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MORE EXPERIENCES OF A FOREST OFFICER IN EASTERN NIGERIA

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This account is mostly about a small town in south-eastern Nigeria, which was at that time inaccessible and isolated in the forest. Today it is beside a main road, and has no doubt been overtaken by progress.

12 January 1960

On Friday we drove [from Enugu] via Abakaliki, crossing the Cross River at Itigidi. The ferry was a Heath-Robinson affair, constructed from planks laid across five dugout canoes, and powered by two outboard motors. It could take 2 cars abreast, and the fare was 10 shillings for each vehicle. It had been arranged for us to stay at the Obubra sawmill; when we arrived the manager's wife, Mrs Cramb, gave us tea. We occupied the Engineer's house -- he was away on leave -- and were promptly adopted by his ginger cat and black dog who abandoned their temporary foster homes to move in with us, settling down amicably with our own dogs. There was no water, and we had to collect some from a dirty stream a mile away, where all the local inhabitants seemed to be bathing themselves. The mill fetch their own supplies of water from Obubra, eight miles distant. Fortunately we had brought drinking water with us.

The next day, Leonard [Cooper] and myself drove the 30 miles to Agoi, down a dreadful bush road. Just before the town we had to ford a deep river. The banks were high and steep, and on the return journey it took Leonard two runs in his car and me three runs in mine, from the bottom, before we could climb out on the other side. The maidens at Agoi were dyed with red camwood, and wore only a narrow grass "tail" in front, suspended from the waist. Their hair was stiffened into a mop. Leonard said they appear like this for only about 6 months in the year, and I wish I could have recorded them on film. We walked eleven miles in Agoi Forest Reserve, over dissected terrain up hill and down dale, in order to choose a site for an experiment on regeneration of natural forest.

14 August 1960

Judy's puppy has just opened its eyes completely for the first time. It is fat and contented, and is asleep in Joyce's arms with Judy gazing fondly on. What a pity human babies aren't furry! We took them both to bush with us last Monday. The road to the Itigidi ferry was frightful and, but for two days without rain, we could not have got through. We lodged in a little unfurnished pan-roofed rest-house at Nko. After arriving, we learned the Departmental Landrover was stuck at Agoi with only two gallons of petrol, the driver down with malaria, and the road from Mkpani to Agoi said to be impassable, even using 4-wheel drive.

On the following day Joyce drove me, and the man who was to guide me, to Mkpani where I hired a bicycle. Mkpani and Nko are noted for cannibalism, and it is alleged that they ate two people last Christmas, and the court cases are still continuing. Rather inconsiderately, they also consumed two prosecution witnesses! We were told that the local priest went to the prison and asked one of the accused, "Moi son, whoi did ye do such a turrible thing" and received the reply, "Well, he was there and he wouldn't keep!". I cycled the 10 miles of ghastly road to Agoi. It was an exercise of pushing the bike uphill and freewheeling downhill, frantically dodging the worst rocks. Then off the bike to pick one's way through mud at the bottom, and to push it up the next hill.... and so on. From Agoi town I had another 3½ miles cycle ride to the work site, where I found preparations for the new labour lines proceeding well. The site had been partially cleared, trees felled, stones collected, and the foundations pegged out.

Rain threatened and I looked anxiously at the sky, because rain could make it impossible to extricate the Landrover. On the outward journey, I had arranged for the sawmill tractor to accompany us on the return to Mkpani, and had dosed the driver with Paludrin and Aspirin. He seemed much brighter, and with strategy and shovelling we got the vehicle two-thirds of the way without help -- but then it began to rain. Hastening to finish the journey before conditions worsened, I became less cautious and, despite 4-wheel drive, we bogged down in soft mud deeply rutted by logging trucks. The tractor had to winch us out twice, before we reached Mkpani at 4 pm. All I had consumed since breakfast was a pint of water carried in my flask, and I was feeling dehydrated. I bought the tractor driver a bottle of beer, and drank another myself at one go, without untoward effect. When very hungry and thirsty, alcohol seems to be burned up immediately for energy. We reached Nko without running out of petrol, despite gloomy forebodings from the petrol gauge.

It rained all next day, but I drove the Landrover to Iyamayong, to Obubra, and to the Cross River Sawmill, to arrange for cement, roofing, timber etc., for the building construction. In the evening I returned to Mkpani, through slushy roads, to meet my Assistant Technical Officer. The next day the rain stopped and, though some parts were muddy, we were able to return to Enugu by the better road, crossing the river by the other ferry at Aforekpo. At Enugu, I found the new office store had been completed. I have designed it so that, if needed, it can be converted to a drawing office. The entire cost was £150.

