one end. An interesting observation in Southern Darfur in October 1947, was the occurrence of tree frogs in occupied nests of a nesting colony. The frogs, whose species it not yet determined, were about three quarters of an inch long, and in one nest two were hiding in the blocked entrance.

Speckle Fronted Weaver (*Sporopipes frontalis frontalis*).

This species is a minor pest in Kordofan and Darfur, where it occurs in small flocks about the thirteenth parallel of latitude. It



nests after the rains, and nests have been found from September to November. It makes a large nest of twigs, completely covered, with an entrance at the side, and lined with grass and feathers, (or else uses old nests of other species, but more information about this is required). It lays 3 or 4 eggs, greyish white, with dark brown speckling of varying intensity, or else a nearly uniform grey. The colouration of the male is:—Forehead and crown black, with small white tips to the feathers, giving a scaly or speckly appearance; back of head and nape, and a band on either side of the neck behind the ear coverts, rufous; rest of the upper parts ashy brown; the quills, coverts, and tail, rather dark, with paler edges. Below, including the sides of the face, pale ashy-grey; throat white, with a narrow line of speckled black on either side. Bill horny-brown. Female similar. Length about 135 mms. The local name in Darfur is *Kiteiu* (also used for the Golden Sparrow).

Cut-Throat Weaver (*Amadina fasciata fasciata*).

This species is a minor pest, but is widespread throughout the country. It has not been noticed in large flocks, but these may occur in some parts of the country, and notes of any occurrence of swarms of this species would be appreciated. The nests are similar to those of the preceding species, and the eggs are pure white. The colouration of the male is:—Above, pale rufous-brown, the feathers narrowly barred with black, giving a speckly appearance; primaries and tail-feathers dusky-brown, unbarred, the outer tail-feather tipped with white; a broad crimson band extends from the ear-coverts across the throat, in front of which the chin is pure white. The rest of the underparts whitish, with few scattered dark bars; and a pale brown patch in the centre of the abdomen. Colour of bill dark brown. Female similar with no crimson band, and pale brown patch on abdomen nearly absent. Length about 120 mms. Local names:—Darfur *Abu Hatab*, (also used for *Quelea quelea aethiopica*). *Umm Dabak* (also used for Kordofan Rufous sparrow) Blue Nile *Dabh Musa* or *Dabh Ar Rasul*.

White Beaked Buffalo Weaver (*Bubalornis albirostris albirostris*).

This species occurs widely in the arid and savannah areas of the country. It is usually found in small flocks, and often in company with the Green Glossy Starling, which it closely resembles; but from which it may be distinguished by the fact that the Glossy Starling shows green and blue reflections in the sun, while the Buffalo Weaver is always black. It nests in colonies, in trees such as the *heglig*; the nests are constructed of dry thorny sticks, and are fixed together in groups of eight

or ten to form large opaque masses in the trees. Each tree may contain many such masses. The nests usually contain three eggs, about 25 mms. long with a greyish white background mottled with dark grey brown, (and it is difficult to extract these without being pricked). The colouration of the male is :—Plumage above and below black, sometimes when worn, or in young birds, paling to a brownish shade ; bases of the feathers, except on the crown, white, and often showing as white patches when disarranged ; outer webs of the middle primaries narrowly edged with white. Bill dusky at tip, whitish or yellowish at base, which is swollen and porous in texture ; this swelling is only found in the breeding season ; in the "off-season" the bill is black. Female similar to "off-season" male. Length about 240 mms. The local name in general use is *Ak*.

The Sudan Golden Sparrow (*Auripasser luteus*).

The range of this species is to the north of that inhabited by the Sudan Dioch, extending across the country roughly on the line El Fasher, El Obeid, Khartoum, Kassala. In this zone it may do considerable local damage. The birds nest in this area, and it would appear that they migrate little, though information on this point is sketchy. They form in low thorn trees, large scattered colonies which may extend for 20 miles, though there are seldom more than two or three nests in a bush. These nests are loosely constructed of twigs, and are completely enclosed with a small entrance in the side ; usually three bluish white or white eggs, with brown mottlings, are laid during early in September. During the dry season the birds can be found in the vicinity of Khartoum, where they arrive in the evening in large numbers, and roost in the trees in river front gardens and neighbouring forests.

The colouration of the males during the breeding season is :—Head neck breast and abdomen, canary yellow ; back russet brown ; wings and tail dusky. Females, and dry season males :—Throat breast and abdomen, pale yellow ; top of head and back brownish grey ; wings and tail dusky. Length approx. 130 mms. Local names, Northern Darfur *Kiteiu* (sometimes used generally for small birds). Khartoum and Blue Nile *Tayr el Asfar* and *Safouri*, Dar Hamar *Kankoja*. Sometimes incorrectly in Northern Kordofan *Timelein*.

The Spanish Sparrow (*Passer hispaniolensis transcaspicus*).

This species is only a winter resident in the Sudan, and breeds in Palestine and further to the north. It only appears occasionally in numbers, but when it does it inflicts serious damage on the riverain

cultivations in Dongola. Halfa, Merowe, and Berber, where conditions would appear to be similar, escape damage. The birds first appear in early November, and flocks continue to arrive for about a month. They depart during March.

A serious cycle of damage by these birds lasted from the winter of 1914-1915 to that of 1919-1920.

These birds feed in small parties during the day, but collect in areas of suitable bush, such as old basin forests, in large congregations at night. During the time this bird is in the Sudan its food is almost wholly graminaceous. It eats cultivated grain crops, or, when these are not available, weed seeds, and even green dates. It does not usually eat grain which has fallen to the ground.

The colouration of the males when in the Sudan is:—Crown reddish brown; throat black; and sides of the body spotted with black. The other markings are similar to those of the domestic sparrow, which has the top of the head slaty blue, and the sides of the body unspotted. The average length is 160 mms. The local name is *Tayr faransawi*.

Sudan House Sparrow (*Passer domesticus arboreus*).

This species is widespread throughout the arid parts of the Sudan, where it occurs in the vicinity of human habitations; it can do considerable damage. During most of the year it makes untidy grass nests in holes in buildings, starting about March, and can usually be reduced to negligible quantities if villagers institute a weekly clearance of nests from their houses, as the population is not replenished by large immigrations. Usually three white eggs, with dark brown spots are laid. The colouration of the male is:—Crown rump and upper tail-coverts, grey; mantle pale rufous with black streaks; a band of dark chestnut on the sides of the head, from above the eye to the nape; below it is a black band running forward below the eye to the base of the bill, and continuous with the black bib which occupies the chin, front of the neck and breast; a white patch on either side, including the ear-coverts; wings and tail dusky with chestnut margins to the feathers, and a white band across the wing formed by the tips of the middle coverts; under-parts greyish-white. Female duller colour, with no black bib or black line below the eye, or chestnut on the sides of the head. Length approx. 150 mms. The local name in the Blue Nile Province is *Wad Debarak*.

Kordofan Rufous Sparrow (*Passer iagoensis cordofanicus*).

This bird is a common resident in Kordofan and Darfur, though

it is not a serious pest ; it appears to occur in pairs during October, but may congregate in small to medium flocks at other times of the year. It makes nests of grass in trees, and may lay 3 or 4 eggs, which are bluish white, streaked with brown or dark grey. The colouration of the male is :—Crown and nape dark ashy-grey, separated from the black ear coverts by a brick red line running from above the eye to the sides of the neck ; middle of the back rufous-brown, with conspicuous dusky streaks ; rump and upper tail-coverts rufous brown, wings and tail feathers dusky, edged with rufous ; below, a black patch on the throat, with a whitish border on either side ; breast and flanks greyish white, almost pure white in the centre of the abdomen. Bill black. Female similar, with the black on head and throat replaced by pale grey. Length about 155 mms. Local name *Umm Dabah* (also used for Cut-throat Weaver).

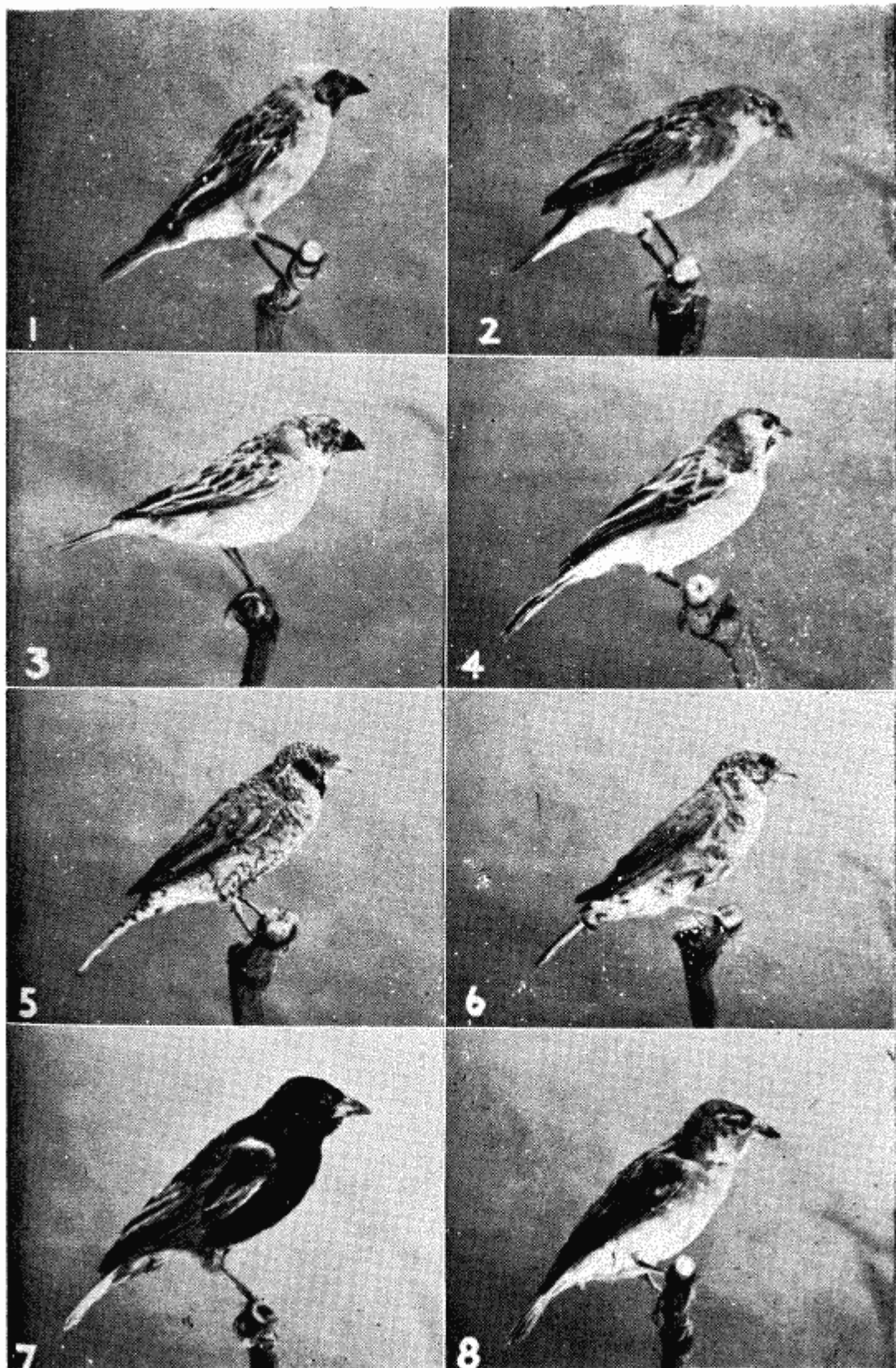
The Red Bishop Bird or Dura Bird (*Euplectes franciscana franciscana*).

This bird usually attracts more than its fair share of attention, partly owing to its striking rainy season plumage, and also to its wide distribution throughout the country. In reality it is not usually more than a local nuisance. During the late rains it builds a globular grass nest, usually in low bushes, with large entrance high up in the side ; it is of much more fragile construction than that of the weaver birds, being made of fine grasses not closely woven, and it is firmly fixed in the bush. It usually contains three small pale blue eggs.

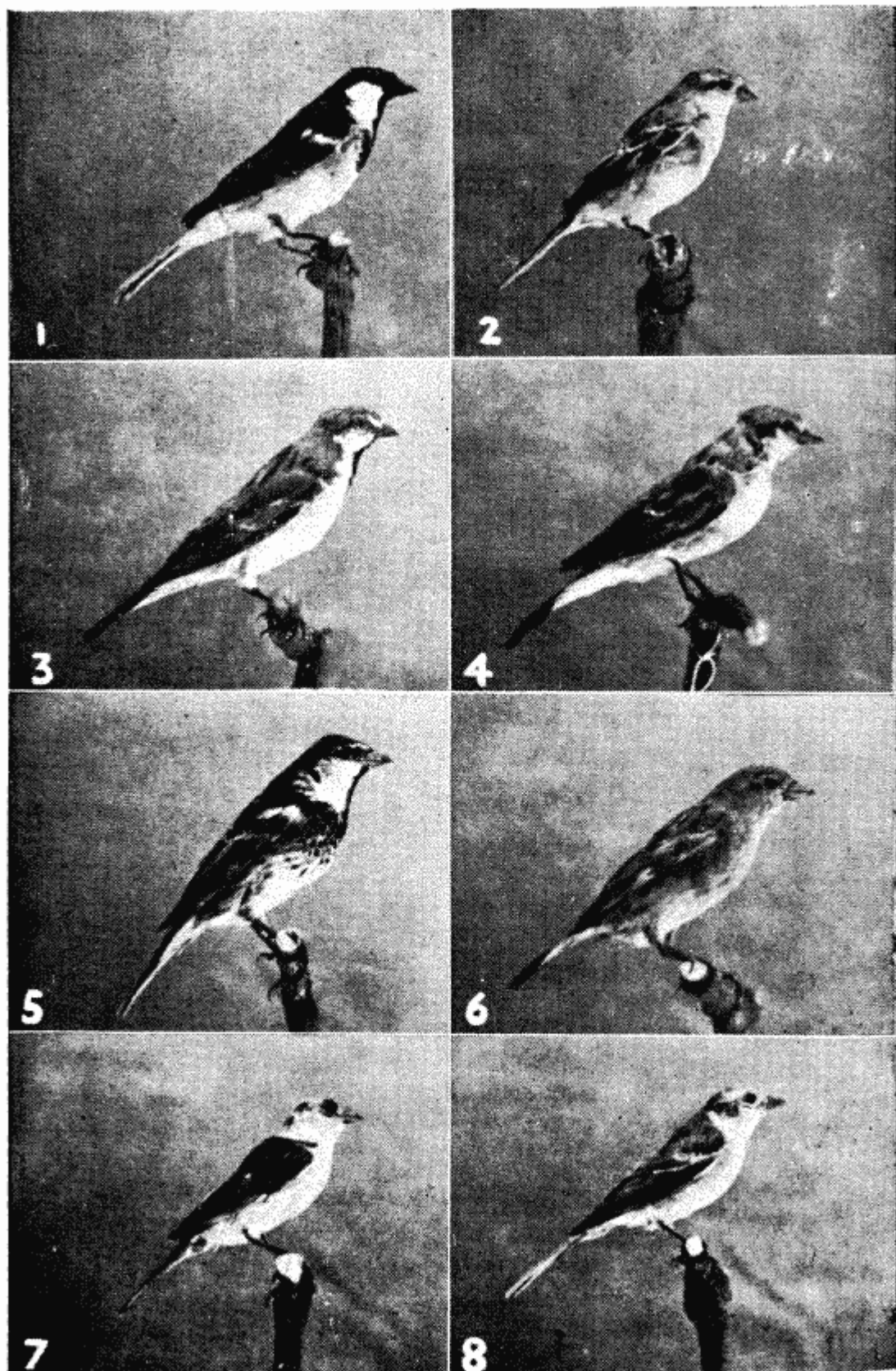
The colouration of the males during the breeding season is :—Crown sides of face lower breast and abdomen, black ; nape throat and chest, rump, and upper and under tail coverts, which are elongated almost concealing the tail-feathers, crimson red ; centre of the back a little duller ; wings and tail brown with paler margins. Female and dry season male :—Underparts pale brown, back feathers dusky with light borders, light brown eye stripe. Length about 110 mms. The local name *Abu Shersheri* is widely used.

Eastern Calandra Lark (*Melanocorypha bimaculata*).

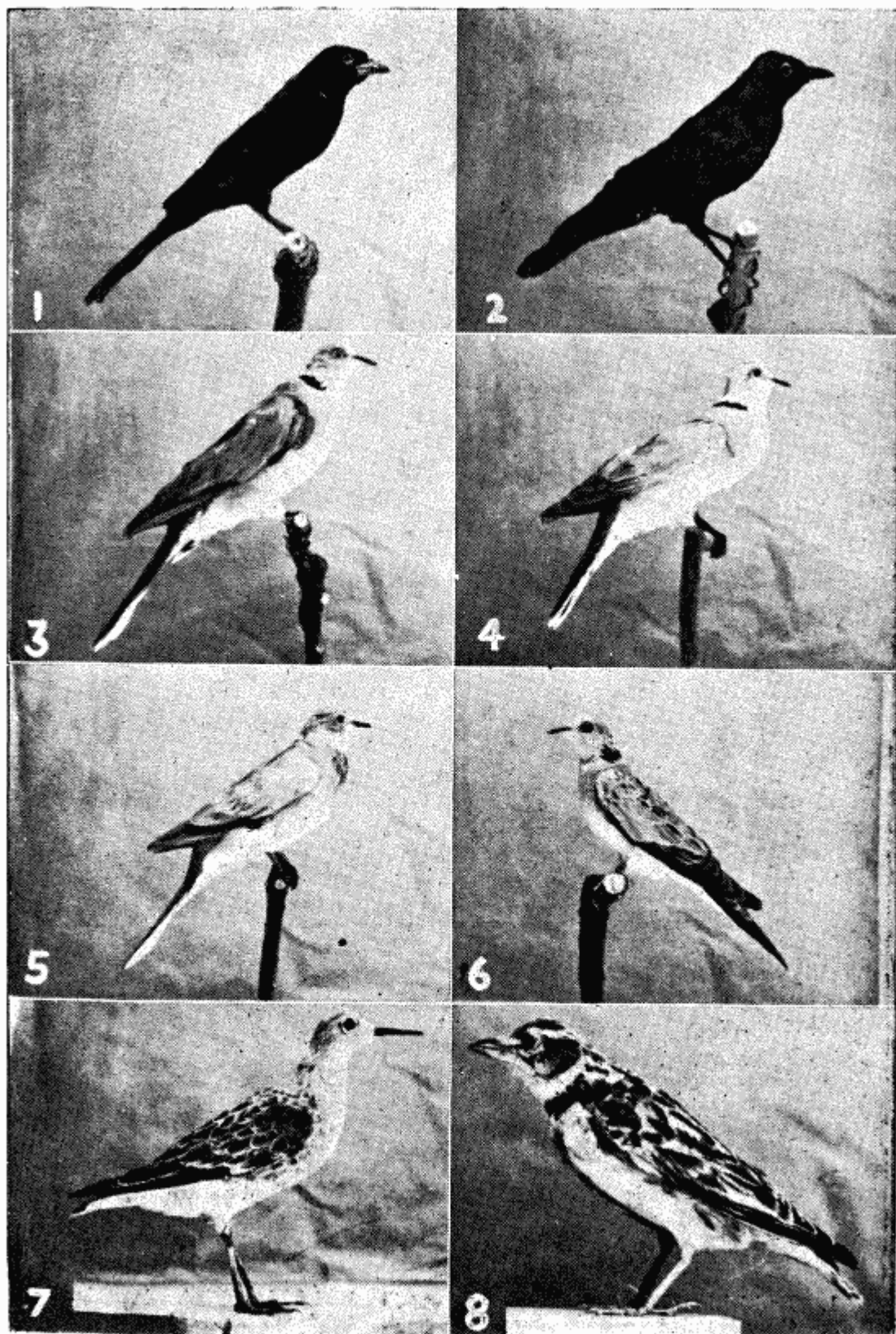
This species is a winter visitor to the Sudan, and may do considerable damage in areas such as the Southern Gezira, where the birds dig up freshly sown grain. They start to appear in early November, and remain until the end of February ; during the winter they may be seen in large or medium flocks. They can be distinguished in flight from other small grain eating birds by their larger size, and slower wing beats, and also by the more diffuse nature of the flock. The colouration of



- | | |
|--------------------------------------|--------------------------------|
| 1. Sudan Dioch. Male. | 2. Sudan Dioch. Female. |
| 3. Sudan Dioch. Male. (early rains). | 4. Speckle Fronted Weaver. |
| 5. Cut-throat Weaver. Male. | 6. Cut-throat Weaver. Female. |
| 7. Nile Masked Weaver. Male. | 8. Nile Masked Weaver. Female. |

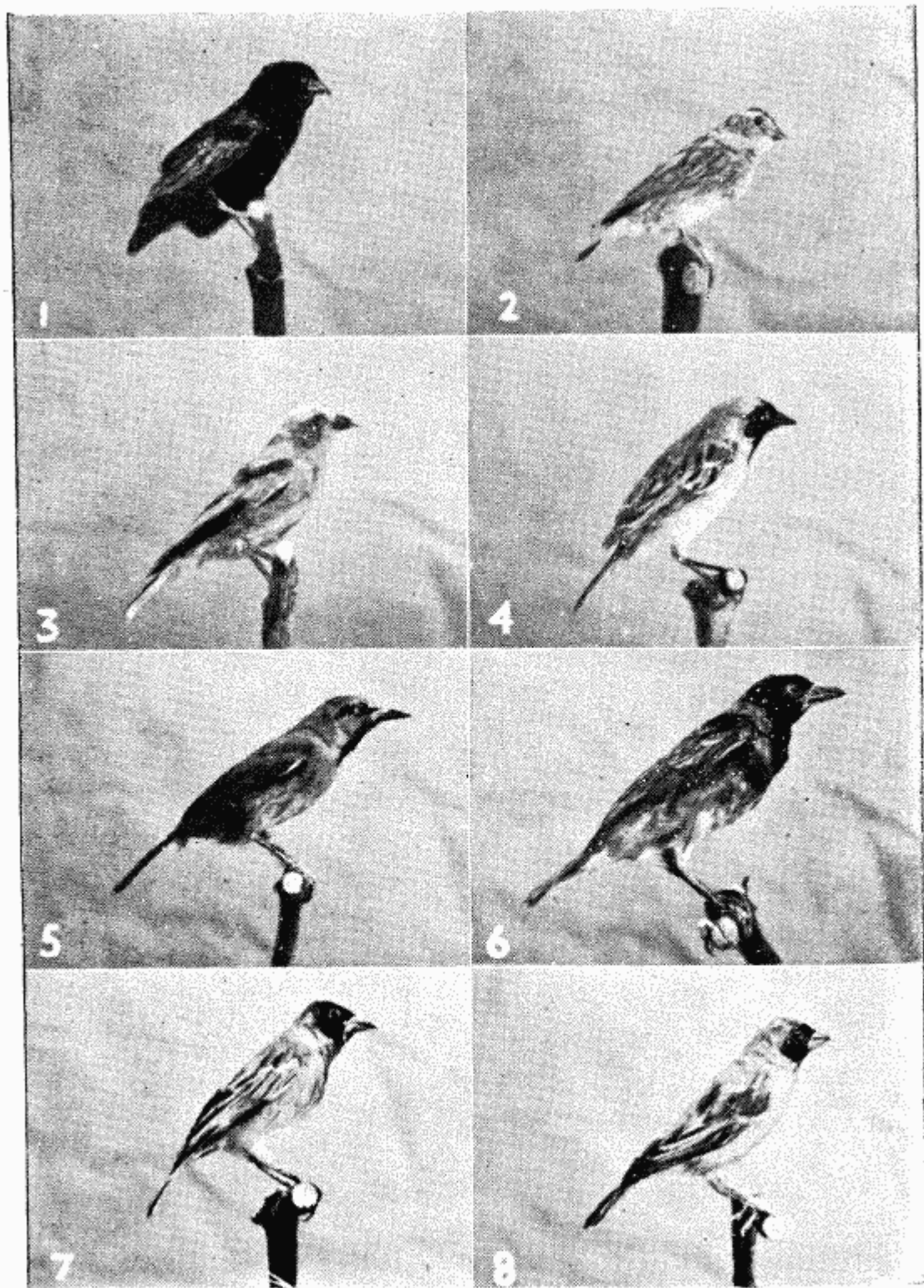


1. Sudan House Sparrow. Male.
2. Sudan House Sparrow. Female.
3. Kordofan Rufous Sparrow. Male.
4. Kordofan Rufous Sparrow. Female.
5. Spanish Sparrow. Male.
6. Spanish Sparrow. Female.
7. Sudan Golden Sparrow. Male.
8. Sudan Golden Sparrow. Female.



