

This edition of *Sudan Studies* was originally distributed in hard copy to members of the Sudan Studies Society of the United Kingdom. SSSUK now makes it freely available subject to licence and cordially invites readers to join the Society (see www.sssuk.org).

Sudan Studies content by *Sudan Studies* editors and writers is licensed under a [Creative Commons Attribution-NonCommercial-NoDerivs 3.0 Unported Licence](https://creativecommons.org/licenses/by-nc-nd/3.0/).



SUDAN STUDIES

Official Newsletter of the
SUDAN STUDIES SOCIETY OF THE UNITED KINGDOM
Number 10 May 1991

ISSN – [0952-049X]

CONTENTS

EDITORIAL NOTE - by Paul Wilson	1
SOCIETY NEWS - by Simon Bush	3
MAKING CONFLICT ACADEMIC - THE SUDAN STUDIES CONFERENCE - by Michael Medley	6
ARTICLES:	
CURRENT AFFAIRS IN SUDAN (8) - by Dr Charles Gurdon	7
DID THE KUSHITES FLEE TO THE WEST? NEW EVIDENCE? - by W.R.K. Hallam	11
USING THE SUN IN ARID LANDS - by John Wright	13
A RIOT IN SENNAR - by Paul Adams	15
EGYPT AND AFRICA. NUBIA FROM PREHISTORY TO ISLAM - by W. V. Davies	16
SHARKS IN THE SUDANESE RED SEA - by Jack Jackson	17
THE 1990 WET SEASON IN SUDAN - by Mike Hulme	21
EARLIER FAMINES IN THE NORTHERN SUDAN - by Brian A. Carlisle	23
SOME RECENT PUBLICATIONS ON SUDAN	24

Unless stated otherwise, copyright of all material published in *SUDAN STUDIES* is retained by the *Sudan Studies Society of the United Kingdom*.



EDITORIAL NOTE BY PAUL WILSON

Since the last issue of *Sudan Studies* the Second International Sudan Studies Conference was held at Durham. I believe all who attended would agree it was a considerable success, and a tribute to the organisational skills and hard work of Janet Starkey, Lesley Forbes, and the others involved, many of whom, I'm sure, are still only just recovering from their efforts!

The conference dinner was followed by a number of excellent speeches, none more so than that by the Guest of Honour, Richard Hill, whose spoke, with his customary self-effacement, modesty, and understatement, about the origins of the Sudan Archive. He remarked that it was actually Bill (i.e. K.D.D.) Henderson who had had the original idea for the Archive, and acknowledged the academic support he had received from Professor Thatcher and the redoubtable Mr. Foster, for whom "there was no such thing as forenames." That Richard Hill had had to employ a degree of diplomacy to get the Archive up and running is understandable, but it was new to me that skills in joinery were also required. In a rare admission of competence, Richard Hill confessed that he "knew his joints", and that, having been loaned a chisel by Mr. Teesdale, the University's carpenter, he had proceeded to make a storage box to contain the rare *firman*s and *berats* that were beginning to accumulate. He finished by declaring that Durham had become, for the Archive, "a worthy home with a worthy custodianship." His speech was followed by one in reply from Professor Yusuf Fadl Hasan, which ended with an affectionate and moving blessing in Arabic.

After the formal dinner was over, many proceeded to the Castle's Undercroft, where the master of the *'ud*, Abd al-Karim al-Kabli, gave a talk, and then a recital. This turned in truly Sudanese fashion into a party which ended, a little before 3 a.m., with a scene which must have been new even for those venerable cellars — the sight of a circle of people of numerous nationalities singing along to Kabli's version of "Auld Lang Syne."

Everybody who attended the conference will have their own ideas about it and perhaps their own comments to make, and I hope some of these will be sent to me in article form for inclusion in future issues of the newsletter. So far, I've received only the comments by Michael Medley that appear on page six of this issue.

This brings me on to a general appeal for articles. This issue contains an interesting cross-section of material, but more articles are always required, on any topic related to the Sudan, whether academic or anecdotal. Articles of greater length are also encouraged, and may be included in parts over several issues. The next newsletter will carry the first part of a long article on "Tribal Administration or No Administration — the Choice in Western Sudan" by James Morton, together with a further extract from the piece which immediately follows. This is an account of the history and culture of the Messeriya Humr, a Baggara tribe of southern Kordofan, written by Gibril Ali, a member of that tribe currently working for the British Council in Khartoum. It is written in the delightful style that characterises the spoken Arabic of the Baggara, amongst whom the art of conversation is highly regarded, and as such is presented



with the minimum of editorial interference. In this section he writes of some contacts with the outside world:

"As I recall, our knowledge of external affairs did not go beyond the British Empire, and some prominent names involved in conflict as the Empire was occasionally challenged. Such names included Mussolini of Italy and Hitler of Germany. A nephew of mine and of my age whose father did some business in En Nahud received the name of Mussolini by which he is still called, although his real name is Mohammed Billal Daddaw. Mohammed Billal Daddaw is white and [this] coincides with his European name. Nobody was named after Hitler but several Baggara children were nick-named Tipps in memory of Mr. Tipps, a District Commissioner in Kordofan at the time whose son, a medical student, came from the UK on a visit to Khartoum Medical School and then visited the British Council office in Khartoum. He mentioned the Messeriya to the representative of the British Council and was then referred to me. I confirmed the fact that his father's name has been given to some of our children and that he is still remembered in the vicinity of Muglad. I gave him an introductory note to introduce him to the tribe. He went there and was received by the late Babo Nimir, Nazir and Member of Parliament who hangs on his chest a medal of King George VI which was offered to my grandfather, Ali el Julla, a fighter of the Mahdi and messenger of the Khalifa Abdullahi and later on a friend of Slatin Pasha who recommended him for the native administration of the Messeriya when the country was reconquered in 1898.

"My grandfather, Ali el Julla, was among the Sudanese notables such as Sayed Sir Abdel Rahman el Mahdi, Sayed Ali el Mirghani and El Shareef el Hindi when they received King George VI when he visited Port Sudan after the Allied victory over the Nazis. The medal on Babo's chest drew the attention of Her Britannic Majesty when she visited the Sudan and went to El Obeid where she was met by tribal leaders from Kordofan. Co-incidentally Babo was among the guests in London when the Queen was crowned. Babo knew two English words, i.e. 'fish' and 'chicken' and these were of immense help to him in ordering food for his friend Sheikh Ali el Tom, Nazir or tribal leader of the Kababeesh, the camel-herders of the sand dunes of northern Kordofan. Ali el Tom naturally detested fish, since his sheikhdom consisted of sand dunes, deserts and oases where no fish breed. Whenever food was served for the guests invited to attend the Queen's coronation, Sheikh Ali el Tom, always sitting beside Babo Nimir, looked at him significantly. Babo would then order chicken for Sheikh Ali el Tom and fish and chicken for himself. When the Arabs, both Baggara and Kababeesh, asked what Babo and Ali el Tom did during the coronation, the answer was that Babo combed the Queen's hair while Ali el Tom arranged it in plaits in the Sudanese style..." [!]



SOCIETY NEWS

BY SIMON BUSH, HONORARY SECRETARY SSSUK

Since our last issue of "Sudan Studies" in December 1990 we have held the Second International Sudan Studies Conference at Durham Castle, University of Durham, from 8-11th April. It was pleasing to see so many members of SSSUK present - as well as our fellow societies from North America, Germany and France. In particular it was a pleasure to greet so many Sudanese, from both the Sudan and those resident in the UK or USA. I am sure all those who attended the conference were impressed with the organisation of the event and the interesting programme that was provided. I am sure that you will join me in thanking Janet Starkey and Lesley Forbes for all their hard work in planning the conference.