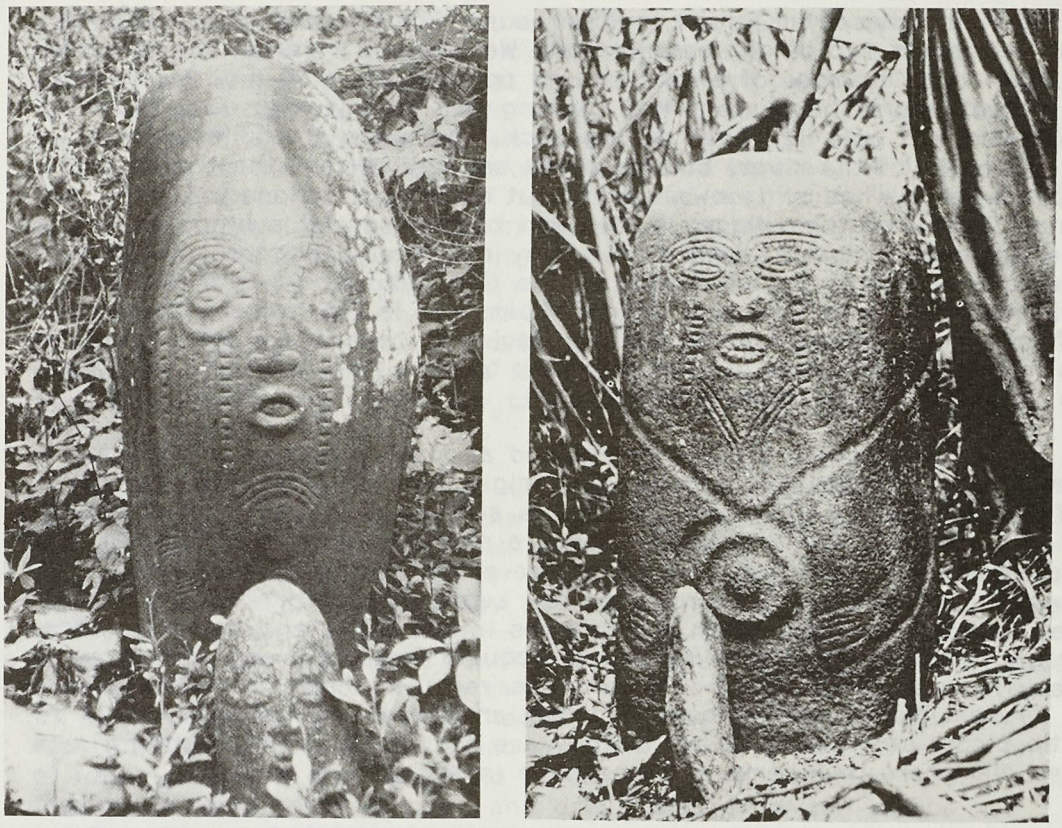
15 November 1961

On Friday we drove to Ikom, near the Cameroons border on the Cross R. We took the Peugeot [kitcar] and screwed one of the rear windows out of the cab. Joyce and myself sat in the front, and in the back were Pinder [our cook], Tobi [his wife], Jessica [our 12-month-old daughter] and the dogs, plus all our camping impedimenta. The roads were good, and we

did the 150 miles from Enugu in four hours. The purpose of the journey was to inspect two of our sample plots. We went up river in the forestry launch, which is made of aluminium and powered by a 24 h.p. 2-cylinder outboard motor. The current was running fast, and it took us 3 hours upstream, but only 1½ hours coming back. There are crocodiles, hippo and manatee in the river, but we didn't see any, except the tracks of a hippo where it had slid down a bank out of the plantations into the water. In one of the villages, a man had been gored by a hippo, after it overturned his canoe. Leonard says they are rarely dangerous, but may overturn canoes to get at their contents (e.g. plantains). John Howat is temporarily Provincial Forest Officer, Ikom, and is the local electoral officer. The elections for the Eastern Region of Nigeria are tomorrow. We left at 7.30 am, and did not get back to Ikom until 3.30 pm, but kept up our strength by sucking oranges.

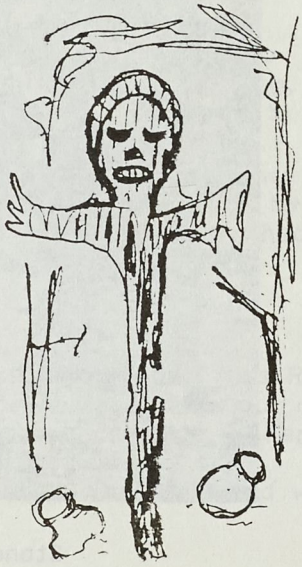
While returning to Enugu, we stopped at Alok to photograph the stone men. These are monoliths of unknown origin, which were discovered by officialdom about 2 years ago. There are several groups of them standing in Alok market place. We nearly caused a riot by photographing them and after a long argument with a village elder, eventually gave up. However, further down the road we saw Leonard's car parked, and found that someone had shown him some stones in the bush, and he was photographing them. The stones ranged to about 3 feet high, and were grey-black in colour and smooth with lines carved into them. There appeared to be male stones with elaborate navels, and female stones each with a little piccin stone in front of it. They are said to be unlike anything seen elsewhere in Nigeria -- or perhaps in Africa [see Note 1].

Stone figures in Alok market place.



Stone figures in the forest near Alok.

The man who showed us the place seemed ill at ease, and in a small clearing ringed by the stones, under a dark-foliaged tree, I saw a wooden effigy about five feet high, ravaged by the elements and deeply furrowed and corroded. It was attenuated in form, like some modern rendering of Christ crucified, but the carved features resembled those of a devil. I guessed we were in a juju grove, but pretended to observe nothing out of the ordinary.