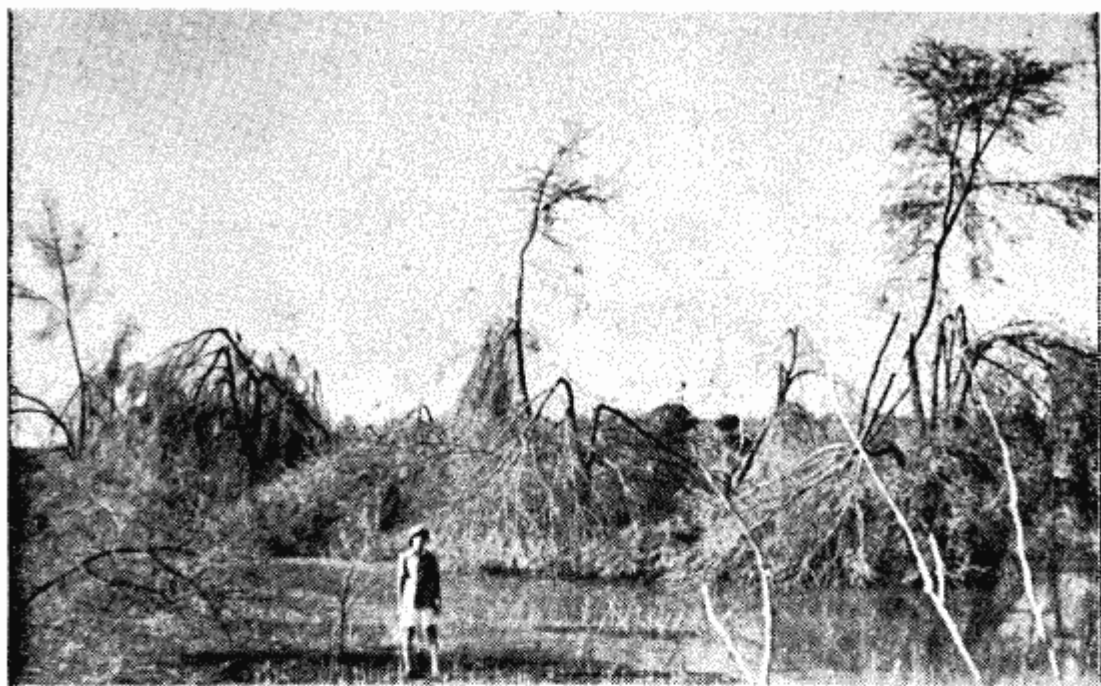
1. White Beaked Buffalo Weaver.
 3. Sudan Mourning Dove.
 5. Sudan Laughing Dove.
 7. Ruff.

2. Green Glossy Starling.
 4. Pink Headed Dove.
 6. European Turtle Dove.
 8. Eastern Calandra Lark.



1. Red Bishop Bird. Male.
3. Grey Headed Social-Weaver.
5. Uganda Spectacled Weaver.
7. Vitelline Masked Weaver.

2. Red Bishop Bird. Female.
4. Little Weaver.
6. Ruwenzori V-Marked Weaver.
8. Ruppells Weaver.



Damage caused by Sudan Dioch. Fung 1947.

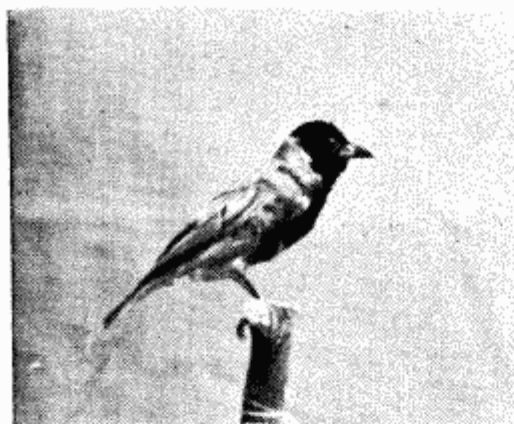
[Photo G. A. Booth]



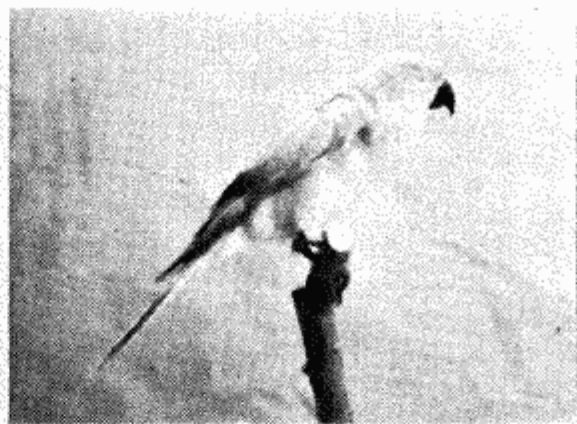
White Beaked Buffalo Weaver
Nests. September 1947.



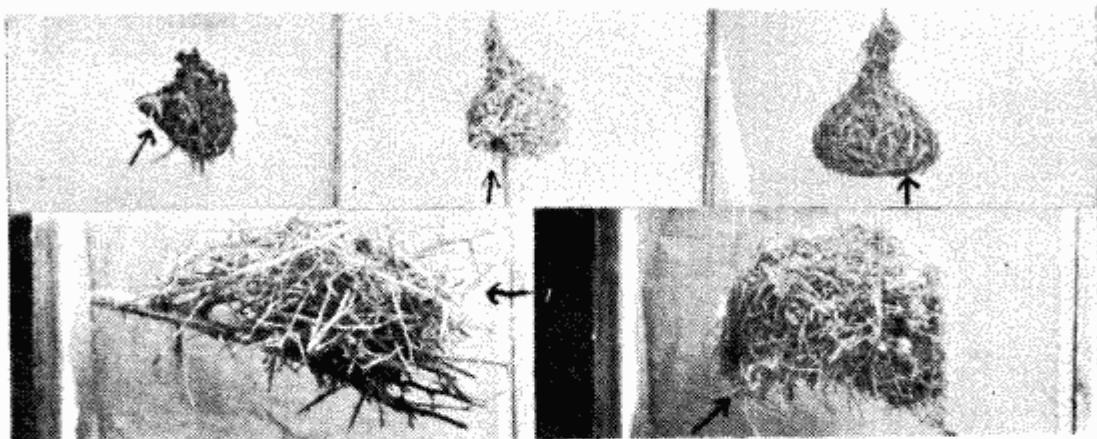
Sudan Dioch. Swarm of Feeding birds.



Uganda Yellow-Collared Weaver.



Abyssinian Parakeet.



Nests showing entrance.

Sudan Dioch. Nile Masked Weaver. Ruppells Weaver.
Sudan Golden Sparrow. Grey Headed Social-Weaver.



Nile Masked Weaver Nests. R. Dinder 1947.
[Photo Mohd. Hassan El Zakir]

the male is as follows:—Upper parts sepia brown, feathers centred darker; tail brown, the outer pair of feathers with small white tip; a black patch on each side of the lower throat, but not meeting in front; underparts whitish, flanks suffused buff. Upper breast slightly spotted; wings dark brown. Bill yellowish brown. The female is similar. Local name, Blue Nile, *Garagara*.

Green Glossy Starling (*Lamprocolius chalybeus chalybeus*).

This species is found widely throughout the Sudan. It occurs in small flocks, and may do considerable local damage to dukhn and dura. Nesting habits would appear to be similar to those of the White Beaked Buffalo Weaver, but more information on this point would be welcome. The colouration of the male is:—General colour metallic glossy green; ear coverts dark blue, and not so glossy; some of the secondaries and coverts with black spots at the tip; rump and tail a more bluish shade; underparts from the lower breast more blue, becoming violet on the abdomen; under wing coverts purplish, underside of wings and tail dusky; second to fifth outer primaries strongly indented on the inner edge. Bill black. The female is similar. Length about 270 mms. Local names northern Darfur *Weir*, Southern Darfur *Umm Dulba*, Kassala Province *Kolia*.

Abyssinian Parakeet (*Psittacula krameri parvirostris*).

This widely distributed species, which is the parakeet commonly seen, does not usually do much damage to crops, though fruit trees such as guavas may suffer considerably from their depredations; in the Nuba Mountains some local damage is caused to grain crops, where these are in the vicinity of patches of forest inhabited by these birds. However it is only noted as an interesting minor pest. Local name *Baghbaghan el Akhdar*.

The Ruff (*Philomachus pugnax*).

This species is a winter visitor which arrives in the Sudan about the end of October, and leaves about the end of March. Large flocks can be observed in the vicinity of the rivers, and in the Gezira, though it is seen in smaller numbers on the white Nile south of Kosti. In some areas damage is attributed to this bird; it usually eats animal matter, and fallen seeds, but large flocks may puddle sown areas of wheat after seeding. In the off-season plumage, which is all that can be observed in the Sudan, the colouration of the male is:—Above pale brown, with darker centres to most of the feathers; wings with a white

band formed by the tips of the greater coverts ; the wing feathers dusky with brown shafts, except that of the outer one which is paler or white ; centre part of rump and upper tail-coverts like the back, the sides pure white ; the tail feathers brown with paler margins ; below, including the under wing-coverts and axillaries, white, mottled on the fore-neck and chest with pale brown. Bill dull blackish brown, sometimes with a dull yellow base. The female is similar. Length about 220-290 mms. Local name, Blue Nile, *Girwil*.

Doves.

There are four species of doves which occur in large numbers, and do damage. One of these is a winter visitor, and the other three are resident species. Large flocks, seldom wholly of one species, may be observed during the late rains and winter in the central Sudan, though considering the numbers, and the fact that individually they can do much more damage than weaver birds and sparrows, the total amount of damage done would appear to be small. In fact they may be more beneficial than otherwise, as specimens have been obtained with their crops full of the seeds of common Gezira weeds. Very large quantities of doves of mixed species have been seen in September in the vicinity of Khashm el Girba and the Blue Nile, feeding on grass seeds, and in the winter near Sennar. Nesting of the resident species takes place from the early rains to the end of the year.

The winter visitor is the **European Turtle Dove** (*Streptopelia turtur turtur*). This species, which occurs in England in the summer, may be found in flocks in the northern and central Sudan between November and April, to about the 12th parallel of latitude. The colouration of the male is as follows :—Forehead grey, becoming ashy-brown on the crown and nape ; a patch of black feathers on each side of the neck conspicuously tipped with white, and bluish-grey ; mantle rather dark brown ; back and rump of the same colour, but with dark centres to the feathers. Innermost wing-coverts, secondaries, and scapulars, black, broadly margined with rufous-cinnamon ; outermost wing-coverts mostly blue-grey ; primaries dark brown, with a grey wash when fresh ; central pair of tail feathers dark brown, remainder black, washed with grey, and very broadly tipped with white, the white extending up the entire outer web of the outermost tail feathers. Chin whitish, throat and breast vinaceous, darkest on the upper breast, and washed with grey ; sides of body dark blue-grey, washed with vinaceous ; middle of belly and under tail-coverts white. Bill blackish. The female is similar. Length about 270 mms. Local name *Gimri*.

The Sudan Mourning Dove (*Streptopelia decipiens decipiens*).

This species is abundant throughout the year in the arid parts of the country.

The nests of this, and two following species, are typical dove nests, consisting of a scanty flat structure of twigs, containing two white eggs. The colouration of the male is:—Forehead cheeks and ear-coverts pale grey, gradually becoming darker grey on the crown, and pale pinkish-vinous on the nape; at the base of the neck a broad half-collar of black, bordered between the nape and the collar with white; mantle, scapulars, inner wing-coverts, and inner secondaries earth-brown, the outer coverts blue-grey; primaries dark brown, the extreme margin of the outer web white; outer secondaries brown, washed with blue-grey. Back, rump, and upper tail-coverts brown, more or less washed with grey, this wash most pronounced on the rump; central pair of tail feathers entirely brown, except for a grey wash on the basal half on either side of the shaft; rest of the tail feathers basally slate colour, washed with paler grey, the terminal third of each feather dove-grey, gradually merging into white at the tip. Chin white; cheeks throat and breast, pale vinous-pink, gradually merging into grey on the belly and flanks; under tail-coverts grey, as are the under wing-coverts and axillaries. Bill black. The female is similar to the male. Length about 300 mms. Local name *Dabas* (which is also used for the next species).

Pink Headed Dove (*Streptopelia roseogrisea roseogrisea*).

This species is the other common ring necked species resembling the Mourning Dove, but is most easily distinguished in the field by its smaller size, being about 270 mms in length. There is also more white on the tips of the tail feathers, and on the outer border of the outer tail feathers. The top of the head is pale pinkish grey, compared with the slate grey of the Mourning Dove. This species is more common in Kordofan the Nuba Mountains, and the Red Sea Hills. The local name is *Dabas*.

The Sudan Laughing-dove (*Stigmatopelia senegalensis sudanensis*).

This is the smallest of the common Sudan doves. It is a very tame bird, and is noticeable for its distinctive cooing. The colouration of the male is:—Entire head nape and hind neck dark vinaceous, gradually becoming browner on the mantle and scapulars; a broad collar of bifid feathers on the forepart of the neck or crop, which passes on to the sides but not the back of the neck, black at the base, rust

colour terminally. Lower back and rump dark grey. Outer wing-coverts, both lesser and greater, grey, as are also the secondaries; the inner wing coverts brown at the base, with broad cinnamon-rufous tips; primaries dark brown; upper tail-coverts, and middle pair of tail feathers, brown washed with grey, the next two pairs grey, the remainder blackish slate at the base, terminally white, the outermost with the terminal half, and the fringe of the entire outer web white, the basal half of the inner web black. Breast below the collar vinous like the head, becoming white on the belly. Under tail-coverts white; under wing-coverts and axillaries grey. Bill black. The female is similar to the male. Length about 260 mms. Local name *Hemeiri*.

Egyptian Goose (*Alopochen aegyptiacus*).

In addition to the foregoing more obvious pests of grain crops, damage is caused in some areas by Geese and Ducks, mainly the Egyptian goose, which is too widely known to need description. In the Northern Province damage is done to developing crops by the geese grazing and trampling the crops into the mud. Near Umm Ruaba also, damage has been recorded from geese eating considerable amounts of grain from the fields, after flighting on to them early in the morning. The Egyptian goose is a resident species, and makes nests in clefts in rocks on hills, or may use old nests of eagles or related species in trees. The nest is thickly lined with down, and between six and twelve eggs are laid. A nest containing eleven eggs was found on the top of one of the twenty fifth Egyptian dynasty pyramids at Nuri during the winter of 1942-43.

THE AGE-SET SYSTEM AND THE INSTITUTION OF "NAK" AMONG THE NUER.

By P. P. Howell

THE main characteristics of the age-set system among the Nuer have been described by Professor Evans-Pritchard both in his book *The Nuer* and in articles in volumes XVIII, XIX and XX of *Sudan Notes and Records*. He has shown that age classification among the Nuer has not the educational or military functions which it has among certain other tribes in East Africa such as Masai and Nandi, but has social functions of considerable importance. He also mentions that the institution is fast dying out, although the essential initiation ceremony known in Nuer as *gar* continues.

One aspect which is either a function, or an institution closely associated with age-sets, is known in Nuer as *nak*. This word literally means kill or slaughter, and is used to describe the special camps which are held periodically and at which a large number of oxen are slaughtered and eaten by the participants, who are all male adults and for the time being segregated from the rest of the community. Professor Evans-Pritchard says of these camps:—

"According to my information the newly initiated boys do not always collect in camps after their wounds are healed, but only in some years, about every second year, and then it is not only the new initiates who form a camp but also members of their age-set who have been initiated in previous years and even members of senior age-sets....., I think that these camps (called *nak* or *kanar*) are a custom separate from the age-set system, though related to it by the fact that its members are mostly recruited from unmarried youths of the village and are hence mainly of the same age-set."¹

Before considering the question whether these camps are a culminating ceremony required in the fulfilment of age-set organization, a normal function of age-sets, or an independent custom in which age stratification is merely an incidental feature, it is necessary to describe more fully the form that these camps take, and all associated custom concerning them.

The camp is not a tribal institution in the sense that all the members of certain age-sets gather together in one place for the purpose of feasting; it is only tribal in that the youths of one village or locality join together in groups throughout the tribe, all at the same time or

¹ *Sudan Notes and Records* XIX p. 245.

during one year. The participants are rarely drawn from a social or territorial group larger than what has been defined as a tertiary tribal segment. Thus there are many camps taking place at the same time throughout a wide area, but according to Nuer informants there are rarely more than forty participants nor less than ten.

The participants are certainly not confined to those boys who have undergone the ritual and operation of initiation together, but are drawn from young men who have been initiated over a considerable period. The length of this period and the guiding factor in its determination is a controversial subject and the purpose of this article is to provide what evidence is available in answer to that question. Theoretically, as Professor Evans-Pritchard has explained, among the Nuer there is a period of initiation extending over an indefinite number of years when boys throughout a Nuer tribe may undergo the operation of initiation, and a period when no initiation takes place. In the past but apparently not universally in these days, this period was defined by the religious expert known among Nuer as the *Wut Ghok* — the man of the cattle. When a new period of initiation is to take place the *Wut Ghok* takes the 'knife' from his cattle byre and by this symbolic act announces that the operation of initiation may now begin. At the close of the period, he takes the knife, puts it into a gourd and hangs it in his byre.¹ Within the tribe no further initiation may take place until he takes it out again. To the Nuer there are therefore two periods — 'when the knife is taken out' and 'when the knife is hung.' For want of a better term, I refer to the former as an 'open period' and to the latter as a 'closed period.' These open and closed periods were of paramount importance in the pattern of age-sets in the past, but the custom is no longer followed very strictly and in some Nuer areas not at all. One of the main causes of this breakdown is undoubtedly the establishment of public security by the present government and the comparative peace which exists in most parts of Nuer land. In the past, a youth who had been *garred* and had undergone full initiation, at once entered the status of warrior and thereafter was expected to take part in raids and in the defence of the community. Boys were not therefore initiated at so early an age as they are nowadays, for a small boy would run grave risks of extinction in a battle in which experienced warriors were the participants. Nowadays, boys are initiated at a much earlier age, sometimes when they are only nine or ten.

¹ *Ce ngom kam rar* : He takes out the knife.
Ce ngom ngab : He hangs the knife.

The general breakdown in the age-set system is the cause of much confusion and is one of the reasons why the true function of the *nak* is hard to find. The participants of a *nak* gather together some weeks before the first millet harvest, and it should be noted that of all times of the year this is hardest for the Nuer. What stocks of grain they held are nearly exhausted and the cattle have been moved back to the permanent village area. The feast does not take place out in the riverain pastures, but in the area of permanent habitation. Usually the cattle byre of the father of one of the participants is provided for the purpose. All cattle are removed and only the oxen for slaughter are brought near. The participants are segregated from the rest of the community, although a few women, usually women beyond the age of child-bearing, may assist them in cooking and some of the older men may join them, but girls are not allowed to come near.

By 'participants' is meant those who are subject to the rules of the feast and who are expected to provide oxen for slaughter. It is these persons who are considered to be assisting in the feast and not other men who are there only as a privilege, if they are there at all, by reason of their special relationship to the contributors. Each youth should provide a bull for slaughter, but since this is not always possible, particularly now that the Nuer have lost so many cattle and cannot replace them by raiding, two or even three boys may club together to provide one. Those who cannot find a suitable ox among their own herds, must borrow one from someone else. The process of borrowing bulls for this purpose is governed by special rules which do not apply in normal exchange transactions and the rates of exchange are different. The current rate of exchange among the Nuer is now one cow calf for a large bull. Oxen are often required for sacrificial purposes or in times of extreme hunger, and exchanges of this sort are frequent, but the borrower usually receives the loan on the understanding that he will pay a cow-calf when he is able to do so. Often a suckling cow calf is earmarked for the purpose, but the owner is not usually expected to pay on the spot. These transactions known in Nuer as *ngwal* are the cause of much litigation in the courts nowadays.

Loans contracted during a *nak* are, however, based on different and higher rates of exchange. They are stereotyped at any rate in theory, though it is probable that like all Nuer customary payments they are more a traditional basis for compromise than an unbreakable rule. The rates of exchange are:—

- One large ox = two cow-calves and one bull-calf.
- One medium ox = two cow-calves.
- One small ox = one cow-calf and one bull-calf.

Nuer say that the reason for this relatively high valuation is that the debtor is allowed a long period of credit.¹ During that period the debtor is not expected to pay and the man who loaned him the ox is not allowed by convention to ask for repayment. To do so would be to subject himself to ridicule, and his claim would not receive the encouragement of the community in which he lives. Further, if a man is asked to supply a bull on these terms to one of the participants, he cannot refuse. If he did so his action would be universally condemned by his fellows and he would run the risk of spiritual contamination resulting in sickness and even death among the members of his family. Moreover, those who qualify for participation in the feast and who are expected to supply a bullock are allowed great licence in obtaining them. They go round begging from their relatives and neighbours and should a man be brave enough to resist their demands, they would either steal his ox, kill it in front of his eyes or cut its tail off, an action which is not only extremely insulting to the Nuer, but which would also render it useless for anything except slaughter. It seems that refusal is rare for these reasons, and also because Nuer are very much afraid of acquiring a reputation for meanness. Generosity in the giving of cattle for all such purposes is considered the greatest virtue among the Nuer; meanness is a grave social blunder.