The conference noted with concern that some members of the Sudanese academic community were refused permission, by the Sudan Government, to travel to Durham to address the conference.

Those of you who were not able to attend the Durham conference can obtain copies of the conference papers which are available in two volumes by contacting:

Mrs Janet Starkey
CMEIS
University of Durham
South End House
South Road
Durham City
DH1 3TS

NEW SOCIETY FINANCIAL YEAR AND INCREASE IN SUBSCRIPTIONS

In my last "Society News" I mentioned that membership was starting to fall slightly. I am pleased to inform you that membership numbers are now fairly healthy. I would ask that members renew their subscriptions promptly. Unfortunately I do not have the time to send out regular reminders. New members are, of course, always welcome.

At the 1990 AGM of the Society, it was agreed that annual membership subscriptions should be raised from June 1991 to:

United Kingdom Subscriptions:

Individuals
£ 8.00 (\$18.00)
Institutions
£14.00 (\$30.00)

Europe Subscriptions:

Individuals
£ 9.00 (\$20.00)



Institutions
£15.00 (\$32.00)

Rest of World Subscriptions:

Individuals	£10.00 (\$22.00)
Institutions	£16.00 (\$34.00)

At the same time it was agreed that it was desirable for the Society to move to a calendar year for subscriptions, starting in January 1992.

In order to effect this transition we are asking members to pay subscriptions in June 1991 to cover the period until December 1992, and rates as above thereafter. Therefore in June 1991 you should please remit:

United Kingdom Subscriptions:

Individuals	£12.00 (\$26.00)
Institutions	£21.00 (\$46.00)

Europe Subscriptions:

Individuals	£13.50 (\$29.00)
Institutions	£22.50 (\$47.00)

Rest of World Subscriptions:

Individuals	£15.00 (\$32.00)
Institutions	£24.00 (\$50.00)

Those members who have paid for three or more years in advance will be contacted individually about the increase.

A new bankers standing order form is enclosed for completion if you wish to pay by this method.

The Committee apologise for this increase which is caused mainly by rises in the cost of printing and postage. We hope that changing to calendar year subscriptions will simplify administrative procedures.

AGM AND ONE DAY SYMPOSIUM - 28TH SEPTEMBER

Those of you who attended the Durham conference will already know that the SSSUK committee will be arranging the Annual General Meeting and One Day Symposium at London House (near Russell Square - Bloomsbury) on Saturday September 28th. For those who are not familiar with the format of the Symposium, there is provision for five or six presentations, each taking about 30 minutes. The atmosphere of the conference is informal and a high degree of academic performance is not expected. Anecdotal material is equally as welcome as work based on a formal degree of research. To identify the flavour, some previous presentations have covered subjects as diverse as Sudan's climate, experiences of an expatriate school



teacher, Sudan Railways, political issues, food security, demonstration of a solar cooker and a slide presentation of life under the Red Sea.

It is always a pleasure for the committee to meet the many members of the Society, some of whom travel long distances to attend the meeting. It also proves to be an ideal opportunity to meet the many new members that have joined the Society over the previous year. I hope that those unable to attend the Durham conference will be able to join us in London. The Symposium usually starts at about 10.00am with the AGM at 12.15pm. The meeting comes to a close at about 5.30pm.

A small fee will be charged which covers the hire of the venue and refreshments (morning coffee, sandwich lunch and afternoon tea).

If you are willing to offer a presentation please contact Tony Trilsbach at the following address:

Dr A Trilsbach
10 Thornlea
Godington Park
Ashford
Kent
TN23 3JX

I will forward a booking form and a programme in a few months.

FAMINE AND WAR

The "Guardian" on May 4th 1991 reported on Sudan's vast array of problems with the headline "RACE AGAINST TIME TO SAVE SUDAN". I am sure that like me, you are grieved by the situation that Sudan faces from famine and war. I urge members to donate what they can afford to one of the many charities operating in the Sudan. It only costs £18.00 to feed and care for a young orphan in a feeding centre for one month. If you wish, please send donations (cheques or postal orders made payable to Oxfam, Save the Children or Concern Worldwide) to me and I will send donations to those agencies from the members of the SSSUK.

Some members of the SSSUK attended the "Famine Now Emergency Conference" organised by SUDAN UPDATE on 11th May 1991. Our Deputy Chairman, Peter Woodward, chaired the meeting. There was a very constructive discussion about the famine and a series of recommendations were made for presentation to the donor community, non-governmental organisations and the media.



MAKING CONFLICT ACADEMIC - THE SUDAN STUDIES CONFERENCE MICHAEL MEDLEY

Many of us must have been lured to the Durham Conference by the exuberance of the programme. It was hard to resist combining a study of the archetypal role of women in the novels of Tayyib Salih, with pigs in the ancient Nile Valley. Or a solar cooker demonstration with an *`ud* recital. Or of meeting a mayor one evening and a film-maker the next. And sure enough, the diverse schedule was matched by a cornucopia of participants: administrators and scholars, Sudanese and *khawaaaja*, novice and retired.

One certainly needs to find common factors in the midst of variety, but it is possible for these to be demeaning. Rather too often was a paper, or the discussion afterwards, reduced by a general attraction towards the controversy of North and South n Sudan - the attraction of opposed views to a collision of clichés. (Interestingly, almost nothing was said about South and North in the world economic order, another topic liable to be blighted by rhetoric). While few would claim that the issue is unimportant or that passionate commitment ought not to be expressed, it was a pity that a well-informed assembly should often have drawn itself into such familiar arguments; and it will be still more of a shame if the war leaves Sudanese (and Sudanist) intellectuals more expert in polemic than anything else.

Tony Trilsbach was perhaps thinking of this when, in his Convenor's Summary, he hoped that future papers would be more "detailed". I like the word "academic" also; it has the pleasurable challenging connotation of "remote from practical consequences". We don't, of course, want our studies to be cut off from the world entirely, but it seems there is much to be gained by sometimes standing aside from the railroad of foreseen implications. At Durham the exemplar *par excellence* of this liberating technique was surely Professor Abdullah al-Tayyib, whose joyful presentations had something of the nature of good poetry; a delight in odd particulars, and a way of combining them which provoked thought rather than satiating it. By this kind of activity people are reminded that they may have something more deeply in common than the impetus to conflict.

[Michael Medley has worked as a teacher and aid administrator in Sudan].



CURRENT AFFAIRS IN SUDAN

Dr Charles Gurdon continues his series on contemporary political and economic issues in the Sudan. The column is particularly based on reports prepared for the Economist Intelligence Unit (EIU), but the author stresses that this column presents a personal viewpoint and does not necessarily reflect the views of the EIU, SSSUK or anyone else.

The outlook is very bleak -

Unfortunately little has changed during the past few months and it appears that the situation in Sudan is going to get much worse before it gets better. Not only will the full effects of the famine hit large areas of northern Sudan during the summer but the regime's attempts to widen its power-base will fail, a major garrison town might be captured by the SPLA, Sudan's international isolation will escalate and the economy will deteriorate still further. There is no possibility that the political and military situation will improve for the regime during the next six months or at least until the end of the famine and the rainy season. If, however, it can survive until the new year then it will be necessary to review the situation and to recognise that, as unpalatable as it may seem, it is possible that the al-Bashir regime will remain in power for a number of years.

- the famine will escalate -

During the 1984/85 famine Sudan needed 650,000 tonnes of emergency food aid. This time, however, it needs 1.2 mn tonnes and only about 438,000 tonnes had been pledged by March, mainly as cereals, pulses and edible oils, and leaving a deficit of 771,000 tonnes. In fact it is tragically apparent that Sudan is now experiencing a famine, the consequences of which will exceed the disaster of the 1984/85 famine.