Another reason for our journey was to collect Jeremy, an infant chimpanzee, and Ruby, a female drill, who are being given by the Provincial Forest Officer Ikom, Dane Marsh, to the University of Ibadan Zoo. They were shut into boxes and travelled in the Landrover, together with Samson, the garden boy who looks after them. While we were in the juju grove, the Landrover passed us. Later we were

stopped by Leonard who told us that the Landrover had hit a cyclist carrying calabashes of palm wine. Smashed calabashes lay all over the road, and there was a blood stain in the middle where the man had fallen. Perhaps he had been partaking too liberally of his own wares! Fortunately Abakaliki was only about 4 miles away, and the driver had carried the man to hospital and reported to the police. When the Landrover turned up, one wing was crumpled up and the windscreen smashed, and the bonnet was liberally splashed with palm wine. Despite the damage done to the vehicle, the man had suffered little more than a broken collar bone.

The monkeys were very excited. Jeremy, the 18-month-old chimp, was frantic and we let him out. He had not forgiven Samson for shutting him up, and he climbed up my leg and sat on my hip. He had soiled himself with fright, and stank. He gave me love bites, gripping me gently with his teeth. Joyce did not welcome his attentions, as she was trying to give Jessica her lunch. Jeremy and Jessica are about the same age, and both make conversational noises. The difference is that he bites if teased! Chimpanzees, like humans, have a long period before becoming adult, and take 8 or 9 years to reach puberty. Ruby was kept confined, as she will bite anyone as soon as look at them. Joyce held Jeremy while I went to the scene of the accident with the driver and a police corporal. The police seemed to think it was not the driver's fault and released him without bail. I drove the vehicle to check the brakes and steering, and they seemed all right.

21 January 1962

On Thursday, I went in the Peugeot 203 to Agoi. Earlier, I had received a message from the Technical Officer to say that the children in Agoi were dying from a mysterious disease. I rang up the Ministry of Health, accidentally getting through to the Director General. He said they knew nothing about it, but would send someone to investigate. I told them my Technical Officer had reported that 113 children had died since the New Year, and that 4 or 5 were dying each night. When I arrived at Agoi, the death toll had reached 150. A sick child was brought to me by the caretaker of our labour lines. The child's nose was running, and I think it is measles. I could do nothing but prescribe aspirin and some "M & B" tablets that I acquired in the town. These are sold, I believe, to treat tuberculosis which is prevalent. I picked out some of the cleaner tablets, and told them to give the child a quarter of the adult dose [marked on the side of the tin]. I thought it might confer protection against secondary infections such as pneumonia -- which are usually the killers. The child was very ill, but I thought he might survive if properly cared for. I told them to wrap the boy in a blanket to keep him warm, and to give him boiled water which had been cooled until it was lukewarm, adding one lump of sugar to a tumblerful of water. The small children are naked, and are left to lie on a mat, and become chilled at night. Also, they are breastfed until they are about three years old, but when ill they become disinclined to suck. I left the balance of the pills with the African sawmill manager. I was told that the children of 'strangers' are unaffected by the disease, which supports the idea that it is measles. This little town has a population of about 1,000, and has only recently been made accesssible by the activities of the sawmilling company (Brandler and Rylke) who are exploiting the nearby forest reserve. The local people have little resistance to alien diseases.

I stayed in the labour lines, which I had designed and planned, and which Mr O. has built. It is a single storey of six rooms, walled with weather-boarding and roofed with aluminium pan, on a concrete base. From here I walked 3 miles to the investigation (No. 288) to inspect progress of the tropical shelterwood operations. It was rough going, up and down rocky and thickly forested slopes that were precipitous in places, crossing a stream and then a river -- by means of a large tree felled across it and adzed on the upper surface. Unwanted trees were poisoned, by cutting a frill girdle at breast height, and pouring sodium arsenite solution into the gutter formed in the bark. The trees selected for poisoning were marked by slashing the bark at face height with a matchet. The poisoning is to kill competing trees in order to favour growth of economic species; if these are:

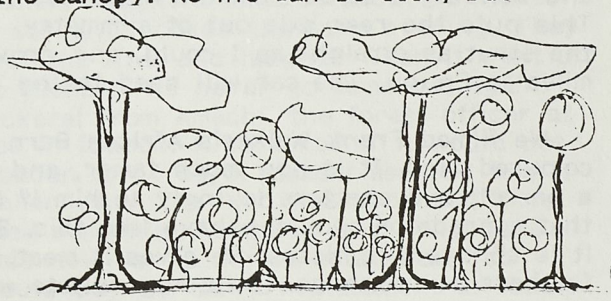
(a) poles -- middle storey trees are poisoned to let in more light;
(b) seedlings -- the middle and understorey trees are poisoned;
(c) if no economic trees are present, then the canopy is opened under potential mother trees, in order to promote natural regeneration.

Mr O. is camping near the investigation, together with his workforce. They have made beds from sticks and tie-tie, and constructed above these a temporary roof of canvas stretched over a framework of poles. It is the dry season and there is not much risk of rain, although at the start of the rains sleeping in the forest could be dangerous, because of tornados bringing down branches or crowns of large trees or even whole trees. The main complaint is lack of newspapers and reading matter, and they asked me to bring some next time I came. When I returned home [to Enugu] I was concerned not to pass the sickness to Jessica. While I was away, she has discovered a new trick -- pushing her fingers down her throat until she retches. I think our disgust encourages her!