The time set for repayment is indefinite and varies from four to eight years² and is controlled by the pronouncements of the *Wut Ghok*. The owner may then demand repayment, and his debtor is equally obliged to produce the cattle at once, provided he has cattle at the time with which to do so. These conventions are less binding than they were in the past, and disputes arising over such repayments sometimes appear before the courts.

The participants of a feast choose one of their number to act as slaughterer: he has no special title, but his spear which he uses for the purpose is known as "the spear of slaughter" — the *mut nak*. Oxen are speared in the heart as is customary among the Nuer for all purposes, including sacrifice. Oxen are slaughtered every two or three days — the amount of meat consumed by Nuer at one sitting is prodigious — and with the exception of certain recognized portions (the ribs and back in particular which are allotted to the elders) the

¹ The rates given here were quoted to me by Gaweir Nuer of the Bar section.

I doubt that they would apply nowadays and there are certainly different rates current and traditional in other tribes.

² linked to the 'open' and 'closed' periods of initiation.

meat is eaten only by members of the camp. Sometimes stock and broth are sent to other relatives or to the old women who assist in the cooking.

All participants are completely segregated from the main body of the community, although as Professor Evans-Pritchard suggests, men of different age-sets may take part. They may not communicate with girls or women, nor are they allowed to attend dances, and since the bulk of the younger males are thus segregated, dances do not take place, even though the period covers the time of year which may be described as the height of the dancing season. They do not take part in cultivation or harvest, this duty being left to the elder men and the women. They may have no communication with their cattle which are carefully avoided and are forbidden to rub themselves with cattle dung ashes, a daily routine among the Nuer, for this would contaminate the cattle.

These restrictions suggest that the participants are in a spiritual condition highly dangerous to the rest of the community and Nuer consider that any breach of the observances would cause illness and death among their relatives and their cattle. This further indicates that the ceremony is or was closely associated with initiation, for among all primitive peoples the period of initiation is one fraught with all kinds of spiritual peril. J. H. Driberg suggested in his lectures, that in most forms of initiation among the cattle-owning tribes of Africa, there are three periods: that of segregation, when the initiates are cut off from the community as a whole; that of aggregation, when they are introduced to their immediate elders, the age-set above them; and that of reintegration, when they are reintroduced to the community as a whole.¹ All these periods are accompanied to a greater or lesser degree with ceremonial and ritual acts signifying a change of status from boyhood to manhood. If this is a safe generalisation, the *nak* ceremonies of the Nuer suggest the period of aggregation, for the participants are, drawn from the recently initiated youths and their immediate elders and these are together kept apart from the main body of the community. The period of segregation is represented by the actual ceremony of initiation when the youths are 'cut,' their foreheads scarred in parallel lines in the manner of the Nuer. This is the period of greatest danger to the youth himself and to his relatives. He is temporarily out of status, his position cannot be defined either in a spiritual sense or in

¹ This theory was inspired by the writings of Van Gennep. See Arnold Van Gennep: *Les rites de passage* Paris 1909.

relation to the age stratification of society. Among the Nuer there is apparently no period of reintegration, but although there is no evidence now available, it may well have existed in the past.

Nuer informants throughout those tribes with which I am familiar¹ have suggested that the ceremony of *nak* in the past always took place on completion of a recruitment period, the end of the 'open period'. They talk of it as a final ceremony by which the members of one age-set are bound together and their relative position defined in relation to the senior age-sets. It is significant that theoretically *nak* should take place at the end of a closed period. Hitherto, during the open period, the junior age-set consists only of a loose association of sub-sets, each with names which may vary locally. Although a man is bound more closely to those who underwent initiation with him, these ties tend to be loosened, the intensity of the relationship of a sub-set being modified by membership of a full age-set. Since there is nowadays great laxity in observing the open and closed periods of initiation, age-stratification becomes confused and modified. Full age-sets and sub-sets, termed *ric* in any definition, are not clearly distinguished, and membership of an age-set, which should cover a considerable period — several years of initiation and recruitment and several when the 'knife is hung up' — only becomes clear later in life.

As in the case of the many terms used in describing the social structure of the Nuer, definition between sub-sets and age-sets is confused and clearly varies with the context. For example the more recent sub-sets of the Lak tribe are *Cargac*, *Korion*, *Kailou* and *Codjok*, the former being the youngest, and these are now loosely associated and called collectively *Rialmac* which represents a full age-set. This age-set in Gaweir is again called *Rialmac*, but the sub-sets are in a different order. They are *Codjok*, *Korion* and *Rialmac*, while two recently initiated called *Thut* and *Gwulung* are loosely linked to them. There are indications that a division will eventually be made either between a *Codjok* and *Korion* or *Codjok* and *Thut* and that the whole age-set thus formed will finally be called either *Thut* or more likely *Gwulung*. Among the Thiang these sub-sets are the same as in Gaweir except that a senior sub-set whose members are older than *Rialmac* and who are called *Caiyadni* collectively, are included in the grouping. The superabundance of sub-set names tends to disappear with the passing of time and age-stratification becomes defined in society by reference to the name of the main age-set. Moreover, reference to

¹ Gaweir, Lak, Thiang, Lou, Western Jikany etc.

sub-set names is not usually made beyond the immediate community in which recruitment has taken place; the finer definitions fade on the horizon of social distance as well as in the passage of time.

A table of the last eight age-sets is as follows:—

LAK NUER		THIANG NUER		GAWEIR NUER	
<i>BOILOC</i>		<i>BOILOC</i>	$\left\{ \begin{array}{l} \textit{Boiloc} \\ \textit{Wun} \end{array} \right.$	<i>BOILOC</i>	$\left\{ \begin{array}{l} \textit{Boiloc} \\ \textit{Wuor} \end{array} \right.$
<i>RUOB</i>		<i>RUOB</i>	$\left\{ \begin{array}{l} \textit{Ruob} \\ \textit{Gwulung} \end{array} \right.$	<i>GWULUNG</i>	$\left\{ \begin{array}{l} \textit{Ruob} \\ \textit{Gwulung} \end{array} \right.$
<i>WANGDEL</i>	$\left\{ \begin{array}{l} \textit{Wangdel} \\ \textit{Nyadwar} \end{array} \right.$	<i>KIEC</i>	$\left\{ \begin{array}{l} \textit{Wangdel} \\ \textit{Nyadwar} \end{array} \right.$	<i>KIEC</i>	$\left\{ \begin{array}{l} \textit{Wangdel} \\ \textit{Nyadwar} \end{array} \right.$
<i>KIEC</i>	$\left\{ \begin{array}{l} \textit{Kiec} \\ \textit{Twot} \end{array} \right.$	<i>WUON</i>	$\left\{ \begin{array}{l} \textit{Wuon} \\ \textit{Karam} \end{array} \right.$	<i>YAL</i>	$\left\{ \begin{array}{l} \textit{Yal} \\ \textit{Lilnyapagh} \end{array} \right.$
<i>WUON</i>	$\left\{ \begin{array}{l} \textit{Wuon} \\ \textit{Karam} \end{array} \right.$	<i>KEC</i>	$\left\{ \begin{array}{l} \textit{Kec} \\ \textit{Codnyal} \end{array} \right.$	<i>KARAM</i>	$\left\{ \begin{array}{l} \textit{Karam} \\ \textit{Codnyal} \end{array} \right.$
<i>PILUAL</i>	$\left\{ \begin{array}{l} \textit{Kec} \\ \textit{Pilual} \end{array} \right.$	<i>PILUAL</i>	$\left\{ \begin{array}{l} \textit{Pilual} \\ ? \end{array} \right.$	<i>PILUAL</i>	$\left\{ \begin{array}{l} \textit{Pilual} \\ \textit{Caiyadni} \end{array} \right.$
<i>RIALMAC</i>	$\left\{ \begin{array}{l} \textit{Kailou} \\ \textit{Codjok} \\ \textit{Koriom} \\ \textit{Cargac} \\ \textit{Gwulung} \end{array} \right.$	<i>RIALMAC</i>	$\left\{ \begin{array}{l} \textit{Caiyadni} \\ \textit{Koriom} \\ \textit{Codjok} \\ \textit{Thut} \\ \textit{Gwulung} \end{array} \right.$	<i>RIALMAC</i>	$\left\{ \begin{array}{l} \textit{Rialmac} \\ \textit{Koriom} \\ \textit{Codjok} \\ \textit{Thut} \\ \textit{Gwulung} \end{array} \right.$

TABLE SHOWING AGE SETS
AND SUB-SETS IN THE LAK, THIANG, AND GAWEIR TRIBES.

Note.—The division of the Sub-Sets of *Rialmac*, the most recent age-set, will not be clear for some time. *Gwulung* and the Sub-Set above will probably form a New Age-Set eventually.

Analysis of this diagram shows that the association of sub-sets is by no means consistent, the *Caiyadni* subset of *Thiang*, for instance, being included in *Rialmac*, while in the any other areas it is usually included in *Pilual* — a senior set to *Rialmac*. The reason is that although sub-set names are often borrowed from other tribes, those included under the name are not necessarily of the same age and a few years may intervene between them. This in itself must represent

some form of breakdown in the system, for the essential motive of a common name is to define common age. The line dividing the new sub-sets of *Gwulung* and *Thut* from the main body of *Rialmac* is not yet settled, and it may well be that *Codjok* will be associated with them into one main age-set. Definition will come, and the apparent confusion will eventually be solved, more by usage than any specific division.

There are indications, however, that this was not so in the past, and that the divisions were made and emphasised by the performance of the *nak* ceremony. Nuer describe the division of age-sets as *dak* — *ce ricdien dak*: 'they divided their age-set.' *Dak* is a common word used to express splitting or fission in society as applied to kinship or other associations. *Dak mara* is an expression used to describe a breaking of relationship. A Nuer will also say "*ce math dien dak*"¹ meaning "they broke off friendship." The expression linking the division (*dak*) and the institution of *nak*, is "*cenak-dien kel*," "they assisted at the same *nak*." For example, the Thiang Nuer say "*wangdel kene kiec ce nak dien kel*." "*Wangdel and Kiec had one nak*." "*Kec Kene Conyal ce nak-dien kel*." I confess, however, that Nuer informants are singularly confused on this subject, and in some cases participations in one *nak* ceremony do not fit in with the general pattern of age-sets recorded in the diagram. This is due, I believe, to a confusion in memory in the days when formal division was usual, and complicated by the recent breakdown in clearly defined "open and closed periods." It is probable, however, that the *nak* ceremony was closely associated with formal division and indeed, amounted to the act of division between the sets, grouping certain sub-sets into one age-set by common participation and dividing them once and for all from their seniors.

There is also a curious process which seems to have taken place only in recent years and is undoubtedly connected to the general breakdown in the system. Nuer sometimes talk about *nak bwoth* — "the slaughtering in time of famine." The recent *nak* ceremonies which occurred on a small scale in the Zeraf valley, were often referred to as *nak bwoth*. The inference was that the motive of the feast was something different to the usual and old purpose of *nak*. In 1943 small groups of men met and segregated themselves from the rest of the community relying purely on meat for subsistence, while the aged, the infirm and the women consumed what milk and grain was available. That year was one of famine and widespread suffering among the Nuer of the area, and, if my conclusions are correct, the process shows a

¹ "*Math*" is a special social relationship—friendship which involves recognized mutual obligations and conventional conduct.

most interesting adaption of an institution primarily associated with age stratification, to a purely economic purpose much needed in the circumstances.

NOTE BY PROFESSOR E. E. EVANS-PRITCHARD

Mr. Howell has asked me to add a note to his article. I am glad to do so because information I collected in 1936 in the central part of Western Nuerland (*Darcieng*) suggests that his interpretation of the *nak* may be correct, though I am not entirely convinced that it is so, and further research, especially in that part of Nuerland, would be necessary to confirm his hypothesis.

Mr. Jackson (*Sudan Notes and Records*, vol. VI, 1923, pp. 146-7) says that these gatherings to slaughter oxen are held as part of the rites of initiation after the wounds are healed. In an article published thirteen years later (*Sudan Notes and Records*, vol. XIX, 1936, p. 245) I took the view that they were not part of the age-set institution but were only incidentally associated with it. I think that there can be no doubt that the gatherings are not held as a closing rite in the initiation ceremonies through which each batch of initiates passes when their wounds are healed. For one thing, they are held too early in the year for them to have such a position in the initiation ceremonies. My earlier statement that gatherings of the kind are held in years of hunger was upheld by further enquiries in the Lou and Karlual tribal areas in 1935 and 1936. A somewhat hasty enquiry in the course of a journey through the Darcieng area suggested, however, that there the *nak* forms some part of the age-set organization, though what is its role in it was not determined. Mr. Howell's explanation may be the correct one.

I was told in the Darcieng area that before the first harvest is ripe the youths of the current age-set, together with unmarried members of the set senior to them (it is possible that sections of a set and not sets were meant) in a district, borrow a homestead and remove from it all the cattle and household utensils to hold a *nak* there. Each youth must bring an ox to be slaughtered or have a half share in one. It is customary for youths to borrow (*gwal*) the oxen instead of taking them from their fathers' herds and a man must not refuse the loan unless his favourite ox (*dil thakde*) is asked for. I was told that youths in the homestead come forward in pairs and declare that they will *gwal* an ox together and are then pledged to carry out their promise by their companions smearing them with ashes. The two youths know in

advance where they can get a fat ox. Each later pays the owner a female calf if it is a large ox and a male calf if it is a small one. Six years are allowed for the debt to be repaid. I was told that by the seventh year all these debts must have been settled as a new *ric*, age-set, will then be holding their *nak* (in Western Nuerland the word *Cuel* is also used).

A month or more is spent in feasting on the meat of the oxen, an ox being killed every two or three days according to the needs of the young men. When we consider that usually Nuer are ashamed to kill oxen for food alone, this holocaust would suggest a ritual purpose and the consideration lends further weight to Mr. Howell's contention. The youths eat all the carcasses except the breast, rump, scrotum, and skin, which are sent to their elders. If there is sufficient grain, women of the neighbourhood may bring the youths porridge in exchange for some of the meat, but there may not be sufficient grain for the purpose at the time the camps are held, for the millet may still be ripening. Girls may visit the young men but may not sleep in the homestead.

THE BIRTH OF A LEPER SETTLEMENT— LI-RANGU, EQUATORIA

By A. Cruickshank.

LATE in 1928 the Director of the Medical Service decided that it was time to open up the Southern Provinces to civil medical work, and suggested that the best way to start was with a leprosy campaign in the Zande district where leprosy was known to be rife. I had the fortune to be chosen for this work, and my instructions were to carry out a leprosy survey of the Yambio area, to organise a settlement for the treatment of cases, and to develop general medical work. The result was Li-Rangu, which eventually became the second largest leprosy settlement in Africa.

Routine Sleeping Sickness inspections had been done in the Yambio Area since 1920, and it was decided that the best way to get an estimate of the incidence of leprosy was to organise a full scale Sleeping Sickness inspection. At these inspections the aim was to see every man, woman and child. The chiefs and headmen were responsible for their attendance and had to explain satisfactorily any absence. With the co-operation of Larken Bey, the District Commissioner, and the help of Warburton Bey, the Senior Medical Officer of Sleeping Sickness Control, the whole area was quickly inspected, a total of 59,935 examined, and 1556, or 2.8% of the population, were found to be infected with leprosy. The Azande soon realised we were on the outlook for this disease, and fearing some fresh restrictions on their mode of living, they deliberately hid cases, so I felt justified in planning for double that number. However once the settlement was established and popular, the opposite took place, and there was a clamour for admittance; many and ingenious methods of simulating leprosy patches were discovered.

The problem now was to find an area big enough and sufficiently central to house all these lepers. With essential relatives the number to be catered for was in the region of 4000; this eventually rose to 4500.

The District Commissioner and I pored over maps and finally chose three areas for exploration, and with carriers I set off on foot to survey them. Finally we chose an uninhabited area of some 30 square miles which had good timber and several permanent streams and was only 18 miles N.E. of the district headquarters, Yambio. The plateau chosen for the hospital and offices was at the head of the Rangu stream and from it the settlement derived its name "*Li Rangu*." "*Li*" is the Zande prefix meaning "head" or "source."

On the 4th of February 1929 I set off from Yambio with 110 carriers. These carried on their heads besides my personal baggage, 3000 lbs. of eleusine, the local grain, axes, hoes, carpenters' tools, brick making moulds, sacks of salt, and hospital equipment. By the time I arrived an advance party had cleared a small area and erected four grass huts, and one of these was to be my home and office for the next few months.

The first essential was communication with the outside world. The nearest motor track was 6 miles away. A route to this was quickly surveyed and a gang put on to cut down the trees, remove the iron-stone boulders, bridge two streams, and flatten out ant-hills. The District Commissioner had arranged for ample labour. The standard rate of payment then was one piastre per day. In four days' time gangs had been organised for road-making, brick-moulding, clearing building sites, collecting timber, bringing in roofing grass, and preparing vegetable gardens. The experience of previous large artificial settlements, particularly that of Source Yubo, had warned us of the danger of divorcing large numbers of the people from their normal tribal life and from the control of their own chiefs and headmen. It was therefore decided that each tribal chief should have a distinct area of the settlement allotted to him, and that he would, from his own lepers, appoint a headman as his representative. This policy proved most successful and led to the chiefs taking an active interest in the settlement, and in the lepers feeling they were still part of the tribal community; it also simplified the problem of tracing contacts and absentees, and in settling cases. As soon as practicable a leper native court was set up, and all the numerous peccadillos of such a settlement were dealt with by the lepers' elected representatives, instead of by a doctor with no legal knowledge, with little knowledge of the language and customs, and little time to worry over the niceties of the law. To enable me to run the settlement I had been invested with the powers of a third class Magistrate, and before the native court started I enjoyed the daily "office"; I believe that most of my decisions were just, even if not always legal.

Larken Bey arrived one day with a deputation. Although the area was uninhabited the white ant-hills all had recognised owners. These ant-hills are a source of income and food. The flying ants emerge from their homes in the early rains. Little pits are dug all around the hills, fires lit in them, and the emerging ant stretching its virgin wings is attracted to the flame and falls into the fiery pit. The roasted bodies are a delicacy, and the oil obtained by crushing them makes an excellent

cooking medium. It was agreed that the settlement should acquire the ant-hill rights, and that the owners be expropriated and compensated. Larken and I tramped many solemn miles through the bush locating, apprising, arguing and pricing these potential gold mines. Prices ranged from a half piastre for a tiny one to thirty piastres for the largest. I shudder to think to what item in the budget the cost was debited. It was felt that no sane Financial Secretary would pass "To buying of Ant-Hills."

After a detailed survey of the area and careful estimation of all water points, the final layout of an inner and an outer circle was decided on. Within the inner circle were to be housed all severe and mutilated cases of leprosy, the leper hospital, the main hospital stores, offices, laboratory, prison, dressers lines, shops, school, church, and Medical Officer's quarters. The outer circle and radiating roads were to accommodate all the rest of the lepers.

How full our days were then! We soon realised that the quickest way to popularise the settlement was to supply meat to this meat-starved population. As no domestic animals, apart from dogs and chickens, could be kept because of tsetse fly, meat had to be obtained by the gun, and this meant many a dawn trek through the sopping bush. An extract from my diary at the end of the first three weeks will give an idea of the multifarious activities connected with the constructing of such a settlement.

4.30 a.m.—Off with Saboon, reputed best tracker available. Marched for an hour N.E. through sopping wet grass. Flushed a bush-buck and a pig. Came on buffalo spoor and after 15 minutes in the dim light of dawn saw a fine bull. Dropped it with a solid from my 350. Saboon wisely would not let me go near it till I had put in a second one — just to make sure. Great rejoicing at this mountain of meat.

Returned 7 a.m., changed, had a cup of tea, and off by bicycle round the work gangs. Brick-making progressing; Mattias now reached 600 a day. Pegged out a new drying shed, and sent off a gang for roof-poles. To carpenter's: Boxi has now got in 2 mahogany trees and is digging a sawing pit. Visited bridge on main road and laid the last log girder (photo). Surprised the stonecutters: good progress since last rain which has softened the iron-stone (the iron-stone was hewn into building blocks by local masons using old axes).

Sent off another 100 men for thatching grass.

9.30 a.m.—Breakfast. 10 a.m.—Interviewed "black" Mohamed-ain of Yambio who wished to open a shop here. Admitted and charted up 8 lepers (it took some 20 minutes to examine, go into the history,

and record in detail each case. As numbers began to increase, this was found to be a most time-consuming and tedious task). Allotted housing sites for these and their relatives. (Each leper was given a plot of land and ten piastres for building expenses. Only mutilated or severe cases had their huts built for them).

Opened an abscess.

1 p.m.—The meat arrived and it took a tedious hour to portion it out justly, but the hungry rapture with which it was received recompensed for the labour.

2 p.m.—Office. 2 cases of theft. 3 of adultery. Took on 3 new *terebai* and 2 dresser trainees (*terebai* is supposed to be a corruption of the French *travailleur* and designated a permanent labourer or artisan).

3 p.m.—Lunch. Buffalo kidney and sweet potato.

3.30 p.m.—Walked the 6 miles to where my car was parked under a tree, motored to Yambio, collected 20 young mango trees and banana shoots, some Crittall windows, saws and nails, and returned to Rangu — another 6 miles to walk. Arranged for the start of an orchard.

6.30 — 8 p.m.—Office. Making out indents for building stores, arranging work gangs for the next day. Filing leprosy cases.

8.30 p.m.—Dinner and bed.

After a short tuition from the versatile and most helpful missionaries at Yambio, particularly, the late Rev. Canon Gore, I essayed brickmaking at Rangu. Bricks can be made without straw but usually we mixed chopped up grass with the puddled clay. Into the first kiln went 30,000 mud bricks, and the fires started. On the 10th day a bull was slaughtered (imported from the Dinka country) to propitiate the god of brickmaking, and in front of the assembled chiefs the kiln was opened — and behold lovely red bricks, strong and durable; so that hurdle was passed and brick-making became a routine.

As already mentioned road making was a priority job and in twenty days time the cut to the main Yambio road had been cleared of thick bush, stumps removed, the surface levelled, two bridges with iron-stone piers and great *banga* trees as girders built — good going for amateur labour. On February 25th I decided to open the road by driving my Citroen car from its garage under a spreading mahogany tree to the centre of Rangu; and a little publicity for the settlement was considered desirable. The three most important chiefs were given seats in the car and we drove in state slowly into Li-Rangu's new market square. Here the drums were throbbing, and the young girls in new dresses of bunches of cassava leaves fore and aft, and the young blades in their bark-cloth "plus fours," danced to the merry tune.

An issue of rock salt was made to all workers and lepers to mark the occasion. Li-Rangu was now on the map.

As already mentioned, once the settlement became popular there was a clamour for admission, and a new form of malingering was discovered. Various plant juices were rubbed into the skin which caused areas of erythema, or superficial burns were deliberately endured in the hope of simulating the early forms of leprosy. To combat this a panel of headmen was appointed to go into each case before it was submitted to me, and I soon learned that I could rely on the judgment of these keen amateur clinicians. Hopeful aspirants used to consult the oracles on their chances of admission for the Azande rarely took any big step in life without recourse to the oracles or propitiating the spirits; however, even a favourable answer was not sufficient, and few non-genuine cases got past the advisory council. A consulting leprologist who visited the settlement was amazed at the knowledge of leprosy which this amateur body had acquired. It certainly saved me many weary hours of investigation.