The price of sorghum has escalated sharply to a high of S£1,800 - S£3,200 per 90 kgs bag although by mid-April it had stabilised at around S£1,500 per bag. This, however, is still well beyond the purchasing power of most of the population when it is realised that the price was only S£300 per sack last year and inflation is around 150%.

Unfortunately both the Sudanese regime and the international donors have been playing politics over the impending famine during the past six months with disastrous consequences. It has been estimated that Sudan needed a minimum of 1.2 million tonnes of food aid. By early April 1991 only 46% had been pledged by the donors of which only 9% had arrived at Port Sudan and only 4% had been cleared from the port. By the beginning of May an estimated 99,000 tonnes of the 513,000 tonnes pledged had arrived in Port Sudan and 41,000 tonnes had moved inland.

Given that food is only now arriving at Port Sudan, rather than having been delivered at regular intervals over the past six months, it is estimated that it would take three months to clear from Port Sudan the food which has already been pledged. The enormity of the relief task is illustrated by one calculation that one loaded truck would need to leave the Port Sudan docks every eleven minutes, day and night, for nine months to supply the 1.2 mn tonnes of grain.



If the crisis were not bad enough already two factors are bound to make it worse. The regime's actions have made the international community far less sympathetic to Sudan's plight than in the past. Secondly the attention of the world is now focused on the plight of the Kurds and the cyclone victims in Bangladesh.

The rains are now beginning in northern Sudan and in a perverse way this will hamper rather than help the international effort to relieve the effects of famine in the drought affected areas. It appears that the lessons of the 1984/85 famine have not yet been learnt and that instead of prepositioning large stocks of food in the right places at the first sign of famine the slow response of the international community will be too little and much too late.

Neither the Sudanese government nor the international aid community have come out of the crisis with much credit. While Khartoum has, until very recently, consistently refused to admit that there even is a famine, the donors were playing politics by refusing to provide any emergency food aid until the regime, which is despised and disliked by the vast majority of the international community, acknowledged that there was a famine and made a formal request for the aid. Although both sides partially backed down the delays have meant that there was insufficient time to get the food to the affected areas before the arrival of the rains. It is still too early to estimate how many Sudanese will die in the current famine but even if the aid programme was dramatically expanded it will certainly be well over the 200,000 who died in the 1984/85 famine.

- the regime will remain isolated at home -

Although for most Sudanese there was never really any doubt that the NIF was behind the June 1989 coup, which brought General al-Bashir to power, the party's leader Dr Hassal Abdalla al-Turabi recently claimed all the credit for the coup and for the regime's subsequent repressive actions. Al-Turabi told a meeting of the NIF's youth movement that Sudan was now the headquarters of the Islamic fundamentalist movement. However, there have been reports of a growing internal conflict within the Islamic movement because of the competing claims of General al-Bashir and NIF leader Hassal al-Turabi to become the self-proclaimed Imam of Sudan.

The divisions within the RCC have also resurfaced. Two RCC members had already been put under house arrest after they offered their resignations because of their opposition to Sudan's support of Iraq. General al-Bashir subsequently dismissed one of them as well as the interior minister Maj-Gen Faisal Ali Abu Saleh on April 15 and appointed the RCC Deputy Chairman Maj-Gen Zubair Mohamed Saleh as the new interior minister and RCC member Brigadier Pio Yukwan as head of the RCC political committee.

On March 22 the regime began the new code of Islamic *sharia* law and reintroduced punishments including the amputation of hands and feet for theft, death by stoning for adultery and beheading for murder. The code is based upon a penal code which was drafted by the NIF leader Dr Hassal al-Turabi in 1988. Amongst other things it makes the "*crime of apostasy*" - which is the denial of existence of God or even the renunciation of Islam - punishable by death. This has now been extended so that any opposition to the self-proclaimed Islamic government



might be construed as apostasy. Also the theft of more than S£2,600 (\$55) can now be punished by amputation of a hand. Typically the first victim of a cross-amputation (right hand and left foot) was an 18-year old southern petty thief called Michael from Port Sudan who was accused of being a dangerous robber but his three Muslim accomplices were only jailed.

The continuing international criticism of its human rights abuses have obviously stung the regime. On May 1 the release of all of the country's political prisoners was announced. The most prominent amongst the detainees who were released were former Prime Minister Sadiq El Mahdi and the Secretary-General of the Sudanese Communist Party (SCP) Ibrahim Mohamed Nugud. They were freed from house arrest after they signed a pledge not to "*engage in an activity hostile to the homeland*".

Despite its attempts to broaden its power base by declaring a general amnesty and holding a national conference to map out the political future of the country the NIF dominated regime will remain very isolated. Its Islamic fundamentalist policies and its widespread abuse of human rights has offended too many people and has narrowed its appeal to all but its most fervent supporters. This does not mean, however, that it is about to change its underlying policies. While there might be some cosmetic changes it will seek to tighten its grip on power because it fears the consequences of showing any sign of weakness.

- and abroad -

Unfortunately its actions have already isolated Sudan in the international community and this is only likely to continue. Besides Sudan's traditional supporters in the West and amongst the Gulf states, who have been appalled by its abuse of human rights and its support for Iraq, it is now losing the few allies, such as Libya, Iraq and Iran, that it thought it could rely on. This can only mean that the level of non-emergency aid will completely dry up and that the regime's opponents will receive a more sympathetic hearing than they would otherwise have done.

- and the SPLA offensive will continue

On March 23 the SPLA captured the important garrison of Maridi in Western Equatoria despite the fact that it was defended by 3,000 government troops. It then captured Mundri, Ieri and Rokon thereby capturing almost all of Western Equatoria, which with the exception of Juba itself, is now on under the total control of the SPLA. It also controls southern Sudan's borders with Ethiopia, Kenya, Uganda, Zaire and the Central African Republic.

Independent observers now believe that only a small garrison at the foot of the Jebel Lado mountain protects Juba airport which is the sole remaining lifeline, not only for the estimated 40,000 government troops, but also for Juba's burgeoning civilian population which is estimated at over 300,000. Although it is still unlikely it must now be a possibility that Juba could also be captured.

A more likely prize would be the capture of Wau which is now surrounded and where a state of emergency has just been declared. The population has increased to 250,000 of whom an estimated 180,000 are displaced people with a further 50,000 expected in the next month. The



capture of Wau is now much more plausible because the pro-government Fertit militia has defected to the SPLA.

The SPLA obviously believes that it has the army on the run and that during the rainy season, when it has always had the military advantage over the army, it might be able to capture one of the major garrison towns. The loss of Wau and particularly of Juba would be a devastating blow to the regime and would effectively mean that it had lost the war in southern Sudan and would have to concentrate on maintaining power in the north. Such a humiliation could result in a coup attempt or, because the regime has crushed all opposition in Khartoum, more like than that an army mutiny which would start in the south but which could soon spread further north. This would pit the regime and its Islamic militia against the combined strength of most of the army and the powerful and well motivated SPLA which would probably result in the collapse of the regime.

The economy will remain on the back-burner -

With the political situation being so precarious it is likely that the economy will be left on the back-burner in the coming months. The regime is simply too preoccupied with the famine, the civil war and maintaining power in the country to do anything about the economy. Although finance minister Hamdi will continue its attempts to drum up support from the Islamic banks and institutions it is unlikely to make much difference to the fundamental weakness of the economy. Given this it is possible that Sudan might be expelled from the IMF after the July deadline when it is supposed to have repaid some of its arrears to the Fund. With the US, Europe and the Gulf states in no mood to bail Khartoum out of its self-inflicted jam such a scenario is still just possible. There are already reports that the World Bank has told Sudan that it is pulling out of the country and that its last employee will leave at the end of the year.