26th February 1962

Last Monday to Wednesday was spent on my own at Agoi. I stopped in Agoi town to buy bananas, and was greeted by an emotional father who shook my hand and thanked me for saving his son's life. Apparently he was one of very few children, under three years of age, to survive. I felt gratified but unworthy. It is probably faith and natural resistance that protected the child, rather than my inexpert ministrations. I was told that the person sent by the Health Department had charged five shillings per head (or rather bottom) to give the children an injection -- although health services are supposed to be free. The needle broke off in the third child, who had to be carried to Obubra Hospital for it to be removed by surgery. It was reported at Enugu that almost no-one came for treatment, whereas I was told that large crowds turned up.

I walked through the forest to the investigation site. The air was motionless and humid, so that my clothes stuck to my back. Except when crossing the river, we could see no farther than 30 feet in any direction, which I found claustrophobic. The forest is virtually undisturbed, and the undergrowth is not dense so it can be walked through without using a matchet. Large trees, exceeding 10 feet girth (100 cm diam.), are about one to the acre, with great outspreading branches, and tower above other vegetation. Sometimes they have root buttresses, undulating several yards from the tree base. Trees over 6 ft girth (60 cm diam.) are about ten per acre [25 per ha]. Below these, a host of smaller trees range to all heights from ten feet upwards. A greenish light filters through the canopy. No life can be seen, but there is a continuous background of noise: the screeching of cicadas, the harsh call of a large hornbill hidden by intervening foliage, followed by the wooh! wooh! wooh! of its wings as it launches itself from the tree over one's head; and near streams the high-pitched ululating of frogs.



One's vision, above and to the sides, is obscured by vegetation, but the constant noise of the hidden denizens of the forest causes an uneasy feeling that *Big Brother is watching you!* [See Note 3 on vegetation.]

We emerged at the river bank and crossed a deep gorge above a pool by means of the tree-trunk bridge. It was a relief temporarily to focus my eyes to infinity by looking up and down the river, which separated the crowns of the trees. An upper pool had been poisoned by hunters, and dead fish were floating down under the tree bridge. My guide climbed down the rocky bank, and gathered fish by skewering them with a thin stick through the gills. Some were three or more feet in length, and weighed up to 4 lb [2 kg]. One species with pink fins resembled Dace; another was like Chub, but had a curious warty hammer nose; another had a proboscis with vestigial jaws and a mouth so small that only my little finger could enter. I was told that the fish were paralysed by putting pulp from the crushed large round fruits of a certain tree into the water -- but I could not ascertain the species. [Fruits of *Blighia sapida* are used for fish-poison, but are not large.]

18 March 1962

Last week, travelling from Agoi to Obubra, I was caught in a blinding storm. It rained most of the day, and water got into the distributor so that the engine stopped twice. However, after short halts it dried out and I could restart. Previously, I described the forest but not its odours. These are strong and varied -- wafts of caramel, of old wine cork, of putrefaction from rotting trunks (which smells like bad meat) and sometimes the perfumes of sweet-smelling flowers. Judy [our bitch] accompanied me, and bravely crossed the stream by the partly inundated stepping stones at the top of a waterfall, and the river by means of the tree trunk. When she reached the other side, she cried gently, as if to say "Why do you make me do this?". We did see some life, as she put up large black mongoose, and chased it until I called her back. It fled, trailing its bushy tail.

On the return journey from Obubra, I negotiated a "Diviation" where a bridge was being rebuilt. Because of deep mud, the Sawmill had put slabs of wood in the bottom. I drove gently in first gear, but one of the slabs slipped and up-ended, wedging on the underparts of the kitcar and bending a strut from the Hotchkiss tube to one end of the rear axle. This puts the rear axle out of symmetry. I jacked up the car, hammered the strut as straight as I could, and drove gingerly the remaining 60 miles to Enugu. The car will need taking for some blacksmithing.

We filmed Frank Walker's African Barn Owl -- a beautiful large ivory coloured bird. It is now much tamer, and very affectionate, more so than a parrot, and chatters lovingly to him if he strokes or hugs it. Strange that a predator should behave like this. But when he feeds it, or when it is annoyed, it hisses! He gives it meat, together with bits of fur or feathers as roughage. (Owls regurgitate waste material as pellets.)

4 June 1962
On Tuesday I went to Obubra with Mike White, who is looking round nurseries and plantations. He is seconded from Princes Risborough Research Station by British Technical Assistance, to study the bug *Phytolyma lata,* which causes the galls that cripple juvenile growth of Iroko (or 'African Teak'), *Chlorophora* [now *Milicia] excelsa.* He was excited to find the bug itself being attacked by an insect parasite. Meanwhile I was driven to Agoi, which took two hours in the Landrover. The main obstacle is the 10 miles from Mkpani to Agoi, as the 30 miles from Obubra to Mkpani are now beautifully graded and tarred, although not connecting with any tar roads on the other side of the Cross river. Presumably it will catch votes from the motorcarless local inhabitants, who may feel that they are beginning to see progress!