Gradually the settlement grew, and I got the help of Kaimakam Yunis Bey, a Syrian doctor, who proved a tower of strength in administration, building and agricultural pursuits.

Lepers started pouring in, and the task of charting, housing, feeding and treating them, as well as training staff, building a hospital, houses, stores, etc., taxed the energies of an inadequate staff. All office work had to be done personally, paysheets made out, all payments supervised, the chest checked, all stores indented for and taken on charge. A lorry was sent to help with the carrying of stores, bricks, etc., but no driver, so a driver had to be taught. All running repairs had to be done personally and I spent many dirty hours under cars taking off broken springs and fitting new ones.

By the end of eighteen months of continuous effort it was felt that the settlement was firmly established as part of the life of the community, as well as being the medical centre of the area. What had been accomplished in that time? The entire population had been inspected twice, a new area had been surveyed, forty miles of motor road with numerous bridges made, thirteen hundred lepers happily housed and fed, five hundred of whom had received continuous treatment for one year. A hospital of eighty beds, laboratory and operating theatre had been built. A two-storeyed house, numerous stores, houses for dressers and artisans had been constructed, a church, a school, a chief's court started, wells had been dug, the beginnings of a dairy herd collected, hundreds of fruit trees planted, gardens and large areas of cultivations

got going, and two shops opened. The kiln had fired over a million bricks for these various enterprises. Some forty Zande dressers had been trained in the elements of nursing and in the giving of injections, and some fifty major operations had been performed.

The work was onerous, often interrupted by bouts of malaria and of dysentery, the life lonely, the conditions of living at first uncomfortable and primitive, but the feeling of having created a medical and leper centre which gave promise of alleviating the crippling scourge of leprosy, and of the many other prevalent disease conditions, was recompense in full.

A COLLECTOR'S NOTES ON THE LARGE LAND SNAILS OF THE ANGLO-EGYPTIAN SUDAN

By J. D. Tothill.

INTRODUCTION

TRAVELLERS and those who live in the Sudan south of the desert, and particularly south of the latitude of Kosti, frequently see the empty shells of snails lying about on the soil, after annual fires have exposed the surface. Sometimes the ground is literally strewn with them, there being hundreds to an acre of land. One soon becomes aware that they are of different shapes and that some are only found in certain situations—such as clay soils subject to shallow flooding in the rains.

In 1904 Richard Hagg published the results of collections made between Shendi and Fashoda by the Swedish Zoological Expedition, and in 1914 Mrs. Jane Longstaff published an excellent account of collections she had made during several journeys between Khartoum and Juba. The late Dr. Myers did some collecting in recent years in Equatoria Province, but so far as the writer is aware, the results have not been published.

Systematic collections have now been made by the writer and his friends, particularly Oscar Snow, Gerald Andrew and H. Ferguson, in all provinces of the Sudan. These have been studied and named, and sorted out into locality collections, and the results are here presented to supplement those of the pioneers mentioned above.

A map showing the distribution of each species has been made and the dots on the map, indicating places of collection, are represented by actual specimens in a collection which has been presented to the Natural History Museum in Khartoum, for the use of students. It is this collection on which these notes are based.

The man in the field often has to travel in the dry season when nothing but empty shells are lying about, the inmates having died of old age, or having been caught in a ground fire and so prevented from going to earth for the dry winter months. In this paper therefore only the shells and not the inmates are discussed.

As to colour markings, even in the wet season, when the molluscs are seen crawling about, it soon becomes clear that they vary greatly on shells of the same shape and that they are of little value for identification. Add to this the fact that the colour markings are frequently burned off in the grass fires, and it becomes clear that it is best in the field to learn to recognize species without the use of markings.

In the field one naturally comes across snails of all ages, from those newly hatched from their eggs to adults that may be anything up to four inches long. After a good deal of practice one learns to recognize the juveniles of the different species, but one can nearly always find adults, and it is with adults only that this paper deals.

Adult shells of the snails discussed vary in size from one to four inches long. There are in the Sudan a number of species of land snails that are smaller, but no adequate collections of these have as yet been made, and they are not discussed in this paper.

A KEY FOR DETERMINATION OF SPECIES.

The following key is intended to enable any field naturalist to name from the adult shell any large species of land snail he may encounter in the Sudan.

The names of parts used in the key are illustrated in diagram A in Fig. 1. In using the key the specimen is to be held out in front with apex upward, and so that one faces the aperture. Diameter is measured from A to B, length from X to Y. Spiral striae are fine lines running parallel with the suture.

1. Spire either extended or compressed but the aperture always to left; when looking straight down on the apex the spire coils to the left.

Genus *Lanistes*. See 2 (below).

—Spire extended or compressed but the aperture always on the right; when looking straight down at the apex the spire is seen to coil to the right. See 3 (below).

2. Spire well extended, the shell more than one and a half times as long as broad and up to 77 mms. (3 inches). *Lanistes ovum* Trosch. F. (Fig. 2)

—Spire so compressed as to be scarcely visible; the shell broader than long and up to the size of a golf ball. *Lanistes carinatus* Oliv. G. (Fig. 2)

3. Spire greatly compressed so that the shell is much less than twice as long as broad, the umbilicus very conspicuous, a globular shell as large as a medium sized apple. *Ampullaria wernei* Phil. H (Fig. 2)

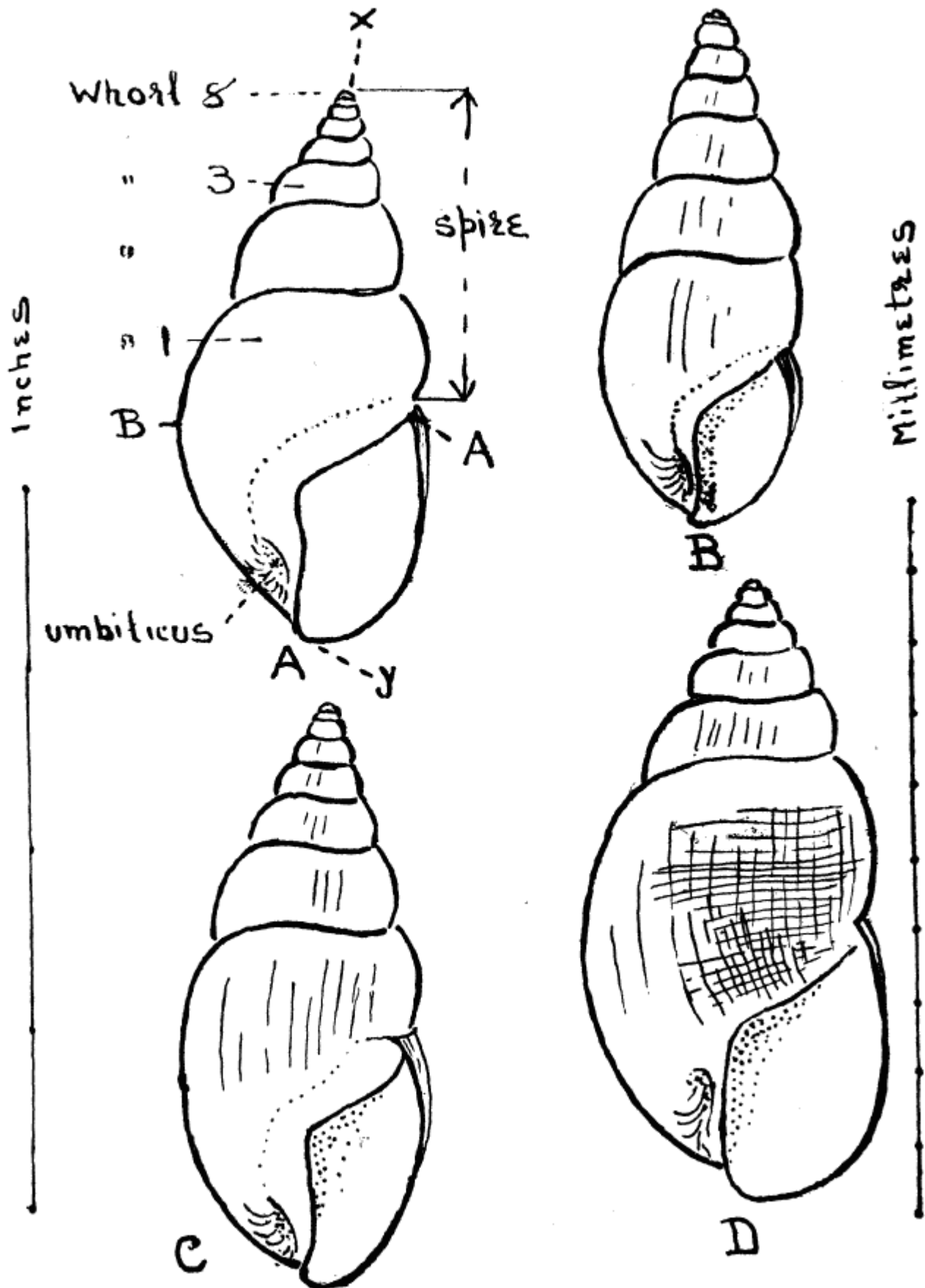
—Spire extended so that the shell is almost twice as long as broad, the umbilicus inconspicuous. See 4 (below).

A Diagram of a shell to show the names of parts used in the key. Length in the key means x to y; diameter means the distance A to B measured by calipers.

B *Limicolaria flammata* Caill. A rather large specimen measuring 76 mms. in length and 26 mms. in diameter.

C *L. festiva* Mts. An average adult 82 mms. long 32 mms. in diameter.

D *L. hambeul* Brug. An average adult 89 mms. long and 41 mms. diameter.



4. Whorls five, shell so stout as to be half as broad as long, the largest land shell in the Sudan. *Burtoa nilotica* Pff. E (Fig. 2)
—Whorls eight to nine, shell much less than half as broad as long. See 5 (below).

5. Greatest diameter 24 mms. (1 inch) or slightly less, length up to but rarely exceeding 72 mms. *Limicolaria flammata* Caill. B (Fig. 1)
—Greatest diameter more than 24 mms. (1 inch). See 6 (below).

Type 6. Smooth shell with spiral striae absent or inconspicuous: length up to 84 mms. (3.5 inches) and not less than 2.5 times as long as broad.

Limicolaria festiva Mts. C (Fig. 1)
—Shell slightly rough to the touch, with a matt surface and with the spiral striae easily visible to the naked eye: length up to 102 mms. (4.25 inches) and not more than 2.3 times as long as broad.

Limicolaria kambeul Bruguiere. D (Fig. 1)

DISCUSSION OF SPECIES.

The species will be discussed in the order of this key. It may be noted that *Lanistes* and *Ampullaria* are amphibious snails that thrive on clay lands subject to flooding; they breathe by gills as well as by lungs and have a heavy, tightly fitting door or operculum that enables the aperture to be closed in the dry season. The remaining genera *Burtoa* and *Limicolaria* are true land snails that cannot survive long immersion in water as they breathe only by lungs and have no operculum.

A. THE AMPHIBIOUS MOLLUSCS.

Lanistes ovum Trosch.

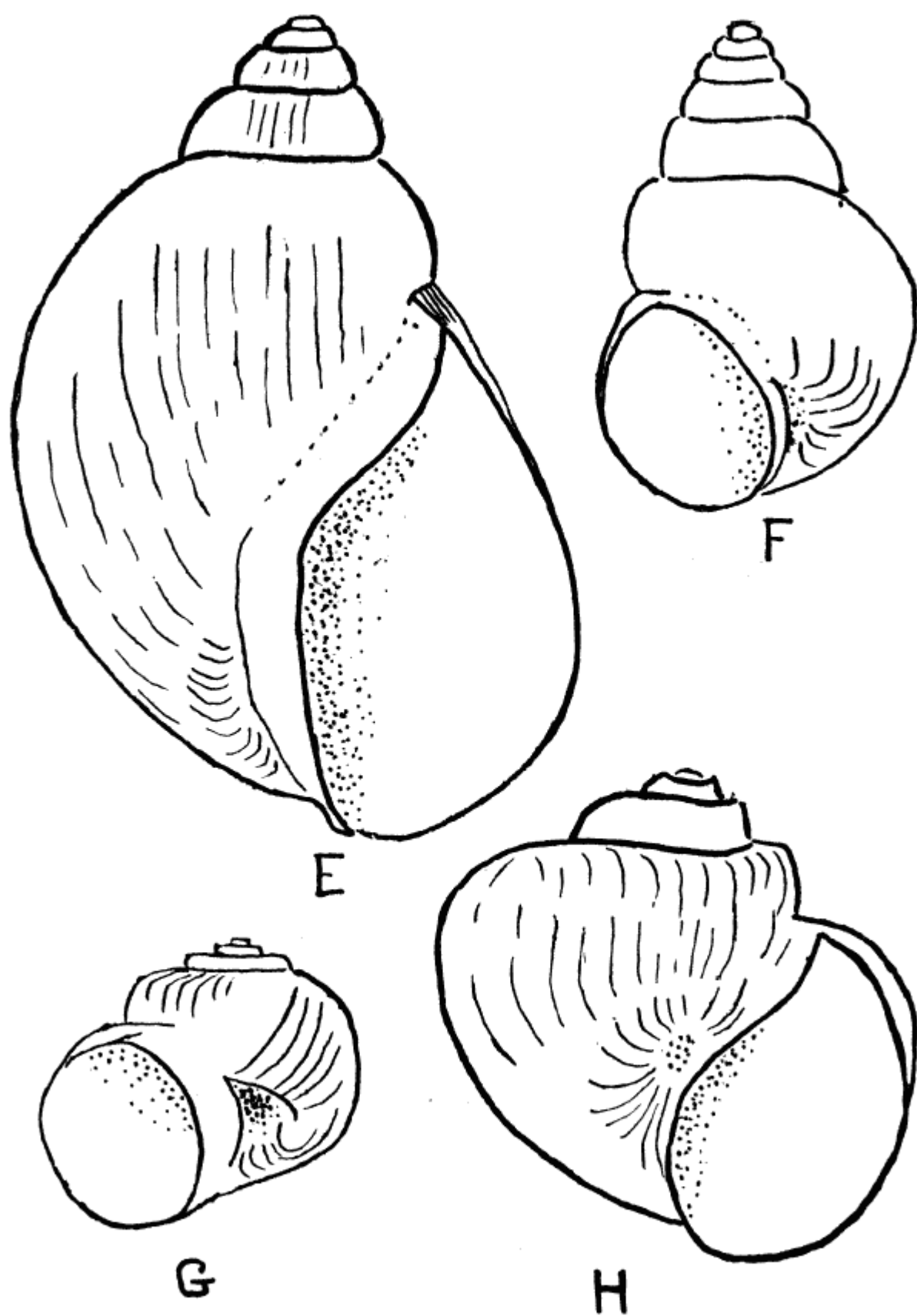
Habitat and habits.—This large species, with a pale to dark olive green left-handed shell with a considerable spire, lives on clay plains subject to annual flooding and on which the flood waters remain up to three feet deep for three to four months in the year. It sometimes occurs in isolated ponds. Its strong, closely fitting door or operculum, and combination of lungs and gills enables it to breathe in water or in air, but it normally burrows into the wet clay as the waters disappear, to remain dormant until the onset of the next wet season. Nothing

E *Burtoa nilotica* Pfeiffer: drawn from an average sized specimen 100 mms. long and 56 mms. in diameter.

F *Lanistes ovum* Trosch: drawn from an average sized adult 63 mms. long and 37 mms. in diameter.

G *Lanistes carinatus* Oliv.: drawn from an average sized specimen 34 mms. long and 33 mms. in diameter.

H *Ampullaria wernei* Phil.: drawn from a medium sized adult 70 mms. long and 48 mms. in diameter.



is known of its feeding habits except that it is frequently found in great numbers in the lowest parts of the plains of the peri-Sudd where tall grasses occur as the dominant vegetation.

Fossil distribution.—This species has not been recovered as a fossil in the Sudan or, in so far as the writer can discover, elsewhere in the world.

Distribution in the Sudan. (See Fig. 3).—In the Sudan the species has been collected only from the Nuba Mountains, the clay plains of Darfur Province lying to the south of Jebel Marra that drain to the Nile, and from the clay plains of the peri-Sudd. The absence from the upper clay flood plains of the Atbara and Blue Nile river systems may be only apparent because no collecting has been done where the railway crosses the Dinder and Rahad rivers, where the habitat would appear, from the train, to be ideal.

World distribution.—M. Connolly, (1939), records this species from Lorenzo Marques, Zululand, Transvaal, Bechuanaland and Southern Rhodesia.

Comment on distribution.—This species appears to be confined to the African tropics. Its distribution in the Sudan, particularly in isolated ponds, seems to presuppose the aid of river-dwelling birds. Ducks and herons are abundant, seasonally, in the Sudan wherever water is found, although most of the ducks are winter migrants. The most probable distributors appear to be the herons which stand in the muddy edges of ponds and streams where newly hatched eggs of *L. ovum* Trosch must occasionally abound, but the writer is unaware of any examinations having been made of mud from the legs of water fowl. The aid of birds seems also to be required to account for the wide distribution in latitude from Zululand to the Sudan across the watersheds of a formidable series of river systems.

The Golf Ball Snail *Lanistes carinatus Oliv.*

As the distinctly rotund shells of adults are nearly as large as a golf ball it seems legitimate to call it the Golf Ball Snail. It is amphibious, breathes by lungs as well as gills, has a tightly fitting strong door or operculum and occurs in precisely similar situations as does the Apple Snail, the main requirements being shallow water for several months of the year and a clay bottom. In the peri-Sudd area of the Sudan it sometimes occurs in great numbers on grass plains that are normally subject to flooding for three months each year.

Fossil distribution in the Sudan.—Fig. 3 on p. 174 of *Sudan Notes and Records* Vol. XXVII, shows a wide fossil distribution in the top six feet of the soil of the Gezira above the 382 metres contour. It has also been collected from soil pits at Um Gerr, Aliab, and from Dudiya and Nahud. It has not been collected as a fossil from any station in Darfur Province. It is recorded from the Miocene beds of Lake Victoria and in Recent and post-Pliocene beds in Egypt (*Journ. Linn. Soc.* Vol. XXXII, p. 240).

Present distribution in the Sudan.—The distribution of the living species in the Sudan is shown on Fig. 12 on p. 183 of *Sudan Notes and Records* Vol. XXVII. It will be noted that its distribution is much more restricted than is that of *Ampullaria*.

World distribution.—The species is recorded from Egypt, from the Sudan, from Lake Victoria in Uganda and, strangely enough, from the Tana River (*Journ. Linn. Soc.* Vol. XXXII May 1914, p. 240).

Comment on distribution.—The species has existed since Miocene times, and seems to have no difficulty in travelling up or down the Nile valley. Its inability to reach Lake Tanganyika and the Congo River system is in strange contrast with its presence as a fossil at Nahud and in the Dudiya depression in Kordofan and in the Tana River.

The Tana River occurrence and subsequent disappearance seems to point to there having been a physical connection with Lake Victoria in one of the pluvial periods of Pleistocene times and to this being followed by a dry period in which the River Tana dried out so as to kill off the *Lanistes* population, and that since the rejuvenation of the Tana River the species has been unable to travel over the dividing watershed. The presence of fossil, and absence of living, crocodiles in Lake Edward have to be accounted for similarly.

Had birds such as herons been carriers one would expect the species to have a range more like that of *Ampullaria*.

The Apple Snail Ampullaria wernei Phil.

Specific identity.—The species varies considerably in the degree of extension of the spire, but in my collection forms with the longest and forms with the shortest spires are connected by so large a number of intermediate forms as to preclude the possibility of there being more than one species in the collection. There seems therefore no justification

for maintaining *A. kordofana* Phil. as a separate species. A specimen closely resembling *Ampullaria* sent to me by Major Connolly labelled *Pila ovata* Oliv. collected from Lake Duma has a much longer spire and is clearly a distinct species, but no specimens with so long a spire have as yet been collected in the Sudan.

Habitat.—The apple snail, as *A. wernei* Phil., is sometimes called from its size and olive green colour, occurs in ponds, lakes and rivers that have a clay bottom. When the rivers or ponds dry out, the animal buries itself in the mud and, as a result of possessing both a very strong closely fitting door or operculum and lungs, it is able to survive long periods of drought.

Food plants.—In an aquarium the species will eat aquatic plants of various kinds, but in nature it frequently occurs in vast numbers on flooded grass plains where aquatic plants do not occur, and in these situations it probably feeds almost entirely on grasses.

Fossil distribution in the Sudan.—As shown in Fig. 2 on p. 173 of Vol. XXVII of *Sudan Notes and Records* the species is widely distributed in the upper six feet of the soil of the Gezira plain above the 382 metres contour.

Present distribution in the Sudan.—Fig. 11 on p. 182 of *Sudan Notes and Records* Vol. XXVII shows the species to be widely distributed in the Sudan where the conditions are favourable.

World distribution.—Connolly (1939) has recorded the species from Uganda, Zanzibar, Mozambique, Belgian Congo, Nigeria, Ubangui, and Abyssinia. It appears to be confined to, but widely distributed throughout, tropical Africa.

Comment on distribution.—The ability of the Apple Snail to find its way to the Wadi Hawar (v. A. J. Arkell *Sudan Notes and Records* Vol. XXVI p. 340), to remote water holes and temporary lakes in Darfur Province and to cross the sea to Zanzibar and Mozambique, points to water fowl as the probable carriers. Of the water fowl inhabiting Apple Snail territory in the Sudan, duck come to mind as being the most abundant and the most widely distributed; the writer, however, cannot recall having shot a duck in these areas with mud adhering to the legs. Herons also frequent all these situations, including the remotest ponds, and as they stand in mud and rise directly therefrom, they may prove to be the carriers.

The eggs of *Ampullaria* have not been seen, but there is a figure by A. H. Cooke on p. 125 of Vol. III of the Cambridge Natural History of an *Ampullaria* egg-mass adhering to a small stem. If the Sudan species deposits its eggs in this manner then distribution by birds probably occurs shortly after hatching.

B. THE LAND SNAILS.

Burtoa nilotica Pfeiffer.

Specific identity.—There are at date of writing fifty two specimens in the writer's collection and many others have been seen in the field. While there are great differences between specimens that have just hatched out and a four inch long adult, yet, among the adults there is little variation in form, and there is no doubt that all the Sudan specimens are referable to a single species.

Habitat.—This species, which is the largest of the land snails of the Sudan, lives quite happily near Shambe on termite mounds that rise out of a plain that is subject to annual shallow flooding, but its normal habitat is well drained forest land that may be flat or hilly.

Eggs.—Several dead adult shells have contained eggs so large as to be taken for lizard eggs. These have a thin, rather brittle shell, and measure one centimetre long and 0.7 centimetre wide, are oval in shape and pale brown in colour. Fifteen is the maximum number that has been seen in one shell.