- but the trade and current account balance will both deteriorate

Given the fact that nothing dramatic is going to be done to bail Sudan out it can only be assumed that, like the political situation, the Sudanese economy can only get worse before it gets better. While the switch from cotton to wheat in some of the irrigated areas might increase food production it will obviously reduce cotton production and therefore cotton exports. Together with the reduction of gum arabic and sesame exports because of the drought there seems little doubt that the level of total exports will fall still further from around \$400 mn in 1990 to about \$350 mn in 1991 and maybe \$300 mn in 1992. At the same time, while the lack of foreign exchange will reduce imports, they are unlikely to fall much below \$1,000 mn this year and around \$850 mn next year. Together with the loss of expatriate remittances and foreign financial aid, because of the implications of the regime's support for Iraq and other reasons, it is likely that the current account deficit will continue to increase from around \$250 mn in 1990 to perhaps \$350 mn this year and possibly as much as \$500 mn in 1992.



DID THE KUSHITES FLEE TO THE WEST? NEW EVIDENCE?

W.R.K. HALLAM

Since the opposing stances on the Kushite migration controversy have found brief expression in *Sudan Studies* Nos. 3, 5 and 7, what might be important new evidence will be of interest to members.

The 'Kisra horde' traditions in Nigeria which may relate to Kush are vague in the extreme. Only one source, the Kisara Migration document in the Palmer collection, contains precise details. The 'tribe of Kisra' is described as arriving in the Sudan after the expulsion of the Persians from Egypt in 621 AD, although there are ingredients which also identify this movement with the retreat of Kush from Egypt on the fall of the 25th Dynasty.

The greater part of the document describes the supposed westward itinerary on the migrants. These wanderings may be categorised thus:

1. A long sojourn in Darfur, reaching Jebel Kwon (Kordofan) and al-Fashar.
2. Another long stay south of Wadai.
3. Subsequent settlement round Lake Fitri (western Chad) and Balda (north Cameroun).
4. A move to Yola, Bachama, Muri (all in Gongola state of Nigeria) and Bamenda (south-west Cameroun).
5. Settlement by some in Jebjeb and Gwona.
6. A shift by others to the land lying between Bagaji and Keffi
7. A further migration by these last to Zaria where they stayed for three hundred years before their dispersal by Borno elements.
8. Some of these, including their king, went to Wukari (southern Gongola).
9. Others settled at Karshi or crossed the Niger and built Wawa and Baku.
10. One of Kisra's sons was Attahir, king of Zaria. The name was shortened to Atta as he and his people moved south.

Whilst Arkell's onomastic evidence for a westward movement after the collapse of Meroe only introduces two examples from Darfur and one in Kordofan, an examination of maps from the Red Sea to the Atlantic between latitude 5° South and the Mediterranean littoral reveals a most remarkable concentration of place names embodying K...sh(...), G...sh(...), K...(...), G....s(...), and so on, in the box 26°E to 1°E and 8°N to 18°N. Whilst similar cognates occur very sparsely over the whole region except north-west Africa, this box contains the areas associated with the Kisra migrations and dispersals.

Moreover, within the box, such cognates are noticeably clustered in areas which conform to the migratory stages of Palmer's Kisara document. The odds against such conformity being accidental are enormous. That Palmer, with his ever ready eye for similarities in nomenclature, was unaware of the clusters of cognates in these areas dispels any likelihood of interference with the facts. These are said to have been written down by one Ahmed Muhammad from a book shown to him by Mallam Kura of Wukari in about 1800 AD.

Following the categorised itinerary above, the maps show that:



1. In Darfur there are a score of relevant names apart from those of Arkell.
2. In the Bahr Auk area of south Wadai a group of cognates appears along the natural migration route south of the arid Sahel.
3. Fittri and Balda areas contain a dozen associated place names.
4. Numerous cognates appear along the reaches of the middle and upper Benue river by Yola, Muri and the Bachama homeland, as well as three in the Bamenda area.
5. Jebjeb and Gwona are in the middle Benue region.
6. Keffi and Bagaji lie on the south-eastern fringe of a heavy concentration of cognates in central Nigeria.
7. This concentration straddles the Kaduna river as far north as Zaria.
8. The present Jukun (i.e. Wukari) district is free from cognates although there are some to the east where their original Kwararafa forbears may have been located.
9. There are two towns called Karshi in the area of 6. Related names are located along the river Niger from its confluence with the Benue to just beyond Niamey. Most of the 'Kisra horde' traditions originate along the Middle Niger.
10. The Igala seem to be suggested here. There are no cognates in their area but some are found just north of the Benue nearby.

Areas on the maps where noteworthy proliferations of cognates occur which are not covered in the document are: the Jurab north-east of Lake Chad; Bade and Mobber territory along the river Yobe west of the lake; and a swathe through Niger Republic from the Tchad border adjacent to the Jurab, via Bilma, down to the Gobir heartland. There are hints of connections with Napata by way of Bilma in the traditions of Gobir and the associated Bade. Karima (=Kerma, or the area of the later Napata) and Shendi are both mentioned.

The names dealt with in this survey are those appearing in maps listed below but other relevant cognates appear among village, ward and tribal names in the Nigerian ethnological writings of Meek, Gunn and Conant and others. It is noted that names such as ----- Kasa (=Lower-----) in Hausa and Qoz----- (=-----Sand-dune) in eastern Tchad and Darfur have not been included. The frequency of Kossom or Koussoum, of which the meaning has not been traced, in Daza/Teda speaking areas is also suspect.

It seems that the location and proliferation of Kush/Kisra place names discussed here give substance to the theory of some form of Kushite diffusion:

1. Southwards in a small way towards Ethiopia and the fringes of the Congolese jungles;
2. Along the routes described in the Argungu document to a greater extent; and
3. Through the Jurab and then south towards the Gobir and Bade areas, also to a considerable degree.

Space obviously does not permit the listing of the cognates identified on the maps in this survey.

It is now suggested that further investigation in depth is merited in the areas where cognates are clustered, to determine whether or not these names have any significance in relation to Kush and, if so, to what extent and how.



Palmer, H.R. *Sudanese Memoirs*, 3 vols., London 1967, Vol. II, p. 61.

Arkell, A.J. *A History of the Sudan to 1821*, London, 1961, p. 174.

Meek, C.K. *Tribal Studies in Northern Nigeria*, 2 vols., London, 1931.

Gunn, Harold D. and F.P. Conant *Peoples of the Middle Niger Region, Northern Nigeria*, London, 1960.

Maps: Africa 1: 1,000,000. Africa 1: 2,000,000. Nigeria 1: 500,000.

[W.K.R. Hallam, author of *The Life and Times of Rabih Fadl Allah* (Ilfacombe, 1977) and numerous articles, is currently working in Jos, Nigeria, from where he sent this article].

USING THE SUN IN ARID LANDS BY JOHN WRIGHT

Introduction -

In arid lands like the northern Sudan the sun shines nearly every day; and even in winter it reaches an altitude at midday at Wadi Halfa of nearly fifty degrees, about the same as in England around midsummer. Most of the time, particularly of course in the summer it shines throughout the day and produces between half and a whole kilowatt for every square metre on which it shines. Thus during the year each square metre of land receives something in the order of a thousand or more kilowatt hours of energy, nearly all of which is unused. A square kilometre receives a million times this; and it is worth considering how many trees would have to be burnt to create the equivalent amount of heat.

The main reason why the sun has not been used in the past, except for drying some types of food, seems to be that there is no locally made reflecting surface efficient enough to concentrate it and create temperatures high enough for cooking or other purposes such as producing electricity. However, the invention of cheap, durable, and easily transported kitchen foil in the last few years has transformed the situation and made it possible to make local equipment which can concentrate the sun's rays enough to produce temperatures above boiling point and so be used in these ways. The cost of fuel for poor families and aid camps must be quite considerable; the sun is free.