The path from our labour lines at Agoi was slippery with damp fallen leaves and it took almost two hours to reach the work area. We heard a chimpanzee near us in the forest, crashing through the thickets and hooting in alarm: "Hoo, hoo, Hoo, Hoo, Hoo, Hoo!". I had to replace our plywood sign boards (painted white lettering on a red background) as the chimpanzees were chewing them and fraying the edges! The new boards are made from beaten-out metal roofing pan. That should give them toothache! This reminds me of the story told by P.C. Randell of the time he was making forest reserves near Kumba [West Cameroons] in the 1930s. A forest officer must walk round the boundaries, before a forest reserve can be gazetted, in order to certify that it is properly demarcated. The boundary traces are cut by labourers with matchets and, in the good old days, ladders were made from sticks and tie-tie (creepers), up and down over fallen trunks, so the officer could negotiate them with minimal effort. These ladders kept being destroyed, and Randy thought the local people were trying to sabotage the work. He protested to the elders, who blamed it on the "gorillas" (chimpanzees). He didn't believe them, but one day, without being observed, he came upon a group of chimpanzees taking one of the ladders to pieces. He stood in silence and watched. The animals then tried to put the ladder together again, which they were not clever enough to do, and with cries of frustration threw the sticks into the surrounding undergrowth!

Michael, the labour-line caretaker, caught a tortoise about 10 inches long, which he and Pinder (my servant) cooked the same evening. They put it alive into the hot ashes of the fire, and laughed when it went off with a loud pop. Pinder said to Michael "He never go come out again!". Mike White agreed to take a cockerel from Amachi, the forest officer at Obubra, to give to Norman Jones in Ibadan. Mike asked if it would not go bad, as he wouldn't be in Ibadan for 4 days. Amachi assured him it would not. Mike was visibly shaken when the bird was produced alive and kicking; perhaps he expected something wrapped in a cellophane packet! He didn't want to soil his new car (a Herald estate) and so dashed it to us, and said he would buy Norman a replacement at Ibadan.

11 June 1962
Eric March [Chief Conservator of Forests] showed us colour slides of the hippopotamus he shot, an enormous beast weighing 2 or 3 tons. It took twelve men to lift its severed head, which weighed 4 cwt [0.2 tons]. He showed us the skull; the brain cavity was only as large as a man's fist!

24 October 1962
Dr Art Parker, the FAO Forest Pathologist, is on tour from Ibadan where he is attached to the Forest Research Department. He returned from Calabar on Monday night, made his cultures on Tuesday, and on Wednesday we left for Alifokpa in his car. The forest reserve is just north of Alifokpa, and is a "political" reserve acting as a buffer between the Tiv tribe in Northern Nigeria and the Ogoja people in Eastern Nigeria. Some bygone colonial administrator had caused a mud wall and dyke to be constructed along the disputed boundary for over 30 miles. It is called "Lugard's wall", but is now eroded to a long low mound extending in both directions as far as the eye can see. [See Note 2.] I helped Art to excavate the roots of some *[Gmelina]* trees which were dead or dying, to find what was killing them. At least two different fungal species were discovered to be attacking the trees. Fungus entered at the base of the tree through fire scars, killing a collar of bark, and eventually causing the roots to die because the products of photosynthesis from the crown could no longer reach the roots. Then the tree could not take up sufficient water from the soil, and the crown died back.

The landscapes to the north and south of the wall appeared quite distinct, as a result of the different farming systems of the Tiv and the Ogoja. The former seem to be savanna people, and remove all the trees from their farms, whereas the Ogoja are forest dwellers and retain numerous farm trees. Tiv people pass through the reserve to the markets of the East. One shapely Tiv lass, clad in a skimpy loin cloth, was wearing an exquisite set of locally manufactured glass beads. They were like large multicoloured humbugs. I wish I had photographed them, but women are very camera shy. I expect a suitable remuneration might have persuaded her. We stopped in the village to leave the Forester. A small child, 4 years old, was brought to us. A square foot of skin was burned off its abdomen, completely destroying the pigment layer and leaving a white area, with blood and lymph seeping from the wound. We carried the child to the Mission dispensary, but they had only a few medicines. I found some Boric ointment in a jar, which the dispenser used. While we were away, £1 in change was stolen from the car.

Then we went to Ikom, and from the customs post by the suspension bridge (into Cameroon) took the Forestry launch down river to the Cross River North forest reserve. We saw Mona monkeys leaping about in trees along the river bank, and also a long beaked Ibis, and different species of bright blue kingfishers. No hippos or crocodiles were in evidence. At Ikom, we stayed in the Forestry Chalet, but dined with the Howats.

Stone figure at Ekrigon Forest Reserve

We visited "British" Ndaio to see a spectacular waterfall. "German" Ndaio is on the other side in Cameroon. The Howats showed us a ring of monoliths, like those at Alok, about 10 miles away in a *Gmelina* plantation [at Ekrigon F.R.] 3½ miles walk from the road.

* * *

3rd October 1971

My senior technician, Mr B, tried to convince me of the potency of juju, and argued that some persons had supernatural powers. He said that, in youth, he had denied the possibility of witchcraft, but an old woman in his compound called him, and told him not to be foolish. She said she would give him proof, and told him to go and roast a yam in the fire until the outside was blackened. She placed this in a calabash in the middle of the hut, closing the calabash with a lid. A day later, when the lid was removed, the yam appeared to be untouched. She told him to lift it out, when to his surprise it had become as light as a feather. The entire contents had disappeared, yet the charred crust was intact. He said he could get someone to demonstrate occult powers. By turning a key in a lock, this person could "lock up" my car so that no-one could start it -- neither myself nor a garage mechanic -- until he unlocked the lock. I thought this experiment might prove rather inconvenient and hesitated to accept the challenge! I replied that I did not agree that humans could break established scientific laws, but there were things we did not understand although they must conform to natural rules.