Distribution in the Sudan. (See fig. 4).—A single specimen has been collected in the Fung; it is somewhat scarce in Darfur Province, where a few specimens have been collected south and east of Jebel Marra; it becomes generally if somewhat thinly distributed in the peri-Sudd area, where it escapes in the wet season to the numerous termite mounds; and becomes generally if somewhat thinly distributed through the broad-leafed forest zone of the Nile Congo divide. It is not a gregarious species, and it is unusual, except in the case of juveniles, to see two specimens within a hundred yards of each other.

World distribution.—There is a specimen in the collection collected by Dr. W. J. Eggeling from Busingiro on the Masindi to Butiaba road in Uganda. It is recorded by Mrs. Jane Longstaff (*Linn. Soc. Journ.*

Zool. Vol. XXXII May 1914 p. 250) as occurring throughout the Lake region of Central Africa; Connolly records it from Matabeleland and Germain from the Lake Chad area. The species is therefore confined to the African continent, where it probably occupies suitable localities throughout the tropics between about 13°N. and 20°S. latitude.

Comment on distribution.—In the case of this wholly terrestrial species, laying very large thin-shelled eggs, it is improbable that birds or animals or water assist in its dispersal, and one is left with the probability that it has achieved dispersal through 2300 miles of latitude and probably a greater mileage of longitude by crawling inches at a time.

The genus limicolaria

The validity of species.—When one consults the literature on Sudan *Limicolaria* one is met with a confusing list of specific names, most of which are based on colour markings and on the size. As the collection grew it became clear that not only colour markings but also the size of adults were of little value for distinguishing species because both are subject to great variation.

The collection was therefore sorted out in the first instance without reference to the literature and without attempting to assign names. It is now clear that there are certainly two and perhaps three morphologically distinct species in the Sudan, and names have been assigned to these after correspondence with Major M. Connolly and a most profitable visit to him at the Natural History Museum in London where specimens were examined and compared.

There is no question about the distinctness of *L. kambeul* Bruguiere, both because it is wider proportionally for its length in all ages, and because the spiral and cross striae are more strongly developed so as to give a matt rather than a shiny surface and a slight roughness to the touch.

The specific distinctness of *L. flammata* Caill. and *L. festiva* Mts. is, however, not so certain because there are in the collection two specimens, one from the Fung and one from Kaka in the Upper Nile Province, that seem to be intermediate. They could be called giant *L. flammata* Mts. slightly longer than normal for breadth. On the other hand, the overlap of dwarf *L. flammata* Caill. and normal *L. festiva* Mts. in the Yambio to Yei part of the Nile Congo divide suggests specific distinctness. From a field naturalist's point of view it is useful to retain the two names even though they may turn out to be of varietal

rank, because *L. flammata* Caill. flourishes on the better drained grass plains of the Blue Nile and Kassala Provinces, becoming a dwarf in the broad leafed forest belt of the Nile Congo divide, whereas *L. festiva* Mts. flourishes in the broad-leafed forest, occurs very sparingly in the hills of Kordofan Province, and has not been recovered from the grass plains of the Blue Nile and Kassala Provinces.

Limicolaria flammata Caill., 1823.

Habitat and habits.—This species inhabits the well-drained parts of the tall grass cracking clay plain lying between the 400 and 800 mm. isohyets (16 to 33 inches). In suitable situations it occurs in great numbers, and one can frequently collect a dozen specimens in as many paces.

The species varies greatly in size. On the fringes of the optimum area it becomes dwarfed, and dwarfs are characteristic of Nahud, of the semi-dry papyrus swamp at Bor, of the termite hill situations in the annually flooded area between the Sudd and the ironstone plateau in Equatoria Province, and of the broad-leafed forest area between Yei and Yambio. The colour markings on these dwarfed specimens vary greatly, but these dwarfs are clearly referable to this species, because they never occur with full size specimens, and because the dwarfing can always be accounted for by the situation being too dry, too wet, or lacking in food plants.

This species feeds almost exclusively on the several species of tall grass characteristic of the so called 'hariq' areas (for details see discussions by F. W. Andrews and J. R. Burnett in Tothill's "*Agriculture in the Sudan*," Oxford University Press, 1947).

Toward the end of the rainy season the animal goes to earth, where it hibernates until the onset of the rains of the following year. How long individuals live is not known, but certainly for more than a year, because several age groups can be seen crawling about at the time of emergence from the earth at the beginning of the rainy season.

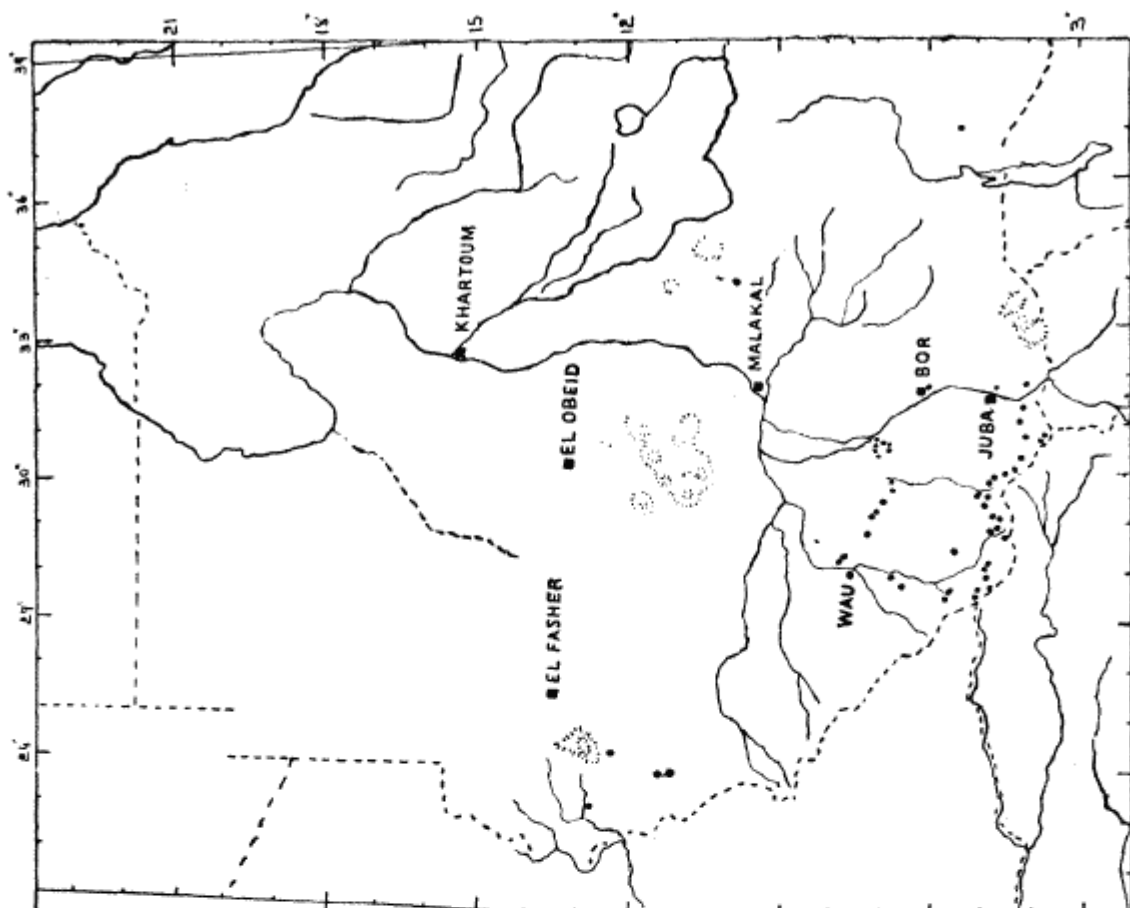


Fig. 4. The distribution of *Burtoa nilotica* Pfeiffer in the J. D. Tothill collection, February 1947.

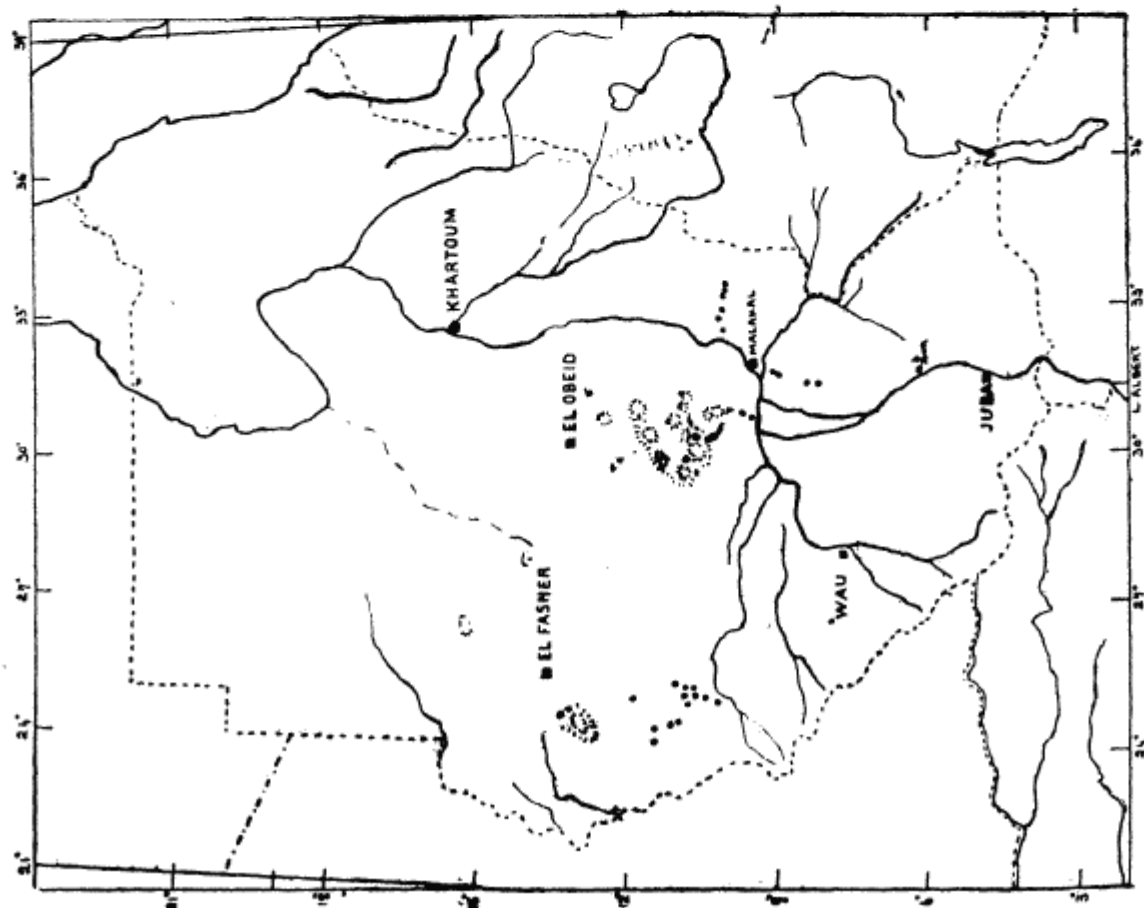


Fig. 3. Distribution of *Lanistes ovum* Trosch in the J. D. Tothill collection, February 1947.

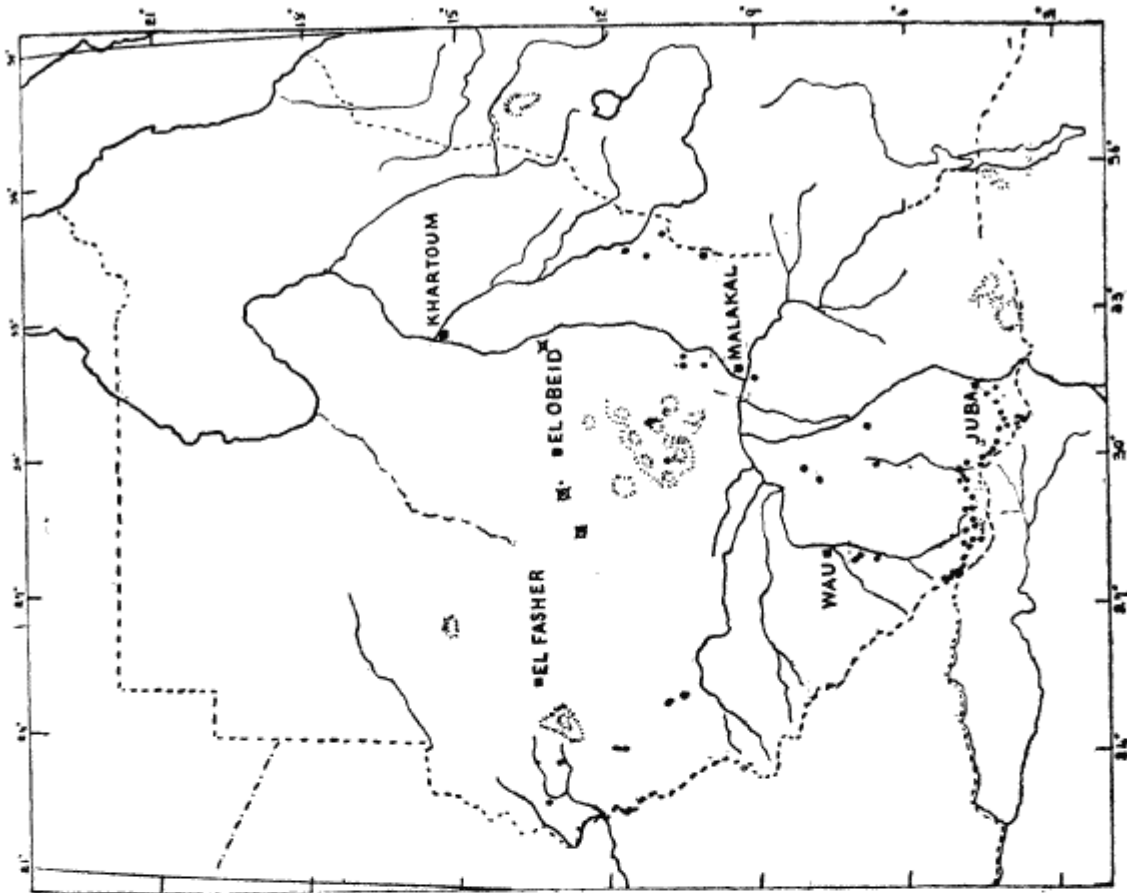


Fig. 6. The distribution of *Limicolaria festiva* Mts. in the J. D. Tothill collection in February 1947. (Starred dots are fossils.)

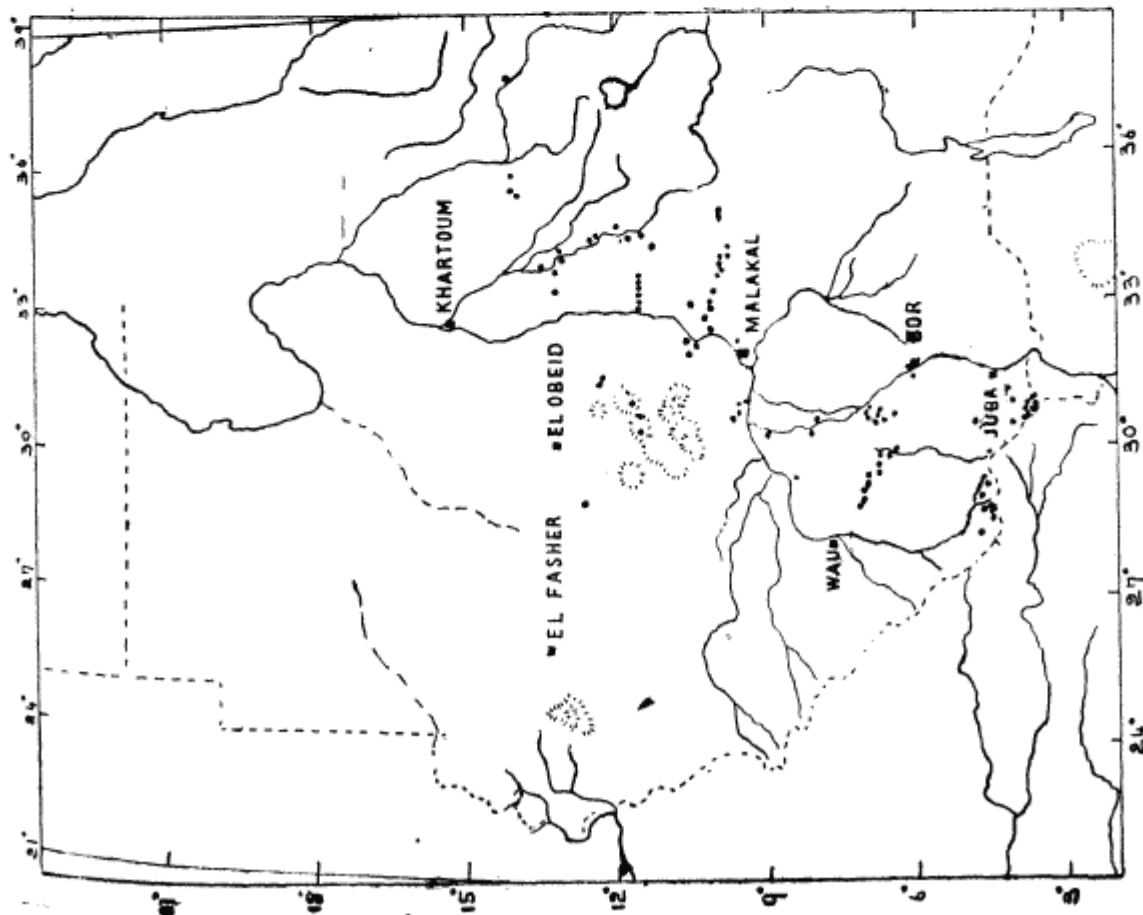


Fig. 5. The distribution of *Limicolaria flammata* Caill. in the J. D. Tothill collection in February 1947.

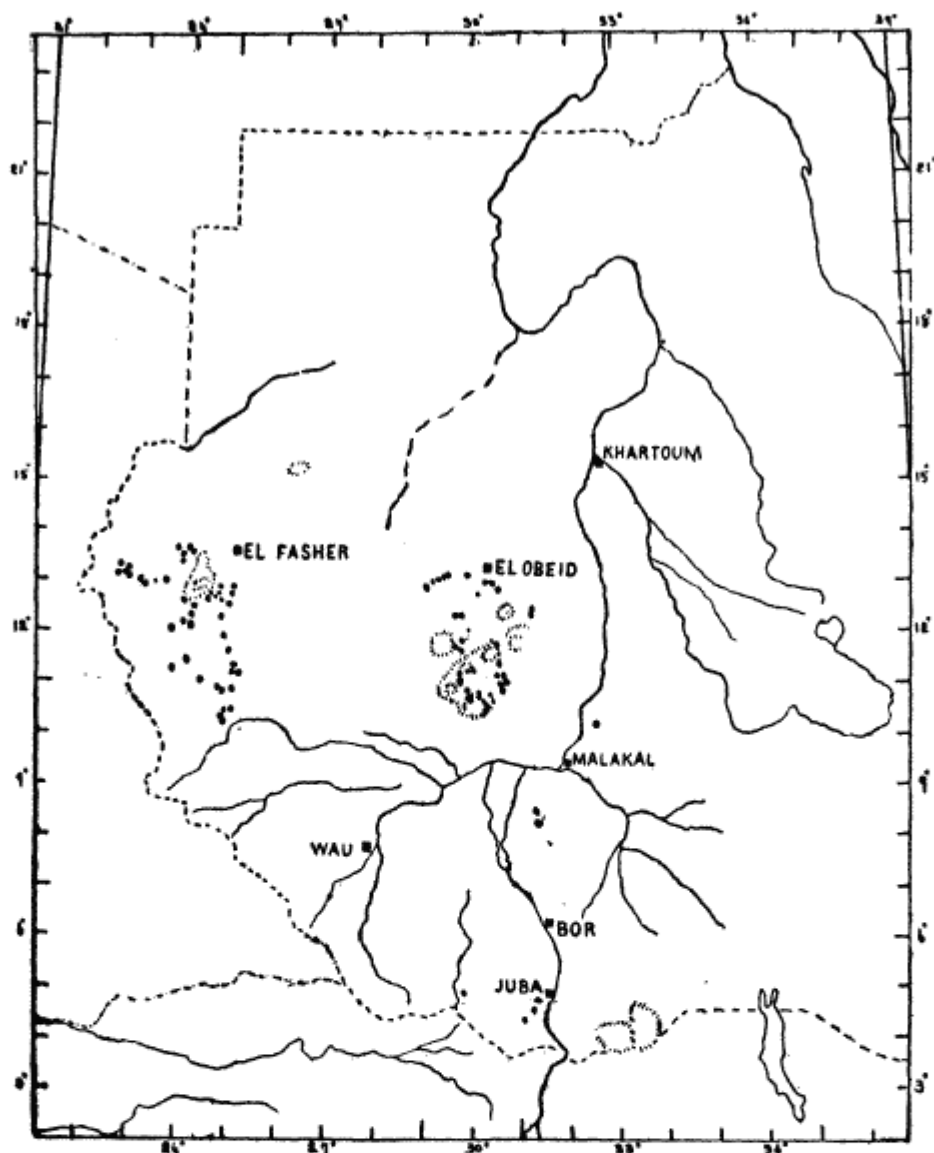


Fig. 7. The distribution of *Limicolaria kambeul* Brug. in the J. D. Tothill collection in February 1947.

Fossil distribution in the Sudan.—The species has been recorded by the writer in great abundance from the soil of the Gezira plain, by A. J. Arkell from an early mesolithic village at Khartoum, and by G. W. Grabham from a site in the desert near station 10 to the north of Abu Hamed (v. J. D. Tothill 'Origin of the Gezira Soil' *Sudan Notes and Records*, Vol. XXVII, 1946).

Present distribution in the Sudan. (See fig. 5).—The map shows that this species has not been collected north of Sennar, that it is very abundant at Gedaref and Renk, and that it occurs (as a dwarf) around

the edges of the Sudd and in the broad-leaved forest of the Nile Congo divide. It is uncommon in Kordofan Province and no specimens have been seen in Darfur Province.

World distribution.—Mrs. Jane Longstaff (l.c. p. 248) records the species as ranging southwards to Lakes Albert and Tanganyika, also to the district between the Lakes and Zanzibar and eastwards to Abyssinia. This should be accepted with reserve until specimens can be compared, because as already mentioned there has been considerable confusion about the species of *Limicolaria*. It is, however, established that this genus is confined to tropical Africa and better represented in the eastern half of this range.

Comment on distribution.—From the habitat, and mode of reproduction from eggs, it can be assumed that neither birds nor water are concerned in the dispersal of this species and that it has spread primarily by crawling. This comparatively restricted area of distribution seems to indicate an origin in Abyssinia or the Sudan. It also suggests that it originated later in time than *Burtoa*, which has spread further over Africa, but prior to the cutting of the east-west river systems by the development of the Nimule to Khartoum part of the Nile.

Limicolaria festiva, Mts.

Habitat and habits.—This species flourishes in well drained parts of the broad-leaved forest zone that have an annual rainfall of sixty inches, and becomes abundant at Yambio.