Possible use -

These include cooking, sterilising water, distillation of salty water from desert wells, and power for refrigerators (e.g. for vaccines) and lighting; or to drive water pumps. The first three can be achieved with devices made by local craftsmen or women almost entirely from locally available materials such as wood and grass (for basket work), or more expensive iron and glass. Devices producing electricity are obviously more sophisticated, and as I have no experience of them I will confine myself to the first three.

Possible solutions -

Readers of this newsletter, and those who came to some of our symposia and the recent international conference at Durham will have seen the concentrating solar cooker which I have



developed; and this is one possible answer. It consists of a parabolic (bowl-shaped) basket three or four feet across with a surface smooth enough to accept a lining of kitchen foil (costing less than an English pound). This can be achieved either by using a bowl chair of the type made all over the Far East from rattan and lined with matting; or, in Africa, of an expanded version of the type of wide basket or even hat made from grass, strengthened with a vertical rib to stop it bending. This would be made with a flat template of wood cut to the right shape and rotated during the weaving to create a paraboloid of revolution. Like a satellite dish, this shape focuses the rays of the sun to a spot in front of it (like a car headlight converts the rays from a small lightbulb into a parallel beam). A black cooking pot is then hung in gimbals at this focus to receive all the heat. The 'dish' sits on an 'egg cup' made of wood or mud.

Another solution, which has been developed elsewhere by others, is a glass covered box with a foil lined lid which reflects the sun's rays into the box and creates a 'greenhouse' in which it is said that quite high temperatures can be created. I have found this more cumbersome and expensive, requiring wooden planks and glass, creating lower temperatures, and possibly more dangerous in use because the heavy glass lid has to be raised for stirring the pot. However, it requires less frequent movement, and continues to work when the sun is partially obscured, as during the West African Harmattan.

Distillation plants have been developed in Botswana by their Rural Industries Innovation Centre at Kanye. They are fairly expensive, comprising a glass-topped metal box with piping for the distillation, but they are robust and effective, and are used in the northern Kalahari desert where wells are saline.

Disadvantages and usage -

The most obvious and serious disadvantage is that when most needed, e.g. during the rains or in the evening, (or during the whole conference at Durham!) the sun is not available, and this requires both a backup of ordinary fuel and a change of cooking habits. The concentrating cooker, being more accurate, requires to be moved both horizontally and vertically about every half hour to keep it pointing at the sun; but this is straightforward and I assume that the cook will be around - or can employ granny or a child - to do this. Food cooked at midday can be kept hot in a hay box, which need only be a pit lined with straw. Boiling dirty water can go on all day and be stored in bottles. My cooker boils two litres from cold in under two hours in the UK summer, and it has cooked 5 pints of stew and roasted a two-pound joint.

Anyone sufficiently interested to send me £1 will receive a copy of my detailed instructions for making and using my own solar cooker -the address is Webbs Farmhouse, Cakeham Road, West Wittering, Chichester, West Sussex PO20 8LG.



A RIOT IN SENNAR BY PAUL ADAMS

Paul Adams spent one year teaching English at the Sennar Higher Secondary School for Boys. At present he is a youth worker in Maine, U.S.A. The events which he describes happened on 5th September 1987.

The day began in a typical fashion. It was hot, there was no electricity and my giardia was alive and well. However, as I arrived at school it became clear that this was to be no ordinary day. The first thing that I noticed was a tightly knit group of students gathered outside the front of the school. The second thing that I noticed was a barrage of rocks, bricks and rubble flying past my head and crashing down onto the school buildings. Surprise quickly became concern, and I hurried into the small room that made up the English Department.

After the ritual greetings I asked the Head of Department, Osman, what was happening. "We do not know; we will wait" he replied. The gathering at the front of the school marched off in the direction of the market place, and one of the teachers went for tea. The students it seemed were on strike, their main complaint was regarding the poor quality of the bread in the boarding house. The Deputy Headmaster wandered into the room offering a loaf of bread for inspection. "On the surface it is bread" he announced "but underneath it is politics." His claim did seem to be a reasonable one. The evidence which he held in his hand was a typical loaf of bread, no different from that eaten by the teachers or anyone else in Sennar.

With school cancelled for that day I walked towards the market with the art teacher, planning to do my daily shopping. While the billows of black smoke rising from that area looked ominous, we hadn't yet realised the full extent of the trouble. As we got closer it became clear that a full-scale riot was in progress. Buildings and cars were on fire, and a number of students were swinging large sticks about their heads and throwing whatever was available. Stalls were being looted, and it seemed that small tins of tomato paste were particularly good missiles. A number of children ran past us with a variety of commodities either on their heads, or gathered up in their shirts. A student running from the market place informed us that the army had attacked the march before it reached the market, and that a fellow student had been shot dead. At this point we decided to leave the area and to head for our respective homes.

It was never really clear to me what exactly happened or why. There were certainly a number of deaths. The army shot at least one person, a policeman was beaten to death by protestors, and a looter was shot dead by a shop keeper. The local press detailed these deaths, and a student came to my house that evening to show me the blood of one victim that had dripped onto his shoe. But what was it all about? The students from the school were clearly involved, but probably not because of the quality of the bread. It seems that a students' strike had become an annual event in Sennar — the hope being that the Headmaster would be forced to close the school and declare a holiday. Talking with the students revealed that a twelve week term, away from their families and in a cramped boarding house, was something they did not relish. It was a small minority that worried about the academic implications of such a closure.



Another body of opinion held that it was 'outsiders' who were responsible for organising the riots, and groups ranging from the Muslim Brothers to the Communist Party were blamed. The local English language newspaper identified shortages, inflation and the general economic situation as the fundamental cause of the riots. It detailed how the merchants had artificially raised the prices of essential commodities by setting up cartels and ignoring government price-fixing. While anger about economic circumstances may or may not have prompted the riots, people certainly took advantage of the situation and began looting when the opportunity arose. And what was the role of the military in all of this? Some people argued that it was the army who provoked the trouble, and were then deliberately slow to respond. Again, the truth of this is disputable. However, it was strongly felt by a number of people to whom I talked that such unrest was in the military interest — showing that democracy could not ensure order whereas the military could.

The facts and motives behind this whole affair remained (and still remain) unclear to me. It may be that all of the views expressed had at least some element of truth in them. In any case, the students had got what they wanted: the school was closed until further notice.

EGYPT AND AFRICA. NUBIA FROM PREHISTORY TO ISLAM

A new exhibition at the British Museum

A new permanent gallery, to be opened to the public on 19 July 1991, will explore the cultural evolution of ancient Nubia and its changing relationship with Egypt over a five-thousand year period, illustrated from the British Museum's rich collections of Nubian and Sudanese antiquities, many of which will be on display for the first time. Two books on related topics, both to be published by the British Museum Press, have been written to celebrate the new gallery: *Egypt and Africa* by John Taylor, a popular account aimed at a general readership, and *Egypt and Africa: Nubia from Prehistory to Islam*, edited by W. V. Davies, a collection of essays by leading scholars reflecting the latest archaeological research and discoveries in the field of Egypto-Nubian and Sudanese studies. In addition, to coincide with the opening of the gallery, there will be a scholarly colloquium on the gallery's theme on 19 July, and public lectures on 20 July. Further details may be obtained from the Department of Egyptian Antiquities, British Museum.

W. V. Davies

Keeper of Egyptian Antiquities

British Museum, London WC1B 3DG.