He went on to tell me that when we were working in the East at Agoi, his colleague had employed a hunter who had killed a bushcow (buffalo), and it had all been carried away without giving the customary gift [of a hind leg] to the local elders. They were offended, and summoned Mr B. to their meeting house. He said that the room was paved with crowns of

skulls, and in the rafters a withered corpse was being cured in the smoke from a fire. The fat that dripped from the body was being caught in bowls. They offered B. palm wine to drink, but he refused. They said that because of the offence they were going to kill Mr O. by sorcery. (I suppose to make sure he learned of it, they told a friend, so that the suggestion might work.) Mr B. begged them for his colleague's life, and offered them money and cola, until eventually they relented. Mr B. asked me if I remembered how all the small children in the town were dying -- and told me this was due to witchcraft. I expostulated, and said that the cause was measles. He said that, because of the witchcraft, when the Nigerian doctor came to treat them, the needles kept snapping, and refusing to pierce the skin. I reminded him that a child had survived, perhaps because of the treatment I recommended. Ah! he said, the parents appealed to you because they thought your juju might be stronger than that of the witch or wizard responsible for the epidemic.

Note 1. Cross River monoliths

Allison's (1968) monograph contains numerous photographs, although for Alok only the stones in the market place are illustrated. The monoliths ("akwanchi") were generally carved from hard basaltic rock (dolerite). Their origins and age are uncertain and not known by the local people, who treat them as cult objects and as memorials to family ancestors. However, Allison associates them particularly with the Ekoid peoples of this area, and suggests they were carved between the beginning of the sixteenth century and the beginning of the present century. He discusses the "sex" of the stones and the idea of "mother and child" for some of them, but regards all the stones as representing male figures. Genitals are not carved on them, and he bases this conclusion on the possession of "beards" by many of the effigies (although these were not then worn by village elders) and on their phalliform shape -- which is particularly evident for the stones in some localities, resembling an erect circumcised penis (though less obtrusively for the Alok specimens). The different groups of stones each have different styles of carving; for instance, spiral patterns, or the indication of arms and hands.

Allison, P. 1968. *Cross River Monoliths.* Fed. Dept. Antiquities, Nigeria. 67 pp.
[See also illustrations in: Allison, P. 1969. Collecting Nigerian antiquities. *Niger. Fld.* 34 (3), 99-114.]

Note 2. "Lugard's Wall"

Lieut.-Col. Haywood (1926) wrote that: "The Yachis [an Ogoja tribe] were invaded and slaughtered in considerable numbers the following year [1912] by the powerful Munshi tribe [Tiv]..... It required a military expedition on a much bigger scale to settle the Munshi-Yachi affair, for the Munshi are a virile and more warlike race, who at that time had never had their country effectively brought under the administration. The boundary settled on by the political officer to the expedition was marked in no uncertain way, by causing the aggressors to build a stout mud wall along the whole of its length, together with a broad road parallel to it to admit of patrolling the boundary. I know that the Nigerian Government were highly incensed at the tribe having been ordered to carry out such an 'unproductive' piece of work, and they visited their displeasure on the author of the idea. I submit however, that it was a first-rate object lesson and that the punishment fitted the crime ...."

Haywood, A.H.W. 1926. *Sport and service in Africa.* Seeley, Service & Co., 285 pp.

Note 3. The vegetation.

On these leached basement complex soils, under high rainfall, mahoganies are uncommon. A typical species in this forest was *Celtis adolfi-friderici,* memorable if only because of its name. The uncommon species *Celtis durandii* was also found -- specimens are preserved in the Forest Herbarium at Ibadan -- though it was not named in the enumeration. These species, and *Celtis philippensis* (Syn. *C.brownii)* which is also present, have a mottled brown and yellow slash, whereas the slash of the usual timber species *C. mildbraedii* and *C. zenkeri* (which were **not** found) shows concentric rings of brown and yellow. [Both these species occur together and also have similar boles with high thin buttresses, but *C. zenkeri* may be distinguished by the markedly parallel veins in the leaves -- illustrated in Keay *et al.,* 1964.] Trees of all species, of 6" girth and above (≥ 5 cm diam.) at breast height, were measured over an area of 180 acres (0.73 km²) and are listed in the following tables by numbers and by standing basal areas (= the sum of stem cross-sectional areas at breast height). Well represented species (>50 m²/km²) are: *Allanblackia floribunda, Chrysophyllum* spp., *Drypetes* spp., *Klainedoxa gabunensis, Pausinystalia* spp., *Parkia bicolor, Pentaclethra macrophylla, Piptadeniastrum africanum, Pterocarpus osun, Staudtia stipitata, Strombosiopsis tetrandra, Treculia obovoidea* and *Vitex rivularis.* It is interesting to note the high proportion of these species that produce edible fruits or have other value for rural communities. This was also observed by Rosevear (1979) in the Oban reserve, which he attributed to forest becoming re-established after depopulation by the slave trade. In apparently primary forest in Bendel State (Okomu Forest Reserve) Jones (1956) discovered evidence of former occupation from pot fragments and charcoal at depths of 25 to 100 cm in the soil, though the site appeared to have been unfarmed for at least 200 years. Again it has been suggested this is evidence for more substantial populations in the past. However, where land is plentiful, people tend to congregate on more fertile soils, and in my own opinion these forests are unlikely ever to have been densely populated (Lowe, 1980). In pre-colonial days, subsistence farming required relatively small clearings (probably less than ½ acre or ¼ ha each) and large trees or useful trees would have been left unfelled. Shifting cultivation could progessively disturb much of the forest in this way. The Tropical Shelterwood System (TSS), which involved climber cutting and poisoning of the forest, was only tried in the Eastern Region on an experimental scale, although in the Western and Mid-western Regions it was a management operation and altogether about 2000 km² received TSS treatment.