It feeds on a variety of plants, and has been seen by the writer, often four feet or more from the ground, feeding on *Calocasia*, *Cardamum*, *Sarcocephalus* and *Panicum maximum*, and at Yambio station upon the lush leaves of a number of species of unidentified grasses.

Quantities of juveniles, only just hatched, have been seen by the writer at Yambio in early May together with many adults and half grown specimens. Individuals, therefore, live for at least two years and may live much longer.

In the dry season there is no sign of living specimens, so that the probable régime is that in the wet season of May, June, July and August the animals are above ground and active, and that they go to earth for the dry season.

In the wet season these molluscs are definitely active, and can frequently be seen in the daytime four or five feet from the ground on smooth barked trees working round the bole so as to avoid the sun.

Colouring varies remarkably. In the ironstone red-loam area between Yambio and Yei living specimens are sometimes uniformly pale olive, and sometimes gaily marked with bright sepia stripes, and there is every gradation between these extremes. These soils are notably acid and this may have something to do with the colouring. All specimens collected from soils that turn litmus paper blue have by way of contrast been gaily coloured.

In the acid red-loam area also many of the shells are notably thin which suggests a shortage of lime in the herbage.

Distribution as a fossil.—Semi fossil shells have been collected by the writer from soil pits at Kosti and Nahud, and the species is abundant in the soil surrounding the rest-house at Khuai.

Present distribution in the Sudan. (See fig. 6).—As the map shows this species is abundant in the broad-leaved forest zone of the Nile Congo watershed, and occurs sparingly in all Provinces northward to the fourteenth parallel of latitude.

World distribution.—The confusion in names makes it impossible to say how widely distributed this species may be. It is, however, confined to Africa south of 14°N. and does not extend as far south as Southern Rhodesia. Its eastern and western limits astride the equator are not known.

Limicolaria kambeul, Bruguiere, 1789.

Habitat and habits.—The species flourishes in well drained, hilly, forest country lying between the 400 and 800 mm. isohyets (16 to 33 inches). It has not been seen by the writer either on the continental sands of Kordofan and Darfur Provinces, or anywhere in the Sudan on the clay plain of the peri-Sudd, or on the iron-stone plateau of Equatoria Province.

In the Sudan it never becomes abundant and in its areas of greatest abundance it is unusual to find more than one specimen to an acre.

In the dry months the writer has never seen a living specimen on the ground. It evidently spends these months buried in the soil and emerges with the first rains of May to lead an active existence above ground for the duration of the rains. Nothing is known of its feeding habits in the Sudan.

Distribution of fossil specimens.—A single specimen has been collected from a brick pit at Khuai to the west of El Obeid.

Present distribution in the Sudan. (See fig. 7).—As the map indicates this species occurs very sparingly in the Fung and around Malakal and at Juba. Although never thick on the ground it is widely distributed south of the fifteenth parallel of latitude in the undulating and hilly parts of Kordofan and Darfur Provinces. Although collecting was confined to a few traverses in each Province the map probably gives a true picture of distribution, because the dead shells are conspicuous objects in the dry season.

World distribution.—The species is recorded from Lake Chad and from Querke on the French border of Liberia.

Comments on distribution.—From the habits of this species it seems unlikely that birds, animals or water assist in its dispersal and probable that dispersal has been achieved in the main by crawling. It is also probable that it arose as a species prior to the break through of the Nile to the north from Lake Albert, as to such an animal the Nile would oppose an effective barrier. On the other hand as the species has not yet spread to Southern Rhodesia it is probably more recent in origin than species like *Burtoa nilotica* that also disperse by crawling but have gone much further afield.

THE CONSOLIDATION AND PROTECTION OF ANCIENT MONUMENTS OF THE SUDAN

By O. H. Myers,

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EACH country in the Near East has a different problem in connection with the consolidation¹ and protection of its ancient monuments; almost all of them have tackled the problem in earnest and made very considerable progress especially within recent years.

Notable work was done in the Levant during the French mandate, and it is hoped that this will be continued by the independent regimes of Syria and the Lebanon. Numbers of mosques, tombs, chateaux and baths have been wisely restored, though plenty remains to be done, particularly in the 'dead' Roman and Byzantine cities. Of particular interest and merit are the completely restored synagogue from Duro-Europus, the Palmyra tomb, and the huge rebuilt gateway from the 'Ummayyad chateau of Kafr al Khair, all three grouped in the Damascus Museum grounds, and unforgettable by any visitor.

The excellent Italian work in Libya is well known; and fortunately the tide of war did less damage to the ancient remains there than was at first feared. The extensive work by the local Governments and by Americans in Iran and Iraq must be known to most people from the illustrations which have appeared from time to time in the *Illustrated London News*. Even Aden has now an Antiquity Service, and the centre of its famous system of 'tanks' was fully, if a little unwisely, restored in the last century.

Nearer home, Egypt has the biggest problem of all countries to face — one might almost say half the World's history in stone to be cared for by one small country. In the early days much was done there that is greatly to be regretted, and there are aspects to-day which leave much to be desired, such as the guardianship, for the poverty and cupidity of the guards is easily preyed upon by unscrupulous dealers acting for European and American collectors and Museums. Nevertheless, despite all the destruction that has taken place, there are

¹ In this note, consolidation is used to mean thorough repairs and such restoration as may be necessary to give the building a new lease of life. By restoration, used alone, is meant work carried to the length of restoring the original form of the building. Protection is used with reference to elements of destruction other than human; guarding being a matter the Commissioner has well in hand.

many monuments that now stand firmer and nearer their pristine condition than they have stood for centuries. A big budget provides for more and more consolidation and restoration, and slowly Karnak, Saqqarah, Deir el Bahri, Luxor and other temples are rising again. In Karnak, a complete Middle Kingdom temple has been rebuilt from its débris which was discovered inside a New Kingdom pylon. The column of the Sudanese conqueror Taharqa, overthrown by an earthquake and now rebuilt, is one of the notable sights of the forecourt.

Apart from those Arab states which have never been penetrated by European influence, where the Governments are indifferent to, or in favour of destruction, the Sudan remains the only Near Eastern country where no serious effort at consolidation or protection has been made.

A protective wall has been built round Buhen temple near Wadi Halfa, and one or two excavators have patched monuments as they uncovered them, mostly inadequately, but then this is not the excavators' task. More recently, the Commissioner for Archaeology and his staff, battling with an inadequate budget, have made a start. An old Christian Church at Dongola, already partially preserved as a mosque, has been consolidated, but the paintings are still largely covered, and it needs anti-hornet, anti-bat, and anti-boy protection. Some of the more urgent masonry underpinning in a few of the pyramids and at Massawarat has been well done. For the rest, the work has had to consist of temporary year to year expedients to prevent further damage.

It is clear from the stop-gap nature of these measures that no plan has ever been inaugurated for a gradual but thorough work of consolidation like that of other countries. This is doubtless because the Sudan is a comparatively poor country, but, at the same time, though not poor in monuments, the work to be done in relation to the budget does not present such a difficult financial problem as it does in Syria or Egypt. Chesterton made King Alfred say " . . . it is only Christian men guard even heathen things," and this has largely been proved true, especially in such countries as India.

At this stage, the most practical attack on the problem seems to be to cut the losses and to concentrate on thorough consolidation work of the most worthy monuments. The Pharaonic remains, that is those of the Middle and New Kingdoms of Egypt and of the Napatan Dynasty of the Sudan, present the biggest problem and, being the oldest, should be tackled first. The damage they have already suffered since the occupation can easily be seen by reference to F. Frith, *Upper Egypt and Ethiopia*, London, n.d. and *Upper Egypt, Nubia and Ethiopia*, London, 1862, in which there are several photographs of the monuments taken

between 1859 and 1860. Comparison of the present remains with these photographs shows not only the subsequent dilapidation of sites such as Sulb, but also series of Meroitic columns, as at Amarah, which have apparently vanished off the face of the earth, leaving not a chip on the site. This melancholy story is common to all countries; the difference is that in the Sudan no "reparations" have so far been paid.

A reasonable plan must take into account financial difficulties, and it would probably be wise, even with these early remains, to concentrate on the most important, at least in a first plan. Thus Buhen temple is well enough protected for the time being, and the recently discovered Pharaonic temple at Amarah could be reburied in sand: it is hoped that the latter will soon be fully published, and from then on its value for visitors is insufficient to justify the cost of its preservation above ground. The remaining fragments of Sesebi, Napata, Gebel Barkal, and many other minor monuments, might at a later stage justify protection and minor repairs, but can be left for the present.

To the writer at least, the three outstanding monuments of this period are the great temple at Sulb and the two little ones each side of the cataract at Semnah, with their famous river level inscriptions. The Semnah temples are so surprisingly well preserved that the task of complete restoration would be both simple and inexpensive.

Sulb is a serious problem. It demands scientific excavation which should take place contemporaneously with the work of restoration. It is possible that a learned society might undertake the excavation, but only in return for a share of any statues and stelae that might be found, and, when the Government is undertaking consolidation, it should preserve as far as possible statues and stelae *in situ*. It would therefore be better for the excavation to be carried out by the Department of Archaeology, and a highly skilled expert would be necessary for the work of consolidation: it might be hoped that the Department of Antiquities in Egypt would second one of their specialists, possible M. E. Baraize, M. H. Chevrier, or M. J-P. Lauer, all of whom have had great experience in this work.

The Meroitic remains, which here replace those of the Classical period in other Near Eastern countries, are next in period of time and of equal importance. They are considerable but are mainly grouped together, thus facilitating the work. During the period when the earlier remains were being consolidated the present policy of underpinning would be sufficient for these, but they should come next in the plan after the Pharaonic, when some of the best preserved pyramids could be thoroughly restored together with Nagar, and perhaps Massawarāt.

The Christian Churches and Forts are for the most part in a sad state of disrepair and most of the paintings are lost for ever. They are considerable in number, but there is no very great variety, so, when their turn came, two might be chosen for restoration or at least consolidation and protection. Among the Islamic remains, there are few of artistic merit, but one or two forts and Qubbahs could be restored without great expense. Such remains of the early occupation as present historical interest appear to be already cared for, and the same applies to the Mahdia.

With energy, an adequate grant, and an early start, such a programme should be completed in ten years. The most difficult part would be the consolidation of Sulb temple, and if expert supervision were obtained for this, a younger man, trained during the course of the work, should be able alone to deal with the other tasks.

But it is useless to consolidate monuments unless they are protected. The vandal is now probably less of a danger here than almost anywhere in the Near East, but the Sudan has an enemy, almost unknown in Egypt on account of her protective cliffs,—the sand, which erodes the poor quality Nubian sandstone at an alarming rate. To protect the monuments from this is almost as important as to consolidate them, and in some places may be all that is necessary. For this purpose, it is suggested that 'sand-groynes' be constructed, and in the Appendix to this note the suggestion is elaborated.

A proper estimate of the time and cost of completing such a programme could only be made after a survey by a qualified person, but the following may serve as a very rough indication of what the plan might entail.

YEAR	SITES	COST £E.	NOTES
1	Sulb	8,000	Includes seconded personnel, initial equipment, and excavations.
2	The same	7,500	Seconded personnel, excavations and sand-groyne (<i>see</i> Appendix).
3	The same	4,500	Above items concluded
4	Semnah and perhaps Gebel Barkal pyramids	4,500	
5-7	Ancient Meroe area ..	13,500	
8-9	Christian and Islamic monuments	8,000	Little or no ashlar masonry needed.
10	Repair and protection of minor monuments ..	4,000	
	Total	50,000	

There may be many who will say that this is too much to spend on antiquities, and that the money should be used for productive work. This is an understandable opinion, to which two answers may be made. Man cannot live by bread alone, and an appreciation of its past is essential to the growth of a nation. Secondly, the disappearance of some monuments and the dilapidation of others are due to their being quarried in the past to build economically for productive schemes. Much of that debt can never be repaid, some of it should be.

APPENDIX

SAND GROYNES

The name Sand Groyne has been chosen to describe an angular construction, designed to direct the sand flow each side of the monument which it protects.

A number of our monuments lie on the edge of the Libyan desert, where they are subject to the full blast of the northerly sandstorms. In reply to a query as to whether a V-shaped wall, pointed into the prevalent wind, would serve to divert the sand each side of it, Brig. Bagnold replied:—

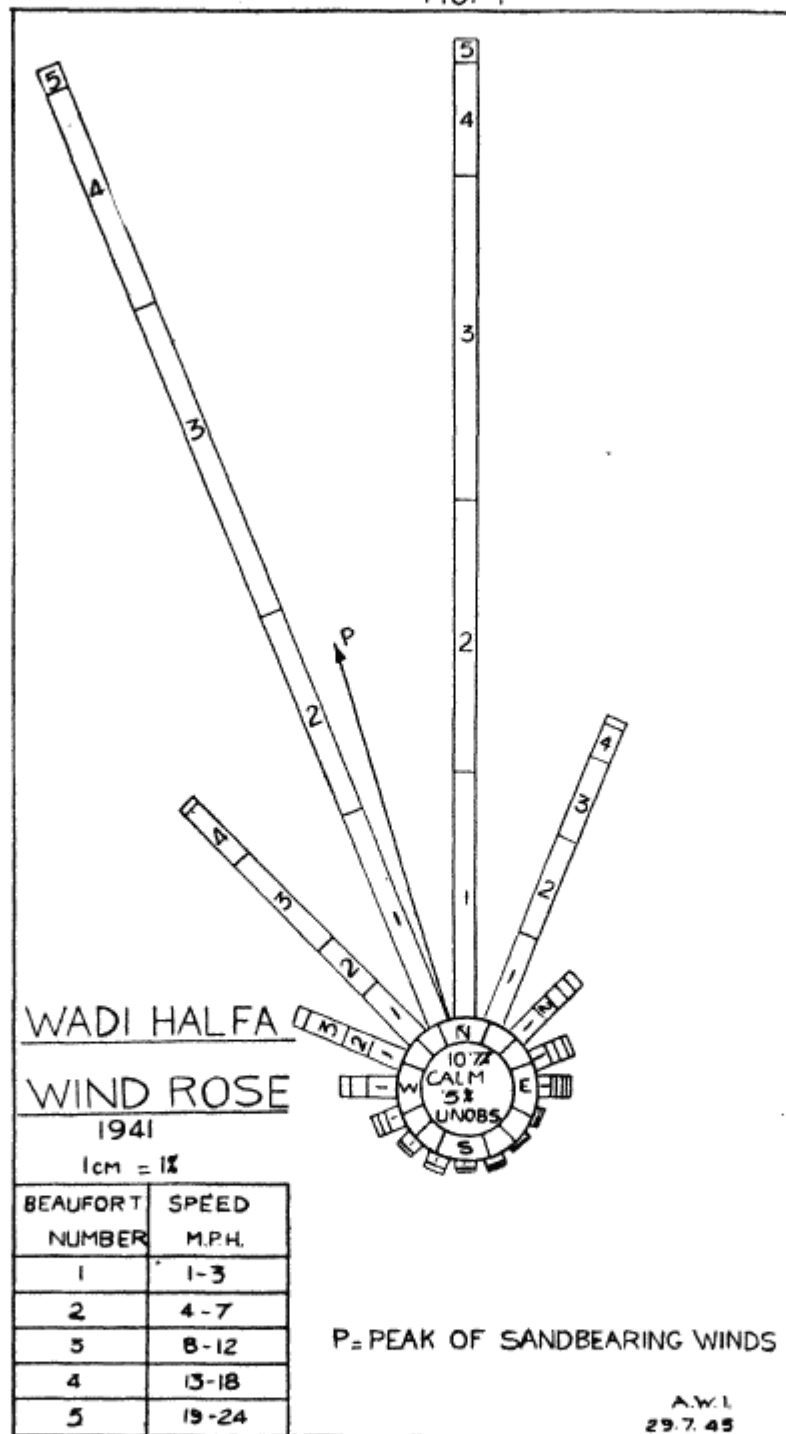
“With regard to your problem, the first point to be clear on is the direction from which the storm winds blow which do the damage. If these blow from one fixed direction, the apex of the V-shaped wall would be pointed in that direction. Then if the walls were inclined at, say, 45° to this direction, the wind would keep them clear of sand. But, if you were to get a *succession*¹ of sand-driving winds from a direction, say, 20° different, sand would pile up against one wall.

“To get the true prevailing direction of sand driving from meteorological records, the strength v and the duration t should be taken over a long period of time for each point of the compass in turn. Then find for each direction the total summation of $(v-V)^3t$, where V is the wind speed, as measured at any height, which is just capable of driving sand. At a height of 1 metre it is 14 miles an hour. If these summations are then laid off on a polar diagram round the compass—provided sufficient wind records are available, you will be in a position to make your designs. If the resulting ‘wind-rose’ goes out to a nice sharp point in one direction, and if the apex of the walls are pointed in this direction, they should not become choked with sand. Otherwise it would

¹ Italics mine.

be best to build a circular wall and to hold up the oncoming sand outside it—well away from it in order to leave room for a large accumulation—with hurdles or fences.

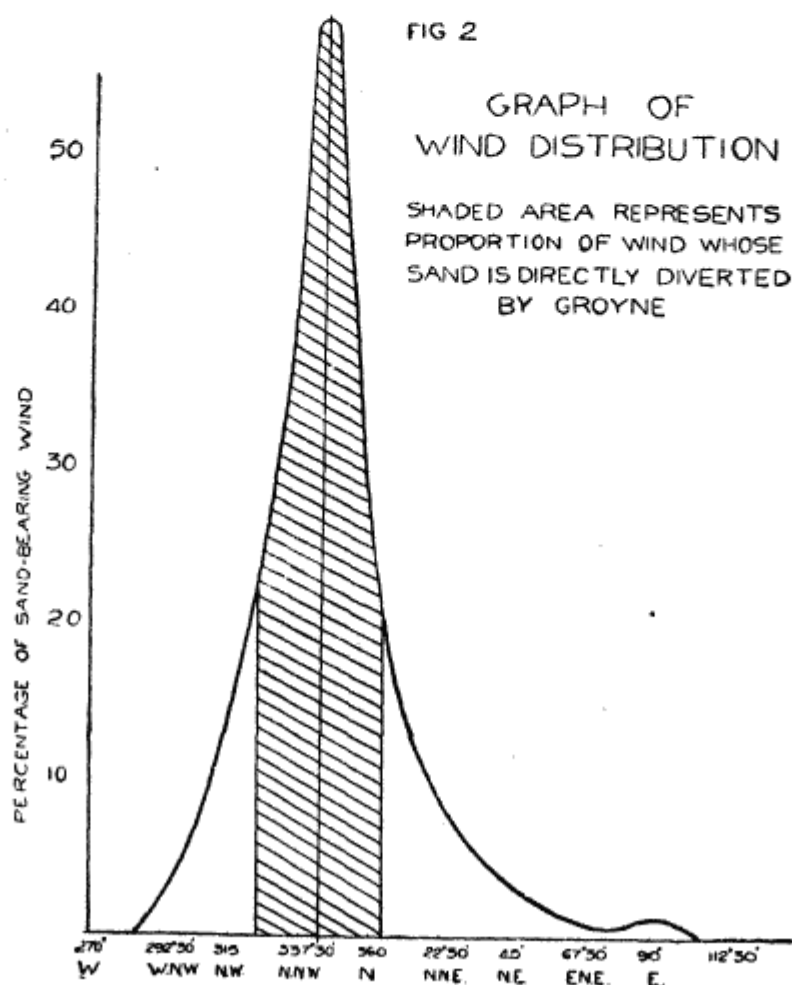
FIG. 1



“ Walls projecting 4 to 5 ft. high above a horizontal floor should be enough, but if sand does accumulate at the wall's foot, some of the

height will of course be lost. I should think that a vertical wall without curvature or batter would be best."

Turning to fig. 1, it will be seen that though there are two points to the wind-rose, these are only $22^{\circ} 30'$ apart. The sand-bearing winds are Beaufort No. 4 and above, so it is also clear that more sand is carried by N.N.W. winds than by N. winds, and again that more is brought by the N.W. wind than by the N.N.E. wind, and so on. Sand-bearing winds represent 15.7% of the total. Converting the fractions at the various points of the compass into percentages of the total sand-bearing winds, we get:- W — 0, WNW — 2.23, NW — 14.0, NNW — 46.20, N — 24.20, NNE — 7.96, NE — 3.18, ENE — 0.96, E — 1.27. If a graph then be made (fig. 2) with these percentages as ordinates and the points of the compass as abscissae, and the asymmetric portion of the figure representing the minor peak on the east be ignored (since no amount of swinging the point of the groyne will have any effect against winds from this direction), the remainder of the figure is bisected by a line cutting the abscissae at 344° to the nearest degree. This then represents the peak of the sand-bearing winds.



From the same graph it is possible to see, by the rather primitive method of counting squares, that 68% of the borne sand will be within 20° of the peak, and will therefore be carried past, 15% will be to west of it, and 17% to the east, including the easterly minor peak. These figures are within 2% of those obtained by taking the two main arms of the wind rose as being within the groyne's diversion area and the rest to either side of it, so the error on them is probably less than the annual variation in wind direction.

It seems improbable that much of the 32% will be carried by successive winds, which would be necessary to pile it against the groyne. The one direction which seems to represent a seasonal change is to the east, and little or no sand will be brought from this direction against monuments lying near the west of the Nile. Inspection of the terrain and damage to monuments might show that for some of them it would be possible to reduce considerably the eastern arm of the groyne, or omit it altogether, and to swing the apex west of 344° , but this cannot be decided away from the sites and will be left out of consideration in the calculations which follow. It is worth bearing in mind as a possible method of saving expense.

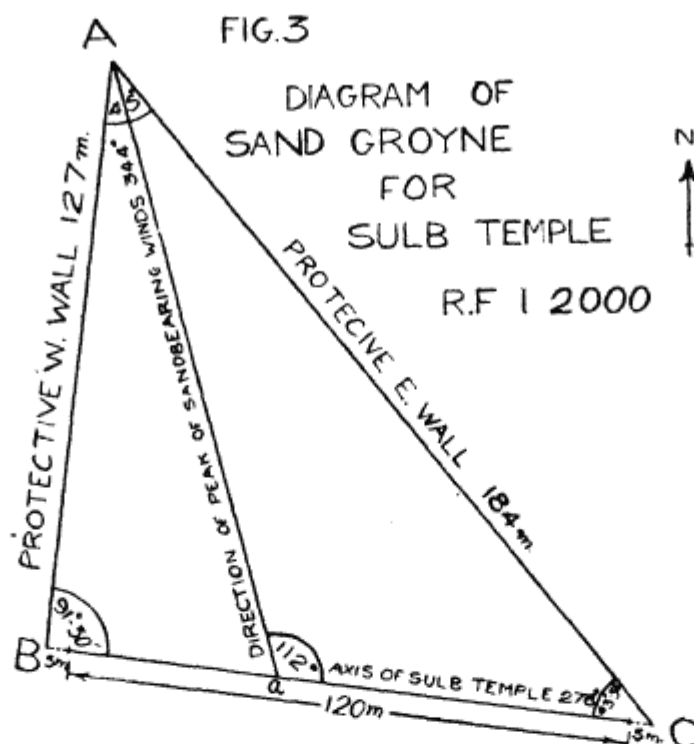
The biggest monument of all, Sulb temple, which is suffering greatly from sand-blast, was planned in 1823 as lying due east and west to magnetic north. If the observation was correct its axis is 278° to the nearest degree.