SHARKS IN THE SUDANESE RED SEA

JACK JACKSON

Six sharks swim directly towards me, twenty six others were counted circling, but I force these out of my mind; hoping that the lure of the bait above my head is stronger than any interest they might have in me personally.

The leading shark is one of two large Silvertips over eight feet long. Its senses are on the dead fish, but its eyes are on me. The strong current slows down the shark's graceful approach, giving me time to focus. One metre away it fills the frame for the super wide 15mm lens. I fire the camera just before the shark snaps at the dead fish. Immediately there is an eruption of thrashing sharks, air bubbles, remoras, pilotfishes and me, as the snapping action sets off a feeding frenzy. I curse the slow recharge of the flash guns. In thirty seconds it is all over and I have only managed two more shots.

The sharks quieten down and resume circling. The smaller fishes reappear from their hiding places in the coral. I regain my balance, check the cameras, then set myself up for another shot.

Sharks feed infrequently and mostly at night, but will feed opportunistically during the day. Sharks can detect vibration over long distances by sensitive cells along their lateral line. They are particularly attracted to the vibrations that emanate from distressed fishes. I have often seen sharks swim at high speed into a shoal of fishes and take just one individual fish. Speared or hooked fishes struggle violently. Sudanese line fishermen can rarely fish in one place for more than fifteen minutes before sharks are attracted in and take struggling fishes off the line before they can be landed in the boat. I have seen a shark puncture a Zodiac inflatable when snatching a hooked fish. The size of the bites on the remains of some fishes landed, indicates that large sharks from deep water are often implicated.

People splashing about in shallow water attract sharks with vibrations similar to those of injured fishes. Sharks arriving at such a scene, in turbid water, only see parts of limbs, which appear to be separate animals, small enough to be their normal prey. This is probably the reason for shark attacks in lagoons, harbours, and on beaches.

Few sharks will attack an uninjured diver in clear water, he or she is too big. Notable exceptions are Oceanic Whitetip Sharks, whose prey includes Pilot Whales, and Great White Sharks, whose normal prey is seal. A modern problem however is light coloured fins, which look like a separate small fish. I have had these bitten at by sharks and groupers.

A common misconception is that sharks will not attack in the presence of dolphins. In June 1990 Jeremy Stafford-Deitsch and I were surfacing from a shark photography session when five large Bottlenose Dolphins appeared 20 metres from the reef. Jeremy set off to photograph them and was then attacked by the same sharks that we had been photographing earlier. It is hard to know what caused this, the dolphins were a good metre longer than the sharks. The sharks may just have been defending their territory, or Jeremy splashing around on the surface in open water may have appeared to be in trouble. The sharks were easily driven off with the



inflatable, but this emphasized the golden rule that one should not be on the surface in open water when there are sharks about.

Sharks that occur on inshore reefs are usually smaller than man. Most common are Whitetip Reef Sharks (*Triaenodon Obesus*), Blacktip Reef Sharks (*Carcharhinus Melanopterus*) and Grey Reef Sharks (*Carcharhinus Amblyrhynchos*), sometime referred to as Shortnose Blacktail Sharks (*Carcharhinus Wheeleri*). All these sharks are grey on top fading to white underneath.

Whitetip Reef Sharks can reach 1.75 metres in length, are very shy, and have white tips to their dorsal fins and tails. They are easily distinguished from other Whitetip Sharks by their slender bodies and short blunt snouts. Usually loners, Whitetip Reef Sharks are primarily nocturnal, hiding under crevices or in caves during the day. They feed mainly on reef fishes and octopuses. Litters vary from one to five pups, around 55 centimetres long at birth. Males mature at 105 centimetres and females slightly larger.

Blacktip Reef Sharks reach 1.8 metres in length, have black tips to their dorsal fins, and dark ends to their pectoral fins. They are more inquisitive than Whitetip Reef Sharks and both species are often seen on top of shallow reefs.

Black Reef Sharks are usually seen in twos and threes and have been known to bite the feet or legs of persons wading in shallow water. They feed on a variety of reef and inshore fishes, octopuses, squids and cuttlefishes. Litters consist of two to five pups, 33-52 centimetres long at birth. Males mature at 90-100 centimetres and females at 96-112 centimetres.

Grey Reef Sharks can reach two metres, usually have a white tip to their dorsal fin, are more heavily built than Whitetip Reef Sharks, and have black shading on the rear half of their tails. They are usually in shoals of five or more. I have seen as many as 35 at a time, sometimes mixed in with Hammerhead Sharks or Silvertip Sharks. They are often found resting on sand in the early morning.

Grey Reef Sharks feed mainly on bony fishes but will take octopuses, squids, cuttlefishes, lobsters and crabs. Their attacks on man elsewhere are well documented, especially when spear fishing is involved, but the Red Sea species seems more benign. They can be strongly territorial particularly at dawn and dusk, rushing at a diver and veering off at the last moment.

Grey Reef Sharks exhibit an obvious threat display, exaggerated sinuous movements, the head arched upwards, the jaws snapping and the pectoral fins pointed down.

Also found inshore are bottom dwelling sharks, including Nurse Sharks (*Nebrius Concolor*), Wobbegongs (*Orectolobus Ogilbyi*), Variegated Sharks (*Stegostoma Varium*) and small Hound sharks.

Offshore reefs in deep water with points and good currents are also home to larger sharks. Scalloped Hammerhead Sharks (*Sphyrna Lewini*), Great Hammerhead Sharks (*Sphyrna Mokarran*), Silvertip Sharks (*Carcharhinus Albimarginatus*) and semi-pelagic sharks passing through, such as Silky Sharks (*Carcharhinus Falciformis*).



Scalloped Hammerhead Sharks, which can reach a length of 4 metres, have obvious hammer shaped heads with a scalloped leading edge. Heavily built, they are brown/grey on top fading to white underneath. They can be found alone, in schools of up to 45, or schooling with Grey Reef Sharks.

Scalloped Hammerhead Sharks prefer depths greater than 70 metres and ignore baitfish, so I have never got one close enough for a clear photograph. They feed on a variety of fishes, small sharks, squids, octopuses, cuttlefishes, lobsters, crabs and shrimps. Litters can be 15 to 30 pups, 42-55 centimetres long at birth. Males mature at 140-160 centimetres and females mature around 212 centimetres.

Great Hammerhead Sharks also feed on stingrays. They have litters of 13 to 42 pups that are 50-70 centimetres long at birth. Males mature at 234-269 centimetres and females at 250-300 centimetres. There are unauthenticated reports of 8 metre individuals.

Silvertip Sharks, which can reach a length of 3 metres, have white tips to their dorsal fins, pectoral fins and tails. These white tips stand out against their dark background. Silvertip Sharks are heavily built, black on top fading to white below. Implicated in various attacks on man elsewhere, Silvertip Sharks gained notoriety in Cousteau's book, "The Shark", where one was photographed in Sudanese waters, removing a leg from a baited dummy dressed as a scuba diver.

Silvertip Sharks can be distinguished from Oceanic Whitetip Sharks by their black upper bodies, pointed dorsal fins and their shorter, pointed pectoral fins.

Silvertip Sharks feed on a variety of smaller fishes and sharks, including Grey Reef Sharks and tuna. Litters can be 1 to 11 pups, usually 5 or 6, 55-80 centimetres long at birth. Males mature at 160-180 centimetres, females between 200 and 210 centimetres.

Silky Sharks can reach a length of 3.3 metres. They are slender bodied sharks, (though broader than Whitetip Reef Sharks), light grey on top fading to white underneath. They have very long rounded pectoral fins with black tips. Semi-pelagic, they may stay on a reef for a few days. Very fast and usually loners, Silky Sharks sometimes school with Oceanic Whitetip Sharks. They feed on pelagic fishes, squids, crabs and lobsters, with a liking for tuna. I have had problems with a large Silky Shark when baiting. Litters vary from 2 to 14 pups, 70-87 centimetres long at birth. Males mature at 170-217 centimetres and females at 213-230 centimetres.