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AGOI FOREST RESERVE -- The data are for combined plots, totalling 180 acres (c.73 hectares). The figures are converted to number of stems per square kilometre (N/km²) and standing basal area (in square metres) per square kilometre (m²/km²). [1 km² = 100 hectares.]

	N/km²	m²/km²
GENERAL UTILITY TIMBERS		
Albizia adianthifolia	27.5	5.944
Albizia sp.	12.4	5.281
Allanblackia floribunda	818.2	59.621
Alstonia boonei	6.9	2.936
Amphimas pterocarpoides	42.6	10.148
Aningeria robusta	2.7	1.142
Annonaceae sp.	122.2	14.905
Antiaris toxicaria	72.8	9.675
Antrocaryon micraster	23.3	11.412
Araliopsis soyauxii	78.3	19.859
Baillonella toxisperma	8.2	5.009
Balanites wilsoniana	1.4	0.006
Berlinia auriculata	13.7	0.542
Berlinia sp.	87.9	12.094
Bombax buonopozense	20.6	7.184
Brachystegia eurycoma	4.1	0.075
Canarium schweinfurthii	37.1	17.654
Ceiba pentandra	9.6	0.691
Celtis adolfi-friderici	159.2	17.059
Chrysophyllum albidum	13.7	1.047
Chrysophyllum delevoyi	92.0	2.968
Chrysophyllum pentagonocarpum	9.6	4.687
Chrysophyllum perpulchrum	141.4	9.628
Chrysophyllum subnudum	71.4	3.712
Chrysophyllum sp.	772.9	37.125
Cleistopholis patens	65.9	9.453
Coelocaryon botryoides	396.7	32.800
Cola gigantea	210.0	9.812
Daniellia ogea	11.0	8.120
Drypetes sp.3	157.9	13.950
Entandrophragma angolense	22.0	7.393
Entandrophragma cylindricum	6.9	0.364
Entandrophragma utile	4.1	1.368
Eribroma oblonga	13.7	1.998
Garcinia kola	189.5	27.920
Guarea cedrata	35.7	3.871
Guarea thompsonii	46.7	7.034
Hallea ciliata	15.1	2.984
Khaya ivorensis	30.2	9.499
Lannea welwitschii	5.5	1.249
Lovoa trichiliodes	89.2	13.580
Milicia excelsa	8.2	0.627
Oxystigma oxyphyllum	2.7	0.922
Parkia bicolor	181.2	68.881
Pausinystalia sp.	591.7	53.630
Piptadeniastrum africanum	201.8	58.749
Poga oleosa	35.7	15.660
Psydrax subcordata	15.1	1.377
Pterygota macrocarpa	13.7	3.297
Pycnanthus angolensis	1478.5	327.297
Strombosia pustulata	653.5	13.725
Quassia undulata	26.1	4.379
Ricinodendron heudelotii	56.3	11.421
Scottellia coriacea	779.8	32.259
Scyphocephalium mannii	188.1	19.455
Spathodea campanulata	1.4	0.206
Spondianthus preussii	26.1	3.178
Stemonocoleus micranthus	6.9	3.322
Sterculia rhinopetala	6.9	1.031
Sterculia tragacantha	151.0	13.666
Tapura africana	10483.0	488.522
Terminalia ivorensis	11.0	9.082
Terminalia superba	2.7	0.330
Tetrapleura tetraptera	8.2	0.709
Trichilia megalantha	119.4	8.623
Trilepisium madagascariens	1.4	0.063
Turreanthus sp.	6.9	0.046
Vitex rivularis	130.4	52.610
Unknown 12	8.2	4.705
Unknown	12.4	3.640
TOTAL GENERAL TIMBERS	18504.4	1599.483
HEAVY TIMBERS		
Afzelia africana	8.2	2.353
Afzelia bipindensis	1.4	0.006
Afzelia pachyloba	16.5	1.681
Anopyxis klaineana	2.7	0.086
Cylicodiscus gabunensis	93.4	32.962
Diospyros crassiflora	101.6	3.331
Diospyros suaveolens	72.8	2.460
Diospyros sp.	68.6	4.573
Distemonanthus benthamianus	43.9	6.442
Erythrophleum ivorense	1.4	0.023
Gilbertiodendron dewevrei	57.7	2.404
Guibourtia ehie	26.1	8.929
Hylodendron gabunense	300.7	40.830
Irvingia gabonensis	501.1	45.718
Irvingia smithii	177.1	25.350
Klainedoxa gabonensis	694.7	199.264
Lophira alata	11.0	10.822
Mammea africana	39.8	9.639
Margaritaria discoidea	8.2	0.712
Nauclea diderrichii	9.6	3.144
Parinari excelsa	115.3	18.527
Pentaclethra macrophylla	405.0	54.612
Pericopsis elata	1.4	0.571
Petersianthus macrocarpus	113.9	24.191
Pterocarpus osun	545.0	103.347
Pterocarpus soyauxii	74.1	21.713
Staudtia stipitata	1236.9	60.205
Strombosia grandifolia	387.1	8.053
Uapaca spp.	831.9	41.192
TOTAL HEAVY TIMBER SPP.	6600.6	746.864