The total length of the axis is given as 160 m. but the length of remains sufficient to be preserved is 120 m. It seems advisable to bring the ends of the groyne some little distance from the ends of the monument, so as to throw the sand clear, say 5 metres at each end.

Turning then to fig. 3, our problem is to draw a triangle ABC, in which side a is 130 m. long and angle BAC is 45° , such that the bisector Aa of angle BAC cuts BC forming angle AaB of 66° (Sixty-six degrees being the difference between the wind peak and the temple axis). By subtraction angle ABC must be $91^\circ 30'$ and angle ACB $43^\circ 30'$. Then by calculation the two sides AB and AC must be 127 m. and 184 m. respectively.

This gives a total walling of 311 m. which is considerable, but it must be remembered that this is the biggest single monument to be protected in the Sudan, and that it lies almost dead across the wind, making for the maximum wall length.

Taking into account the possibility of some temporary piling up at the groyne base outside, it seems best to make it about 6' high, and in order to support the possible weight of sand accumulating within it from eddies, it must be two bricks (about 18") thick.



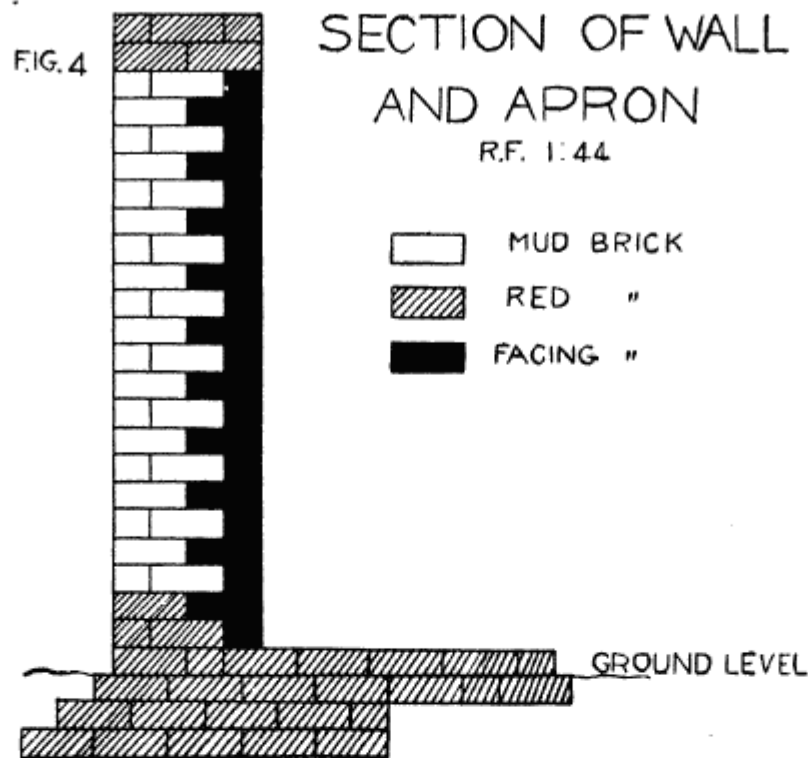
Further to ensure against any permanent accumulation of sand outside, an apron of about 3' width might be built into the wall, for a hard surface will greatly assist the major winds to blow away any sand piled up by the minor and will allow winds of Beaufort No. 3 to carry it away. (See Bagnold, *The Physics of Blown Sand and Desert Dunes*, London, 1941, p. 72).

To give greater resistance to erosion of the groyne itself it is suggested that the lower 5 ft. of the wall should be faced outside with salt-glazed or sand-cement bricks. The roughness of ordinary burnt brick will probably give the best surface for the apron, and these should be used for the foundations to prevent damage by burrowing animals as well as for the top two courses of capping. In the interests of economy the rest may be mud brick. Fig. 4 is a section of the proposed walling.

In order to construct with bricks of more than one kind, it would be necessary to have purpose-made mud bricks, the same size as the burnt and facing bricks. It is assumed that any difference between the latter two would be negligible and would be taken up in the interstices.

Means of six determinations at the brickfields near Khartum gave the following figures in cm.:—

	length	width	thickness
Box	23.90 $\pm$ 0.07	11.15 $\pm$ 0.06	7.98 $\pm$ 0.01
Adobe	23.25 $\pm$ 0.17	11.25 $\pm$ 0.05	7.53 $\pm$ 0.01
Burnt	22.06 $\pm$ 0.13	10.93 $\pm$ 0.06	6.65 $\pm$ 0.09



The absence of shrinkage in the width of the adobe is most curious and might be attributable to an inadequate number of observations, were it not that the probable error is less than a half of one per cent. The shrinkage of all hand-made bricks, both burnt and adobe, is very irregular as between the lengths, widths and thicknesses, because a complexity of factors comes into play, so for practical purposes it seems safe to assume that there is no change between the width of the box and the dried mud brick.

Then the box required to make mud bricks the same size as the burnt bricks will be 227 x 109 x 70 mm. to the nearest millimetre.

In order to make salt-glazed bricks it is necessary to have a clay with an alumina/silica ratio of between 1:4.6 and 1:12.5, and not too high a ferric oxide content. The clay at Deim an-Nubāwi, at the north end of Omdurman, which was used in 1927 for brick making at the Moghren brick factory, might be suitable. The washed clay contained 63.1% silica, 22.6% alumina, and 1.4% ferric oxide, and the unwashed material had a small amount of coarse sandy matter which would be advantageous for glazed bricks. The puddle would thus be better used unwashed.

There is some doubt whether a wood-fired kiln would give the necessary temperature of 1200°C (cone 6). Judging by the bricks

produced at present, this temperature is certainly not reached in the ordinary way. Further research is required before it could be decided whether it was worth trying to produce such a brick or not.¹

It is estimated that, allowing for a 10% loss on all burnt brick and 15% on adobe (which may be a little low for this country), each 6 foot of walling and apron would require 275 facing bricks, 500 burnt bricks, and 450 mud bricks. The total cost of construction of the same length of walling by direct labour is estimated at £E. 5.34 with mud and plain burnt brick only, and £E. 5.78 with sand-cement facing bricks (which are made by Sudan Railways at Atbara). Both figures are exclusive of transport charges, for which accurate figures are not obtainable.

With so many factors uncertain, it is impossible to make a useful estimate for salt-glazed bricks for facing, though it may be mentioned that the cost of the salt for 6' of walling would be 90 m/ms. (*i.e.* at the rate of 140 lbs. of salt, at 275 m/ms. per cwt., per 1,000 bricks).

The total length of wall needed for Sulb temple is 340 yds., so the cost with sand-cement facing bricks would be £E.983.² (If it were found possible to dispense with the East wing, this cost would of course be reduced by more than half, even though the West wing were slightly lengthened).

It would doubtless be wise to test the sand-groyne on a small scale somewhere on the western bank in the Halfa area. At the same time a half-groyne could be tried out near the river bank, where the latter bends westwards.

Sand-groynes might prove suitable for the protection of small patches of cultivation, wells, or buildings, from oncoming dunes. For this purpose the groyne would have to be five or six feet higher at its apex than the highest point of the oncoming dune, though the wings could probably be tailed down towards the base. The construction would have to be solid proportionally to the height of the dunes to be diverted.

¹ The British Refractories Research Association at the Mellor Laboratories, Shelton, Stoke-on-Trent, can supply full details on this point, if supplied with dimensioned sketches of the kiln, showing the arrangement of flues and general construction. Provisionally it may be said that common sea-salt is good enough for the purpose, and that a half to one and a half pounds of salt are required for each cubic foot capacity of the kiln. The salt should not come into direct contact with the bricks. The temperature of the kiln should be at least 1200°C. and the atmosphere strongly oxidizing before the salt is added. The procedure is to introduce the salt at several stages at 20-30 min. intervals. The draught is cut down as much as practical before introducing the salt, and the temperature, which drops considerably after each addition, is restored to 1200°C before further salt is added. Unless the walls of the kiln are of high alumina bricks they will be damaged.

² About £E. 285 would have to be added to the figure for transport of facing bricks, but the figure is a very rough one.

Barkhan dunes could perhaps be stopped more simply by tying down their tails with a coating of concrete, for these dunes advance only by the fact that the wind blows their tails over their faces. The length of tail which it would be necessary to bind, would best be established by experiment. This might not stop the dune from growing, but its growth would seldom be a menace if it were bound some little distance from the object it was desired to protect.

Note.—For information and help in the preparation of this note I am indebted to Brig. R. A. Bagnold, F.R.S., Mr. B. Butterworth of the Building Research Station, Watford, Mr. A. W. Ireland, Government Meteorologist, Mr. M. H. Lees, Assistant Director of Works, Musa Eff. Sassoon, Mr. C. T. Serjeant of Sudan Railways, and Mr. R. C. Wakefield, Director of Surveys.

EARLY REFERENCES TO MALARIA NEAR DONGOLA

By D. J. Lewis.

A FEW years ago *Anopheles gambiae*, the most important African malaria-carrying mosquito, spread from the Aswan Reservoir area into the centre of Egypt, causing a severe outbreak of malaria. The mosquito was later exterminated from that country and, early in 1946, was also exterminated in the area of the Sudan between Saras, south of Wadi Halfa, and Faras on the Egyptian border.¹ At present it is not known to occur north of Firka, some 120 kilometres along the river from Faras.

In considering these rapid and extensive changes in the range of this important tropical mosquito one might ask what was its past history in the area, if it has always been there or if it spread recently from much further south. Its past existence in the area can be ascertained both from a few actual records of it and from records of malaria of which *A. gambiae* is the local vector, other species being scarce or absent. An examination of the relevant literature, indicates that malaria has existed for most of the present century on at least parts of the river between Merowe and Faras.¹ In the nineteenth century several travellers alluded to a disease in this area which was probably malaria. Although its identity cannot be proved, their records quoted below are of some interest, both from a historical point of view and because they do suggest that malaria and *A. gambiae* have existed in the Dongola area for well over a century.

Burkhardt,² who travelled up the Nile in 1813, wrote that a fever (regarded as almost certainly malaria by Bloss³), which occurred in epidemic form during the flood, but not every year, and which was often fatal, particularly affected the Dongola area. At the present day malaria has a sporadic occurrence in the district. Burkhardt was driven away from the vicinity of pools at Wadi Sonk (Sonki E.) at night by numbers of biting "gnats." These may have been *A. gambiae* since the other common mosquito, *C. univittatus*, is seldom annoying, and *C. molestus*, a biting species, is local and not common.

¹ Lewis, D. J. (1948). The extermination of *Anopheles gambiae* in the Wadi Halfa area (in the press).

² Burkhardt, J. L. (1822). Travels in Nubia by the late John Lewis Burkhardt. Second Ed., 42, 73, 79, 229, London.

³ Bloss, J. F. E. (1941). Notes on the health of the Sudan prior to the present Government. *Sudan Notes and Records*, 24, 130.

Waddington¹, after reaching Amara on 16th November 1820, wrote of "mosquitoes so very active that I was glad to take refuge under my gauze net." Of the south part of Argo Island he wrote: "The last two nights were much colder, which did not prevent the mosquitoes from being remarkably active about us. There is a breed peculiar to this country, which is much smaller, and less sonorous, than those whose attention we had been in the habit of receiving." This description suggests *A.gambiae*; *Phlebotomus papatasi* is almost inaudible and the traveller would have encountered it and the other species of mosquitoes in Egypt. At Merowe, on 15th December 1820, after a slow advance from the north: "The army was by no means healthy.... there were.... many sick of dysenteries and intermittent fevers.... their bark was so deficient in quantity, or in quality, that the Protomedico [asked].... Mr. Hanbury for a little of his *China famosa*, though we had scarcely enough left between us to cure one tertian, should any one of the party be unhappily so visited" (the word "quinine" is derived from *china*, the Peruvian for bark, the drug being prepared from the bark of a certain tree). Of Dongola, reached on the return journey on 2nd January, Waddington wrote: "The plain is very low here and symptoms of inundation are visible at nearly two miles from the river. There are several large holes, whence the mud was taken to build the town, and which are now filled with stagnant water. Some marshy ground near assists in accounting for an intermittent fever which generally prevails here after the inundation has retired. We found, in consequence, many of the inhabitants and all the soldiers ill." "Bark" was administered to one of the inhabitants, and about this time a member of the party developed fever. Long before the nature and transmission of malaria were understood the disease was known to be often associated with stagnant water. On 5th January Waddington was on Argo Island, of which he wrote: "The western side of Argo is in some places very sandy, and a little within is a great deal of low ground, now full with stagnant water and fishes and waterfowl; all this part of the island is said to be at this season particularly unhealthy." Later, on an island west of Argo (9.1.22), "we had not left ourselves above twenty doses of that necessary medicine ["bark"]. The natives consoled us by the assurance, that, if we remained on this spot [first reached on 3.1.22] only three or four days longer, we should all have intermittent fevers, from which themselves were suffering extremely."

¹ Waddington, G. & Hanbury, B. (1822). Journal of a visit to some parts of Ethiopia, 18, 51, 136, 224, 232, 235, 238, 247, London.

Cailliaud¹ was delayed by "la fièvre" below Argo in December 1821, and wrote of dangerous fevers occurring in the Berber district (south of Abu Hamed) after the rains.

Hoskins,² who visited the area in 1833, recorded that at Abu Hamed the malaria, so prevalent upstream during the inundation, was unknown. Dongola, he wrote, was very unhealthy in the rainy season. Further north, at Sulb, he slept out of doors, having no "fogs or damp" to fear.

De Cadalvène and De Breuvery³ visited Dongola in 1830, where, they said, fevers which were dangerous after the rains in Sennar and Kordofan were neither protracted nor dangerous (Hoskins had previously referred to the prevalence of "ague and intermittent fevers" in Kordofan). They mentioned mosquitoes and a repellent ointment.

After referring to the unhealthy "exhalations of the moist plain" Reclus⁴ (c. 1885) wrote of the Nubian area (below the R. Atbara junction) where "the inundations of the Nile stretch far into the plains, leaving stagnant pools here and there, malignant fevers are very common and frequently terminate fatally." Most people were said to live "beyond the zone of the marsh fevers." Of Dongola Reclus wrote that a channel of the river "at low water becomes a mere stagnant pool emitting dangerous miasmas."

¹ Cailliaud, F. (1826). *Voyage à Merowe* . . . , 365. Paris.

² Hoskins, G. A. (1835). *Travels in Ethiopia* . . . 180, 256. London.

³ De Cadalvène, E. & De Breuvery, J. (1836). *L'Égypte et la Turquie de 1829 à 1836*. Tome 1 & 2, Égypte et Nubia. Vol. 1, 160, 161, 195. Paris.

⁴ Reclus, E. (c. 1885?). *The Earth and its inhabitants*. The Universal Geography. 10, North-East Africa. Ed. E. A. Keane, 282, 291, 300. London.

A TRIAL ECONOMIC SURVEY OF TWENTY FAMILIES AMONG THE MOROKODU TRIBE OF AMADI DISTRICT, EQUATORIA PROVINCE

By G. R. Staniforth.

THIS trial survey was limited to twenty families of the Morokodu tribe chosen at random in an area of about ten square miles just south of Amadi. It is not claimed that this sample is fully representative and, had it been possible, the survey would have been extended to include the whole of this small tribe. Information was collected on questionnaires (of which a sample is shown) and a check survey of some of the holdings produced answers to the first nine questions reasonably similar to the originals. A Moru-speaking employee was taught to fill in the forms, but it would have been better to have used an investigator who belonged to and was completely accepted by the Morokodu tribe, had a sufficiently intelligent individual been available. The people were highly mistrustful of the enquirer in any question of money and the replies on income and expenditure are considered so untrustworthy that they will not be detailed here.

The measurement of cultivated areas at one time seemed impossible. The best available employees had no idea how to compute areas but an assistant was eventually taught to make rough sketches of the shape of plots, to split them into triangles and to measure the sides of these triangles on the ground by pacing. The writer then had to construct the figures to scale and to calculate the area, assuming 5,000 square paces to the feddan. It would be better, in any future survey, to instruct the surveyor to make tie, as well as construction, measurements in all plots with more than three sides, as these would provide a check on his accuracy. It is often difficult to recognise the exact boundaries of cleared cultivation and plots are of every imaginable shape. Nevertheless, taken as a whole, the figures for cultivated areas are approximately correct. There was no time in this preliminary survey to measure areas under different crops, which are often sown in several places on the holding and sometimes mixed one with another.

For the purpose of computing family strength the individuals at each site were divided into the very young, adolescent, full grown and very old of either sex and, by an arbitrary arrangement, the families were reduced to man-power by disregarding the very young and the very old and by reckoning each woman and adolescent as half a man.

The tabulated summary of results shows that families are of from 2 to 18 persons, with an average strength of 6 or 7 and that there is a dwelling hut for every 2 or 3 people. Most families include 2 or 3 small children. All except two of the families had fishing nets or hooks—the River Yei is nearby. Only two of the families kept a few goats but most of them had between one and twenty head of poultry. The majority owned bee-hives, some possessing as many as ten; but probably never more than half of these would contain a swarm at any one time. The crops which occupy most of the ground are dura, sesame and ground-nuts; but cassava, sweet potatoes, hyptis, melons, *bamia*, beans and tobacco are also commonly grown in small patches. Some light is thrown on the rate at which cultivation is shifted by the figures showing the number of years for which the family has occupied the present site, the average length of occupation being 5 years. The most interesting point which emerges is the close correlation between the acreage cultivated and the man-power of families. In nearly all the holdings the area cultivated is approximately one acre to one unit of man-power.

The overall impression gained from a consideration of the results of the survey is one of poverty. Even if two crops are successfully grown during the year on part of the cultivation area and if new land is regularly brought into cultivation, the food grown can suffice for little more than subsistence. Nor is there any cash crop to provide funds for buying extra food or clothes. Honey and beeswax are very unreliable sources of income. Fish provides an important addition to the diet when grain is in shortest supply and the river at its lowest, but livestock can provide only a tiny supplement to food supplies. There is game in the district and all families possess bows and arrows, but the twenty families, between them, claimed to have accounted for no more than two bush rats and four guinea-fowl during the past year.

These scraps of unco-ordinated information are diffidently presented not so much to provide information on economics as to suggest possibilities for better organised enquiries. Medical and nutritional surveys are already being carried out in Equatoria and very interesting results might be obtained if they could be carried out in conjunction with an agricultural-economic survey.

QUESTIONNAIRE.

1. How many people are there in the family ?

Very old men	Very old women	Men	Women
Very small boys	Very small girls	Youths	Maidens

2. How many buildings are there ?

Dwelling houses..... Grain stores.....

3. How many bee-hives are there ?

4. How many fishing nets.....or hooks are there ?

5. How many goats or sheep ?

6. How many head of poultry ?

7. What game was killed last year ?

8. How long has the family lived here ?

9. How much money did the family receive last year ?

(a) From wages

(b) From the sale of honey Fish

Beeswax..... Poultry..... Pepper

Eggs Dura Beer

Tobacco..... Others.....

10. How much money did the family spend last year ?

On clothes..... Food Tobacco.....

Beer Marriage Tools

Anything else.....

SUMMARY OF RESULTS.

Family No	Total No. of persons	No. of small children	Strength in man equivalents	Acreage cultivated	No. of years in present site	No. of dwelling houses	No. of grain stores	No. of beehives	No. of head or poultry
1	5	—	2	2.2	1	2	1	—	8
2	10	5	4	3.0	17	5	8	—	20
3	10	3	4½	3.2	6	3	3	8	7
4	7	3	2½	3.0	9	3	5	2	6
5	8	3	3	4.6	3	3	2	—	12
6	3	—	2½	3.7	9	3	2	3	2
7	18	8	6½	5.2	3	6	9	3	6
8	6	2	3	2.6	4	2	1	6	—
9	2	—	1½	2.1	1	2	2	5	10
10	5	2	2	0.8	2	1	—	—	—
11	7	2	2	3.2	1	3	2	2	—
12	2	—	1½	1.7	2	2	2	4	1
13	8	2	3	4.7	2	3	2	10	7
14	2	—	1½	1.6	2	2	2	—	3
15	6	2	2	1.5	6	3	—	6	4
16	7	2	2	2.3	4	4	3	10	4
17	8	2	5½	6.0	11	3	3	2	4
18	6	—	3½	3.0	3	3	1	2	—
19	5	—	1½	1.8	15	3	1	—	6
20	7	3	2	3.5	4	3	1	5	20
Average	7	2	3	3.0	5	3	2½	3	6

ADULT EDUCATION AMONGST COUNTRY WOMEN : AN EXPERIMENT AT UMM GERR

By G. E. Richards.

THE island of Umm Gerr, situated on the White Nile about 145 road miles south of Khartoum, contains a large pump scheme whose function is to supply alternative livelihood to some of the semi-nomadic tribesmen whose vital grazing grounds are now flooded by the Jebel Aulia Reservoir. The problems of helping former nomads to adapt themselves to a sedentary mode of life were attacked by the adult education staff of the Institute of Education at Bakht el Ruda during the war years with slow but encouraging results. The following note is an account of recent work on the women's side.

Work amongst the women was started by Sitt Dar-el-Gelaal, who is a trained teacher and midwife, and myself in September 1945. We started by regularly visiting 12 of the 19 villages on the island. These twelve villages were inside the area of the Pump Scheme. The villagers had built themselves mud houses to live in, and were rather more settled than in the remaining six villages where the people lived in grass huts or tents and were still largely semi-nomadic.

First Lessons.

At each visit we held a meeting lasting some two to three hours in the most suitable house in the village, usually that of a sheikh or *murshid* (village guide). Our main aim was to get to know the women, and be known amongst them, to become familiar with their ways of living, beliefs and customs, to discuss with them their problems, and so find out what were their most urgent needs. Immediately we started these meetings most of the women asked to be taught to sew ; we made them provide their own materials, needles and cotton, or alternatively buy them from us, and then helped them to make embroidered cloths, sheets, *tagias* (caps), *tobes* (outer garments), and in some cases other garments. After a few weeks at least 80% of the women attending the meetings were learning to sew, and we insisted that the remainder brought with them their own handwork such as *zaf* (fibre) work, *birsh* (mat)-making or wool-spinning, so that no person would be sitting idle. During the meeting we promoted discussion on the value of cleanliness, the causes, prevention and cures of the more common diseases, the

importances of diet and good cooking, the value of schools, use of dispensaries and midwives. In addition we sold quantities of soap.

These meetings continued with fair regularity for eighteen months. What were the results? There was definite improvement in the personal cleanliness of the women attending the meetings, which was to some extent reflected in their houses: through these rather domestic meetings we had encouraged the women to take a pride in the appearance of themselves and their houses, and they had responded to this encouragement. Apparently we were working on the right lines and must develop the work.

Second Stage of the Work.