There are many pelagic species of sharks in the Red Sea. These are unlikely to be seen by divers, who would not normally have reason to dive in open water.

Oceanic Whitetip sharks (*Carcharhinus Longimanus*), can reach a length of 3.5 metres. Heavily built with short snouts, they are brown/grey on top fading to white below. Their dorsal and pectoral fins are mottled with white. Their rounded pectoral fins are long and broad. They prefer to stay well away from land, often travelling with migrating pilot whales. They feed on fishes, squids, sea birds, turtles, crabs, lobsters and dolphins.



Oceanic Whitetip Sharks are thought to be the main culprits for attacks on survivors of air and sea disasters in tropical waters. Litters vary from 1 to 15 pups, around 65 centimetres long at birth. Unusually for sharks, the females attain maturity at a smaller size than males, 180-190 centimetres, whereas the males mature at 200 centimetres.

A Shortfin Mako Shark (*Isurus Oxyrinchus*), probably the fastest of all sharks, has attacked a swimmer farther north in the Gulf of Aqaba, and when I worked with Hans Hass in 1981, he still maintained that he had been attacked by a Great White Shark (*Carcharodon Carcharias*), at Sanganeb in 1950.

More common and every divers dream, are Whale Sharks (*Rhincodon Typus*), which can attain a length of 14 metres. Oval in cross section with flattened heads they are dark grey to black with rows of white spots on top, fading to white underneath. These harmless surface dwelling giants feed on plankton, small fishes and squids.

As always there is a joker in the pack! Tiger sharks (*Galeocerdo Cuvier*), can be anywhere. Reaching a length of more than 6 metres, they are heavily built, grey on top fading to white underneath, with darker vertical stripes on the upper body. Normally Tiger Sharks stay in deep water by day, rising into shallow water to feed at night. They eat a wider variety of prey than other sharks: fishes, sharks, (including their own species if hooked), turtles, dolphins, lobsters, jelly-fish and sea birds. They also feed readily on carrion, taking any terrestrial animals disposed of in the sea by man, and garbage, including plastic bags, tin cans and old boots!

Tiger sharks wander over large areas, but are often found in the turbid waters of harbours, river mouths, and ships anchorages, probably attracted initially by the sea birds that frequent these habitats. Well known for attacks on man in shallow water elsewhere, they are often caught at the entrance to Port Sudan harbour. Tiger Sharks are probably responsible for two attacks on children splashing about in that harbour over the last five years.



THE 1990 WET SEASON IN SUDAN

Mike Hulme

Climatic Research Unit

School of Environmental Sciences, University of East Anglia, Norwich NR4 7TJ

Achieving food security in Sudan has proved very difficult. Despite nearly two decades of food planning, increasing numbers of people in Sudan face seasonal or permanent food insecurity. Although only one element in a complex set of environmental, institutional and political constraints, drought is often the single most important contributory factor causing acute food security and eventually famine. Sudan has experienced a marked reduction of rainfall over the last two decades compared to the middle decades of the present century. The 1990 wet season has continued this pattern, and this brief note quantifies the magnitude of the drought and comments on the significance of the 1990 rainfall for future years.

Using monthly rainfall data from 26 stations in central Sudan an index of relative annual rainfall magnitude can be constructed back to 1900 (this is an update of the index previously shown in *Sudan Studies*, Nos. 1, 6 and 8). The annual anomalies are calculated from the 1921-80 average. Several features clearly stand out (see Figure). The relative wetness of the 1920s, 1930s, and 1950s and the dryness of the 1970s and the 1980s is a characteristic of recent climatic variability that central Sudan shares with the rest of the African Sahel. This interdecadal difference amounts to about a 30% reduction in annual rainfall, quite critical in a semi-arid region where annual rainfall only amounts to between 200 and 600mm and where rainfed cultivation is widespread. More specifically the graph shows the magnitude of the rainfall anomalies in individual years; 1984 has been the driest year on record, although this has been closely followed by the 1990 value. Indeed, only two years in the last 25 have received more rainfall than the 1921-80 average: 1978 and 1988 (1988, of course, was heavily influenced by the extraordinary storm over Khartoum on August 4/5; see Hulme and Trilsbach, 1989).

What has been the cause of this prolonged reduction in rainfall over central Sudan? One possibility is that changes in large-scale ocean temperatures have altered the intensity and penetration of the moist southwest monsoon. The last 20 years have seen a progressive warming (cooling) of the southern (northern) Atlantic Ocean, and recent work at the UK Met Office (Folland *et al.*, 1991) has shown how this may change the atmospheric circulation over the African Sahel. This begs the question, 'why have ocean temperatures changed in this way?' One possibility is that the oceans have been responding to the progressive increase in atmospheric concentrations of greenhouse gases, the 'enhanced greenhouse effect'. Exactly what effect this will have on ocean circulation and temperature patterns remains unclear, but the sort of changes in Atlantic temperatures seen over the last two decades are not implausible.

Can rainfall in central Sudan be forecast? A forecast for seasonal rainfall in the Sahel is now issued around the end of May each year by the UK Met. Office. This uses the relationship



between ocean temperatures and rainfall mentioned above. In 1990 the forecast was for an average to dry year, with Sudan drier than the West African Sahel. This east-west contrast duly occurred, although the extreme dryness of the wet season over Sudan was not anticipated. Nevertheless, there is premise that increasingly skilful seasonal forecasts can be prepared for regions like central Sudan. Whether such information would lead to improved management of resources and hence food security remains somewhat doubtful without institutional and political issues being simultaneously tackled (see Hulme *et al.*, 1991).

Acknowledgement

A.B.Zahran of the Early Warning System of the Sudan Relief and Rehabilitation Commission in Khartoum is thanked for supplying the monthly rainfall data for 1990.

References

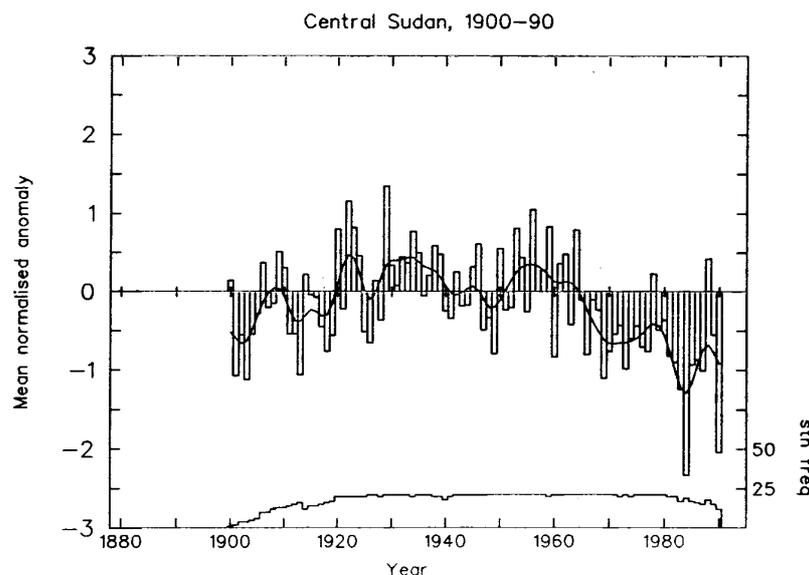
Folland, C. K., Owen J. A., Ward, M. N., and Colman, W. (1991) "Prediction of seasonal rainfall in the Sahel region using empirical and dynamical methods" *J. of Forecasting*, 10, 21-56

Hulme M., Biot, Y., Borton, J., Buchanan-Smith, M., Davies, S., Folland, C. K., Nicholds N., Seddon, D. and Ward, M. N. (1991) "Seasonal rainfall forecasting for Africa Part II: application and impact assessment" *Int. J. of Env. Studies (A)* (In press)

Hulme. M. and Trilsbach. A. (1989) "The August 1988 storms over Khartoum: its climatology and impact" *Weather*, 44, 82-90

Figure caption

Annual rainfall index for central Sudan from 1900 to 1990. The index is based on 26 rainfall stations between 12° and 16° N in the semi-arid zone of the country. The index is relative to the 1921-80 average rainfall. The smooth line shows successive 10-year averages.