	N/km²	m²/km²
USUALLY LESS THAN 40cm DBH		
Aidia genipiflora	74.1	1.047
Anthonotha macrophylla	70.0	1.464
Antidesma sp.	31.6	0.388
Aulacocalyx sp.	321.2	5.512
Baphia nitida	201.8	2.349
Barteria fistulosa	56.3	0.846
Blighia sapida	5.5	0.132
Bridelia sp.	1.4	0.206
Bridelia stenocarpa	16.5	0.605
Buchholzia coriacea	1.4	0.023
Calpocalyx sp.	2101.8	42.161
Carapa procera	302.0	6.142
Celtis philippensis	1.4	0.206
Chytranthus atroviolaceus	1.4	0.023
Coelocaryon sphaerocarpon	31.6	1.641
Coffea sp.	113.9	0.918
Cola acuminata	79.6	1.705
Cola digitata	193.6	1.250
Cola hispida	8.2	0.120
Cola sp.	19.2	1.226
Corynanthe pachyceras	130.4	11.357
Dacryodes edulis	167.5	6.613
Dactyladenia sp	4.1	0.034
Desplatsia dewevrei	15.1	1.104
Dialium guineense	333.6	8.542
Dichapetalum sp.	1036.5	47.685
Diospyros dendo	12.4	0.290
Diospyros hoyleana	86.5	0.933
Diospyros iturensis	399.5	30.216
Diospyros preussii	12.4	0.051
Diospyros pseudomespilus	9.6	0.098
Discoclaoxylon hexandrum	5.5	0.155
Discoglypremna caloneura	17.8	1.379
Drypetes sp. ?	1009.0	5.550
Drypetes staudtii	451.7	6.506
Elaeis guineensis	17.8	1.819
Ficus sp.	30.2	1.219
Funtumia africana	208.7	17.430
Garcinia mannii	82.4	1.473
Greenwayodendron suaveolens	1031.0	41.589
Grewia coriacea	6.9	0.063
Homalium africanum	115.3	10.584
Homalium longistylum	137.3	24.094
Hypodaphnis zenkeri	332.2	45.879
Kigelia africana	2.7	0.577
Klaineanthus gaboniae	265.0	10.699
Memecylon sp.	28.8	4.915
Monodora sp.	6.9	0.280
Musanga cecropioides	133.2	5.859
Napoleonaea sp.	107.1	1.199
Newbouldia laevis	15.1	0.240
Octolobus angustatus	1.4	0.023
Omphalocarpum pachysteloides	1.4	0.006
Pachystela sp.	1.4	0.023
Pauridiantha floribunda	94.7	3.263
Picralima nitida	24.7	0.789
Placodiscus sp.	2.7	0.046
Porterandia cladantha	8.2	0.207
Pseudospondias microcarpa	122.2	24.857
Psydrax parviflora	1.4	0.023
Psydrax sp.	2.7	0.011
Radlkofera calodendron	1.4	0.206
Rauwolfia vomitoria	1.4	0.023
Rhabdophyllum calophyllum	16.5	0.246
Rinorea sp.	115.3	2.047
Rothmannia hispida	23.3	0.200
Rothmannia sp.	2.7	0.069
Rothmannia whitfieldii	4.1	0.092
Santiria trimera	665.8	32.470
Sapindaceae sp.	1.4	0.063
Scaphopetalum sp.	1.4	0.006
Strombosiopsis tetrandra	5573.7	223.117
Tabernaemontana pachysiphon	156.5	2.503
Tetrorchidium didymostemon	48.0	0.884
Treculia africana	168.9	5.962
Treculia obovoidea	8193.1	243.991
Trichilia prieureana	49.4	5.417
Trichilia sp.	547.8	24.928
Trichoscypha acuminata	178.5	3.962
Uvariodendron connivens	15.1	0.461
Uvariodendron sp.	118.1	1.465
Uvariodendron sp.1	6.9	0.080
Uvariodendron sp.2	1.4	0.124
Xylopia quintasii	17.8	0.950
Zanthoxylum macrophylla	68.6	2.172
Zanthoxylum zanthoxyloides	6.9	0.419
Unknown 7	4.1	0.017
Unknown	4.1	0.454
SPECIES USUALLY < 40cm DBH	26147.0	941.164
TOTAL ALL TREES ≥ 5cm DBH	51252.0	3287.503