It was not practicable to try and extend the scope of each meeting; not only could we not spend sufficient time in each village, but the monotony of repeating one lesson twelve consecutive times was too much to contemplate. We therefore selected four villages in which the women were rather more advanced, we planned to spend three days a month in each giving a class lasting from about 9 a.m. until after lunch; each class to be composed of about fifteen women selected from the village in which the class was being held and from villages nearby. The work of the class was divided into two parts:—

1. *Needlework.* Up to this point the women had only been accustomed to hemming and embroidering: we had done all the necessary cutting out and tacking up, and now we had to teach the women to do these for themselves. This was the first time that the women had used a pair of scissors and a pencil. They were easy to teach and quick to learn. The first garment they made was an apron, which on finishing, they wore during the cookery lesson, and then a pair of knickers, a petticoat, and a frock. Each woman paid the cost price for her garment.

2. *Cookery.*—The common diet of the people was *lugma* (millet porridge) or *kisra* (millet bread), with only *rob* (sour milk) or *um rigeiga*, yet there were quite a variety of vegetables and salads grown on the island, and most villagers owned a vegetable plot. The most urgent need then, was to teach the women how to use these vegetables and salads. The cookery lesson took the form of the preparation of the lunch by the class and we stressed the need for variety in the diet and the importance of cleanliness in preparation. Proper cleaning of pots, pans, other utensils, and cloths immediately after use was carefully supervised. We taught some twentyseven different dishes which

included three sweets. Each member of the class paid 1 P.T. towards the cost of the meal, and took her turn in bringing *kisra*; the remainder of the cost was met by a grant from the Rural District budget, and a small grant from the Tenants' Welfare Fund.

Results.

We have just finished a series of these classes spread over a period of eighteen months. The enthusiasm of the members of the classes showed that they felt that they were learning things which were of value to them and proved to us that we were still working on the right lines. Evidence that they were putting into practice in the homes some of the things they had learned came from reports from the husbands of the better cooking in the home, and continued improvement in the cleanliness of the women. Indirect evidence of our teaching and contact is that the women are more ready to use Government midwives, the dispensaries, go to the Dueim hospital, send their children to school, use the wells in the villages and generally make greater use of the social services provided for their own benefit.

Future plans.

We have been working amongst the women, and have opened a school for girls over seven years old. But what about that very greatly neglected section of the population, children from the age of fourteen days to school age? Miss Hegan, a qualified Health Visitor, was appointed last January specially to advise on and work out plans for the Child Welfare aspect of the work. Up till now she has spent her time becoming familiar with, and getting known amongst, the women of Um Gerr, and now with Sitt Um-El-Hassen she will spend until next April working out a programme with a particular emphasis on Child Welfare. During this time it is hoped that Sitt Um-el-Hassen will take part in the Mass Literacy Campaign, and begin literacy classes for the women who are now more than ready to learn.¹

On September 24th² Sitt Dar-el-Galaal and myself hope to start the first course of training of mistresses for the extension of Adult Education work in other areas: the course will last three months and there will be four members. These members will be school teachers who have a special interest in work amongst rural communities.

¹ Since this article was written a literacy campaign of the each-one-teach-one type has been started in three villages with very encouraging response from men and women. *Ed.*

² Written in 1948. *Ed.*

PHILOSOPHICAL SOCIETY OF THE SUDAN.

REPORT UPON THE 1946/7 AND 1947/8 SESSIONS.

1. Formation.

The Society was founded early in 1946, its objects, as defined in its constitution, being :—

“To promote discussion, exchange of views, and research in moral, political, and natural philosophy, by holding meetings for the reading of lectures and original papers, and by any other means, such as co-operation with other societies with similar objects, that the Committee may from time to time approve.”

The Sudan is developing rapidly and the need for the Society had become increasingly apparent during recent years. Although foreign publications and societies necessarily remain the principal media for the dissemination of information concerning specialised research in the Sudan, the Society provides a medium for less specialised research of primarily local interest. It also facilitates co-operation between workers in different fields and is a means whereby the intelligent layman can keep abreast of developments.

The inaugural meeting was held on February 2nd, 1946 and seventy five persons became founder-members. The following officers and committee were elected :—

President	A. J. Arkell
Vice-President	G. Andrew
Secretary	G. W. Ogden
Asst. Secretary . . .	A. W. Ireland
Treasurer	G. C. Wood

Committee :

Dr. I. M. Beasley	Dr. N. L. Corkill
Dr. R. L. Knight	Dr. E. S. Horgan
G. M. Hancock	J. S. Owen

At the first Annual General Meeting held on 12th November, 1946 the same officers and committee were re-elected except that Dr. B. M.

Boyns and S. G. Assabgy were elected to fill two vacancies on the Committee created by the retirement of Dr. N. L. Corkill and G. M. Hancock.

At the second Annual General Meeting held on 13th January, 1948 the following officers and committee were elected :—

President.....	Dr. J. Smith
Vice-President....	G. W. Ogden
Secretary.....	A. N. Ireland
Asst. Secretary...	L. S. Coble
Treasurer	G. C. Wood

Committee :

G. Andrew	S. G. Assabgy
Dr. I. M. Beasley	Dr. B. M. Boyns
Dr. R. L. Knight	P. L. Shinnie

2. Programme.

The Programme for 1946/7 and 1947/8 comprised twenty one lectures and four field days.

1st. Meeting 26th February, 1946	Speaker : A. J. Arkell Subject : <i>Some suggestions for lines of research in the Sudan.</i>
2nd. Meeting 26th March, 1946	Speaker : M. Shebeika Subject : <i>A Sudan historical manuscript.</i>
3rd. Meeting 23rd April, 1946	Speaker : Dr. J. D. Tothill Subject : <i>The origin of the Gezira soil.</i>
4th. Meeting 28th May, 1946	Speaker : G. W. Ogden Subject : <i>The relationship between frequency and speed of transport.</i>
5th. Meeting 24th September, 1946	Speaker : Dr. I. M. Beasley Subject : <i>Light reading in the middle ages.</i>

- 6th. Meeting
22nd October, 1946 Speaker : Dr. J. Smith
Subject : *The distribution of tree species in the Sudan in relation to moisture and soil texture.*
- 7th. Meeting
26th November, 1946 Speaker : R. L. Hill
Subject : *The structure of the Turkish administration in the Sudan, 1823-1837.*
- 8th. Meeting
17th December, 1946 Speaker : O. W. Snow
Subject : *Some problems in agricultural research.*
- 9th. Meeting
21st December, 1946 Speaker : Dr. Dows Dunham
Subject : *The history of the Sudan from 800 B.C. to 350 A.D. as disclosed by Dr. Reisner's excavations.*
- 10th. Meeting
28th January, 1947 Speaker : R. J. Hillard
Subject : *Welfare and development.*
- 11th. Meeting
25th February, 1947 Speaker : S/Ldr. A. T. Mathews
Subject : *Objective type examinations—Their features, advantages and analysis.*
- 12th. Meeting
25th March, 1947 Speaker : Dr. J. B. Hutchinson
Subject : *Evolution.*
- 13th. Meeting
9th April, 1947 Speaker : Professor J. B. Stebbing
Subject : *The encouragement of forestry research in the Sudan.*
- 14th. Meeting
29th April, 1947 Speaker : A. J. Arkell
Subject : *Some results of the excavation of an early site in Khartoum.*
- 15th. Meeting
25th November, 1947 Speaker : J. L. Lishman
Subject : *Some economic considerations concerning the development of communications in the Sudan.*
- 1st. Field Day
27th November, 1947 Leader : Dr. R. L. Knight
Shambat Research Farm.

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| 16th. Meeting
23rd December, 1947 | Speaker : Dr. E. S. Horgan
Subject : <i>Medicine and surgery in the most ancient east.</i> |
| 2nd. Field Day
8th January, 1948 | Leader : A. J. Arkell
Khor Abu Anga |
| 17th. Meeting
27th January, 1948 | Speaker : A. W. Ireland
Subject : <i>Climate and building design.</i> |
| 3rd. Field Day
8th January, 1948 | Leader : E. J. N. Wallis
The Omdurman Battlefield. |
| 18th. Meeting
24th February, 1948 | Speaker : G. C. Scott
Subject : <i>Intelligence testing in the Sudan.</i> |
| 4th. Field Day
13th March, 1948 | Leader : G. W. Ogden
Khartoum Automatic Telephone Exchange. |
| 19th. Meeting
23rd March, 1948 | Speaker : H. A. W. Morrice
Subject : <i>The development of road communications in the Sudan.</i> |
| 20th. Meeting
27th April, 1948 | Speaker : R. L. Hill
Subject : <i>The Turks as a ruling class in the Sudan.</i> |

It is intended that the Proceedings of the Society shall eventually be published in a permanent form, but this is not, under present circumstances, possible. Meanwhile multigraphed abridged Proceedings, containing abstracts of papers delivered, are published annually, and selected papers are submitted by the Society for publication in full in *Sudan Notes and Records*. A limited number of copies of the abridged Proceedings is available for sale to non-members at P.T. 25 (5/-) per copy and may be ordered from the Hon. Secretary, Philosophical Society of the Sudan, c/o. General Post Office, Khartoum.

The thanks of the Society are due to the Editorial Committee of *Sudan Notes and Records* for its co-operation in the matter of publication and particularly for making space available for this and subsequent reports.

RECENT BOOKS AND ARTICLES OF INTEREST TO SUDAN READERS

Reference to these lists will be found in the Editorial Notes.

This list does not include books already reviewed in this Journal, nor does it include the numerous text books published by the Education Department.

All books etc. are published in London unless otherwise stated.

BOOKS & MONOGRAPHS.

1942.

La Vie dans les Deserts: Kacharov D. N. & Korovino E.P. Edition Française par Th. Monod. Payot, Paris.

1944/45.

Geological Investigation of the Alluvial Valley of the Lower Mississippi River.

A Laboratory Study of the Meandering of Alluvial Rivers. Two studies published by the Mississippi River Commission, of great interest in relation to the development of the Blue and White Niles and of the Sudan plains.

Some Aspects of Marriage and Family amongst the Nuer: Evans Pritchard E. E. Rhodes Livingstone Institute, N. Rhodesia 1945. 2/-.

The Sudan: the Road Ahead. Fabian Publications. 1/-
1946.

Agricultural Development of the Middle East: Keen B. A.

Middle East Science: Worthington E.B.

Rural Education and Welfare in the Middle East: Allen H. B.
H. M. Stationery Office, London.

Valuable reports to the wartime Middle East Supply Centre by well-known experts, containing material about the Sudan.

The Feeding of Sudanese Infants: Corkhill N. L. Khartoum, McCordale, for Sudan Medical Service. English 10 P.T., Arabic 5 P.T.

An Arab Tells his Story: Atiyah E. Murray. 12/6.

Remiscences by a well-known former Sudan Government official.

Survey of the Anglo-Egyptian Sudan 1898-1944: K. D. D. Henderson.
Longmans. 1/-

The Anglo-Egyptian Sudan: British Survey No. 34.
1947.

The Sudan: a Record of Progress 1898-1947. Sudan Government. -/6.
101 Facts about the Sudan. Public Relations Office, Khartoum.

Two booklets issued under official auspices describing conditions and developments in the Sudan.

The Hand of God in the Sudan: Revell F. H. New York & London.
Describes the work of the Sudan Interior Mission.

Le Soudan Egyptien 1821-1898: Sabry M. Cairo, Imprimerie Nationale.

Cultural Survey of Modern Egypt: Mosharrafa M. M. Longmans. 2/6.

Egypt: an Economic and Social Analysis: Issawi C. Oxford U.P.

The Awakening of Modern Egypt: Rifaat Bey. Longmans. 15/-

Three important books on social and economic conditions in modern Egypt.

The Naturalist's Handbook (A Collector's Guide): Legge M. M. Longmans. 2/-

A re-issue in English of a booklet originally compiled for Sudan schools in Arabic.

Fi Tariq el Hurriya (On the Road to Freedom): Ali Rifai el Ansari. Cairo, el Akha Press. P.T. 24.

Describes the issues between England and Egypt, including the Sudan question.

La Civilisation du Desert: Montagne R. Paris, Hachette. Frs. 210.

An analysis of nomad Arab culture and social organisation in Africa and Arabia.

Poultry Keeping in the Sudan. Phillips T. H. Khartoum, McCorquodale. P.T. 15.

Constitutions, Electoral Laws and Treaties of States in the Near and Middle East: Davis H. M. Duke Univ. Press, Durham, N. C.

Contains the principal agreements between England and Egypt, including those on the Sudan.

Proceedings of the Northern Sudan Advisory Council: 6th Session January 1947; 7th Session May 1947. Khartoum, Sudan Government.

Report of the Sudan Administration Conference to the Governor General: March 1947. Khartoum, Sudan Government.

Annual Report on the Administration, Finances and Condition of the Sudan for 1945. Khartoum, Sudan Government. P.T. 10.

Geological Map of the Anglo-Egyptian Sudan 1/4,000,000.—(Provisional Edition). Khartoum, Geological Survey. P.T. 50.

1948.

Alam al Jaish w'al Bahriya fi Misr ithna' al Qarn al Tasi Ashara

(Leading Egyptian naval and military personalities in XIX Century.

—In Arabic). Abdel Rahman Zaki. Cairo, Al Risala Press.

Biographical Notes dealing with many officers who served in the

Sudan.

- What Shall I Say?*: Earl G. F. Longmans. 2/-
From C.M.S. in Southern Sudan. Hints to African teachers.
- The Fate of Italy's Colonies*: Fabian Colonial Bureau. 2/6
Proposes handing over part of Eritrea to the Sudan.
- Sudan Almanac* 1948. Khartoum, Sudan Government. P.T. 7
Reappears after a lapse of six years in an expanded form, giving much more general information and statistics.
- Land Usage in the Sudan in its relation to a Nigerian Mechanised Groundnut Scheme*: Weatherhead A. T. and Baker O. W. H. Nigerian Government.
Report on the principles of the Gezira Scheme in connection with development plans for Nigeria.
- Gordon Memorial College Calendar* 1948. (English and Arabic Editions). Khartoum. P.T. 25 or 4/-.
The first Calendar to be issued by the new University College of the Sudan, giving full information about staff, courses, regulations, etc.
- Monographs of the Ethnographical Museum of Sweden*: No. 20 *Nose Ornaments in Africa*. No. 21 *Tubular Smoking Pipes especially in Africa*. Lindblom K. G. Stockholm 1945 and 1948. Kr. 4 each.
- Classification of the Bantu Languages*: Guthrie M. Oxford Univ. Press for the International African Institute. 8/6.
While of great importance in its sphere, this monograph does not directly touch the Sudan.
- Problems of African Development: II Government and People*: Batten T. R. Oxford. 3/6.
The first part was reviewed in S.N. & R. XXIX Part 1. This volume deals with health, education and government.
- The Government of Ethiopia*: Perham M. Faber. 30/-
Contains references to relations with the Sudan.
- Proceedings of the Northern Sudan Advisory Council*: 8th (last) Session. March 1948. Khartoum, Sudan Government.
- Verbatim Records of the Anglo-Egyptian Dispute heard before the Security Council* 1947. (English and Arabic). Khartoum, Sudan Government. P.T. 5.
- Annual Report on the Finances, Administration and Condition of the Sudan for 1946*: Khartoum, Sudan Government.

ARTICLES.

- Shilluk Luo Tribes in the Bahr el Ghazal*: Santandrea S. *Anthropos* Tome XXXVII/XL 1942-45.

The Luo of the Bahr el Ghazal: Santandrea S. *Annali Lateranensi* Vol. VIII 1945.

Acconciatura e Vestiario dei Koma al Confine Etiopico-Sudanese: Grottanelli V. L. *Annali Lateranensi* Vol. IX 1945.

Nutrition of the African in Tsetse-fly Areas (in Southern Sudan): Woodman H. M. E. *African Medical Journal*, Sept. 1947.

Early Khartoum: Arkell A. J. *Antiquity* no. 84, Dec. 1947.

On the Value of Iron among the Nuer: Howell P. P. *Man*, Oct. 1947.

Nuer Modes of Address: Evans Pritchard E. E. *Uganda Journal* Vol. XII Part 2, Sept. 1948.

Fashoda: Kennedy A. L. *Quarterly Review*, April 1948.

Jute for the Sudan: *Great Britain and the East*, Jan. 1948.

Deraheib Gold Mines: Newbold Sir D. (the late). *Antiquity* No. 84, March 1947.

People without a History: Crawford O. G. S. *Antiquity* No. 85, March 1948.

Discusses excavation of early mound sites in the Sudan and urges work on riverain sites in preference to further Egyptological researches at present.

The Sudan Publications Bureau: Hodgkin R. A. *Overseas Education*, April 1948.

Economic and Social Development in the Sudan: (anonymous). *Overseas Education*, July 1948.

Note: Articles purely on the political situation are not included.

BOOK REVIEWS

GRAMMATICHETIA GIUR. Father Stefano Santandrea, F.d.S.C.
Missioni Africane Verona. 1946. pp. 142.

This is the first grammar of any size (after excepting Ghawi's cyclostyled "First Steps in Jur") on "*Dhe Luo*," the language of the so-called "Jur," a small Nilotic tribe in the Bahr el Ghazal. In spite of strong cultural pressure from the surrounding Dinka and later official discouragement in linguistic matters, the "Jur" have preserved their Shilluk-like language and blacksmith traditions in a surprisingly compact form. This grammar will be of great use, both to those missionaries who work through the medium of the vernacular, and for historico-linguistic investigators tracing the course of the Shilluk migrations.

The book is divided into two parts :

1.—*Nozioni elementari.*

This part is disappointing from a person of Fr. Santandrea's language ability. He has set his chapters out in the best traditions of Italian school grammars, and tried to render Jur in terms of European grammatical concepts. Consequently, under headings like "Congiuntivo," "Condizionale," "Gerundio," "Participio," etc., we are too often told "Propriamente parlando non esiste in Jur," and then are told what the Jur do say in order to translate an Italian conditional mood, etc. This part also suffers from peculiar gaps, *e.g.*, the section on "Il Possessivo" deals throughout with 1st. person possession only.

2.—*Note sulla costruzione jur e varie.*

Here the author throws off the chains of convention and sets out those elements in Luo grammar which do not fit in to the old pattern. This section is the really valuable one and gives us an idea of what the language is really like. I am interested in that he discards the Kohnen-Pschorn thesis (expressed in their Shilluk grammars) of there being a passive voice and maintains the theses of reversible subject and object, *e.g.*, "I kill the man" as against "The man kill I" (My own Dinka experience started with this thesis and proceeded to that of the Passive Voice!).

The book ends with some annotated folk tales and a small Jur-Italian vocabulary.

Fr. Santandrea is a phonetician of no mean standing in the Sudan and the accuracy of his recording is a foregone conclusion. He has also, from time to time, introduced tone marks and given us glimpses of the tonal grammar of the language. (His list of tonal doublets on pp. 92-103 is particularly enlightening). It is therefore all the more unfortunate that he has refrained from tone marking all his material, and I hope that this omission will be rectified in future works from his pen.

A. N. TUCKER,

THE CHRISTIAN APPROACH TO ISLAM IN THE SUDAN:
J. Spencer Trimmingham, *Oxford Univ. Press*, 1948. 3/6.

TO a narrow administrator, most missionary activity appears misguided, unrealistic and even harmful; the strict evangelist, on the other hand, is puzzled and distressed by the way in which Christian officials seem to betray their faith in their works. The recent history of the Sudan has produced a situation where this divergence of views is at a maximum. Dr. Trimmingham naturally takes his stand with the missionaries. But his book is written from a broad viewpoint and is, in general, a fair review of a complex problem. To Christians in the Sudan who are not missionaries it presents a number of often evaded challenges. It also expresses with admirable clarity a point of view which must be common to many missionaries.

The book falls roughly into two parts. There is a useful and impartial history of mission activity in the Sudan, followed by a sketch of their present activities and problems. The second half of the book is entitled "The challenge of the present opportunity." Various attitudes of missionaries to Islam are analysed. The crude tactics of direct controversy and attack are dismissed; so also is the "leavening approach" which tries to build on the fact that Islam already accepts the *nabi 'Isa*. "Veneration of 'Isa as a prophet is no means for his enrichment as the eternal Christ"; the two concepts are irreconcilable. The concentration of missionaries on good works is regarded as an interim compromise. The way out, according to Dr. Trimmingham, is mainly through the development of a truly African church. He does not rely much on the hope that Western missionaries can effect direct changes in the hearts of Moslem Sudanese. He does, however, see considerable hope in the up-surge of Christian Africans from pagan regions of the South. This is a novel and interesting theme which, despite its apparent unlikelihood,

is not without historical precedent. It is far less outrageous than Toynbee's bold suggestion that the salvation of the U.S.A. may come from the negroes.

The book, perhaps inevitably, suggests more questions than it can answer. Probably its greatest service, both to missionaries and officials, is to raise one corner of the cauldron lid, and let us glimpse the brew of spiritual and social conflicts which we are all helping to cook. It is a clear, provocative book, and a good *aperitif* for Dr. Trimmingham's major study of Islam in the Sudan, which is to appear soon.

R. A. HODGKIN.

CORRESPONDENCE

The Editor *Sudan Notes and Records*.

Dear Sir,

In the footnote No. 39 in the article "Some ancient records of Kordofan" *S. N. & R.* XXVIII p. 22, you ask if the centurion's description could have applied to the Sobat.

A few miles east of Gambeila where the Baro (as the Sobat is here called) debouches from the mountains it passes over a series of impressive rocky rapids which amount almost to a waterfall. Navigation is quite impossible.

But I doubt very much if the centurion's description could have applied to the Sobat. Although it floods out over immense areas of swamp both north and south between Nasir and Jokau from June to November, it is always a clearly defined river with no *sudd* blocks. Moreover there is no papyrus grass in this area and ambatch-canoes are rarely seen.

I feel at this stage of their journey the centurions must have repeated the traditional tale about the source of the Nile without having seen the two rocks.

Yours truly,

F. D. CORFIELD.

Malakal.

Museums in Khartoum

Khartoum Antiquities Museum

This contains objects from the earliest times to the Fung period. It lies on the river front to the west of the Gordon College. Two piastres is charged for admission. Troops in uniform are admitted free. Open every day from 9 a.m. to 1 p.m. and from 3 p.m. to 6 p.m.

Natural History Museum

This is an annexe to the above and contains mainly ornithological exhibits.

Khalifa's House Museum, Omdurman

This contains objects from the Turkia and Mahdia periods. It is close to the Mahdi's tomb. Entrance is the same as for the Antiquities Museum.

The Commissioner for Archaeology (Mr. P. L. Shinnie), whose office is at the Khartoum Museum (Phone **2809**), welcomes enquiries about any of the above museums (except Natural History). Enquiries about the Natural History Museum should be addressed to The Curator, Natural History Museum (Mr. J. W. Cowland), Research Division, Agriculture and Forests, Wad Medani, or to his representative in Khartoum, The Entomologist, Khartoum North.

There are also small museums of Antiquities at Merowe, Suakin, Wadi Halfa and Port Sudan.

Geological Museum.

On the river front between the Public Works Dept. and the Sudan Club.

Open daily.

Graphic Museum (Medical and Public Health).

Adjacent to the Civil Hospital facing the railway station.

Open daily.

Zoological Gardens.

On the river front near the Grand Hotel.

Open daily.