EARLIER FAMINES IN THE NORTHERN SUDAN

BRIAN A. CARLISLE

The terrible famines that have gripped the Sudan in the last decade have not surprisingly attracted world-wide alarm and sympathy: but it is not really an entirely new problem as the inhabitants who live in the northern extremity of the northern Sudan are living in an inhospitable climate as the rains that sweep up Africa in the summer months only rarely reach them.

I was an Assistant District Commissioner in the Beja District from 1947 to 1951 and I was in charge of the district in the summer months when the D.C. was on his annual leave. The Beja District was large and frequent travelling by the District Officers was the order of the day to administer the district efficiently and fairly. I invariably trekked for more than 20 days a month, either by lorry or by saloon carriage along the railway line or by camel, of which I owned four. The first question one would ask on arriving at a sheikh's house, market place or police post was directed to the welfare of the local inhabitants, the outlook for the crops or the state of the grazing. 1947 was a dry year and the coastal area got none of its winter rains so as the summer approached in 1948 the food outlook was poor.

As I trekked round in May 1948 I was getting increased reports of hardship reported to me by the Sheikhs and I felt there was a call for some action. The Condominium Government had instituted for general use throughout all its offices a very efficient filing system so as a young and inexperienced A.D.C. one could repair to the files and see what one's predecessors had done in similar circumstances. The Beja District had had several famines in the last few years so there were precedents of how to put up your case to the province Headquarters and how the help should be channelled. In 1948 Relief Works were to be started in the disaster area with payment in grain. So communal work of likely long term use to the district had to be devised, foremen recruited and grain ordered from the Government's central store in Khartoum North. The worst effected area was around Musnar, a desolate railway station half-way between Haiya and Atbara and here work was provided to dig hafirs for water storage and to make small dams to catch the rains when they came.

We got through 1948 only having to institute Relief Works but the dry weather continued into 1949 and the hardship amongst the Northern Beja intensified and to ease the suffering more grain had to be ordered from the Government store in Khartoum North to be distributed free to the people worst affected: such distribution was done through tribal channels since they knew their people and I never heard any complaints that any of the sheikhs had abused their position. During the summer we had a visit from one of the senior men from the Egyptian Red Crescent whom I took round the famine areas and he professed himself satisfied with the steps we had taken. The only other thing that I recall about his visit is my inability to find any of my senior Sudanese staff prepared to accompany him to the mosque on a Friday. Now forty years later Islam has returned to bite the educated classes.



Disturbed as we were by the continuing lack of rain in the northern part of the province I organised through provincial headquarters that some land should be set aside in the Gedaref rainbelt for 200 Beja cultivators who would move down there on an experimental basis. However come 1950 the rains came early and it rained and rained turning the desert into what I remember describing as the Sussex countryside. Throughout the district there were excellent crops and excellent grazing and the idea of moving the Beja southward to a wetter area came to nothing. So ended that particular famine: not more than 100,000 people had been affected and fortunately at that time the Central Government had reserves of grain to meet such an eventuality.

SOME RECENT PUBLICATIONS ON SUDAN

The items in this listing have been provided by Mike Hulme of the Climatic Research Unit, University of East Anglia, and David N. Edwards of St. John's College, Cambridge. The editor appeals, as before, for any other contributions in this field.

Duffill, M. (1990) From emergency to social security in Sudan - Part I: the problem. *Disasters*, 14, 187-203.

Duffill, M. (1990) From emergency to social security in Sudan - Part II: the donor response. *Disasters*, 14.

El Arifi, S.A. (1988) Problems in planning extensive agricultural projects: The case of New Halfa, Sudan. *Applied Geography*, 8, 37-52.

Hulme, Mike (1988) The Tropical Easterly Jet and Sudan rainfall anomalies. *Climate Monitor*, 17, 122-33.

Nyamweru, C. (1989) New evidence for the former extent of the Nile drainage system. *Geogl. Jl.*, 155, 179-88.

Salih, M.A.M. (1990) Ecological stress and political coercion in the Sudan. *Disasters*, 14, 123-31.

Slim, H. and Mitchell, J. (1990) Towards community managed relief: a case study from souther Sudan. *Disasters*, 14, 265-69.

Speece, M. (1989) Market performance of agricultural commodities in semi-arid South Kordofan, Sudan. *Geoforum*, 20, 409-26.

Wallach, B. (1989) Improving traditional grassland agriculture in Sudan. *The Geogl. Review*, 79, 143-60.

Woodruff, B.A. et al (1990) Disease surveillance and control after a flood: Khartoum, Sudan, 1988. *Disasters*, 14, 151-63.

Adams, W.Y. (1986) *Ceramic Industries of Medieval Nubia*. 2 vols. Univ. of Kentucky.

Caneva, I., (Ed.) (1988) El-Geili: The History of a Middle Nile Environment 7000 BC-AD 1500. *Cambridge Monograph in African Archaeology*, 29.



Edwards, D.N. (1989) *Archaeology & Settlement in Upper Nubia in the 1st Millennium AD. Cambridge Monographs in African Archaeology*, 36.

Fattovich, R. (1989) The Stelae of Kassala: A new type of funerary monument in the Eastern Sudan. *Archéologie du Nil Moyen*: 3, 55-70.

Geus, F. (1986) La Section Française de la Direction des Antiquities du Soudan. *Archéologie du Nil Moyen*: 1, 13-58.

Godlewski, W. & Medeksza, S. (1987). The so-called Mosque Building in Old Dongola (Sudan): A Structural analysis. *Archéologie du Nil Moyen*: 2, 185-206.

Grzyski, K. (1987). *Archaeological Reconnaissance in Upper Nubia*. Toronto.

Hagg, T. (Ed.) (1986) *Nubian Culture, Past and Present*. Papers of the 6th Int. Conference for Nubian Studies, Uppsala.

Kendall, T. (1990) Kingdom of Kush. *National Geographic*, Vol. 178, No. 5, Nov. 1990, 96-125.

Mack, J. & Robertshaw, P. (Eds.) (1982) *Culture History in the Southern Sudan. Archaeology, Linguistics & Ethnohistory*. Br. Inst. in Eastern Africa, *Memoir* 8.

Reinold, J. (1987) Les fouilles pre- et proto-historiques de la Section Française de la Direction des Antiquities du Soudan: Les campagnes 1984-5 et 1985-6. *Archéologie du Nil Moyen*: 2, 17-60.

Rowley-Conwy, P. (1989) Nubia AD 0-550 & the "Islamic" Agricultural Revolution: Preliminary Botanical Evidence from Qasr Ibrim, Egyptian Nubia. *Archéologie du Nil Moyen*: 3, 131-8.

Sadr, K. (1987) The territorial expanse of the Pan-Grave Culture. *Archéologie du Nil Moyen*: 2, 265-92.

Torok, L. (1988) *Late Antique Nubia. Antaeus*, 16. Budapest.

Welsby, D. & Daniel, C. (1991). *Soba: Archaeological research at a medieval capital on the Blue Nile*. Br. Inst. in Eastern Africa, *Memoir* 12.