

from mere cracks in the ground. The larger come from definite pipes up to two or even three feet in diameter. From these the steam issues in a steady stream, too hot to hold one's hand in, and with a slight blowing sound. There is no definite deposition of sulphur, silica, or any other mineral matter around the jets.

Some of the jets are single, but most are in groups, lying along fault-lines running north and south, i.e. lines parallel to the main direction of the Rift Valley.

In the accompanying photographs, No. 1 shows one of these fault lines, marked by a definite small escarpment, along which was a whole series of steam jets, three being visible in the picture. No. 2 is a nearer view of the centre jet of No. 1; on close inspection it was found that the steam was coming from several vents within a few yards of each other.

The volcanic features of the district are highly interesting and would repay further study. There is a well-preserved cinder zone, some two or three hundred feet high, a few hundred yards north of the station, while the lava sheet covered by dense bush lying between it and Lake Elmenteita—'The Lava Forest'—provides a stretch of country some ten miles across, with worse walking and more difficulties of penetration than any of like size that I have ever been unfortunate enough to come across.

Loose boulders and flakes of obsidian seem to carpet most of the Eburru district, and their effect on one's boots is very destructive.

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## ZIZYPHUS JUJUBE

BY C. W. HOBLEY

All along the coast of British East Africa, particularly in the vicinity of settlements, there is commonly found a tree of irregular growth and usually having several stems. There appear to be two varieties, one with and the other without thorn; the latter bears the bitter fruit. It has oval leaves, rough on the underside; and the flowers, which are insignificant,

## 412 NESTING HABITS OF A SWIFT (*TACHORNIS*

are borne close to the leaf stems, and are in groups of four; it bears a small edible yellow fruit and belongs to the order of the Rhamnaceae. The Swahilis call it *kunazi*, and in Arabic it is called *dōm*, in India it is called *bér* or *bor*. It is a well-known tree on the coast of Arabia at Hadramaut and Muscat, where it is possibly indigenous, but some authorities maintain that it was derived from India. It was certainly carried over to the east coast of Africa by the early Arab settlers, and it has also spread to China. It is said to grow to a very considerable size in Arabia, and is highly prized for its fruit, a big tree being often valued at Rs. 40-50.

The fruit is dried and crushed, and is sent far into the interior of Arabia as food.

Rich people have the seeds extracted and a cupful will sell for Re.1; they are supposed to be a great specific for the sight; this is probably due to their astringent properties.

The bark is used for tanning in North India and Burma. In some parts of India the tree is carefully cultivated, and the size of the fruit has been increased by grafting or budding the trees, and a fruit 2 in. long by 1 in. in diameter is produced; the fruit borne by the specimens of the tree in East Africa only averages 1 in. in diameter. In India the pulp of the fruit is mixed with tamarind and made into chutney. The dried fruit is also exported from the Persian Gulf to Europe, where it is made into lozenges and jujubes for the treatment of cough; this is the origin of the name of the species of this tree. Seeing that this tree flourishes so well on the coast without any cultivation, it might prove worthy of some attention from coast planters.

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### NESTING HABITS OF A SWIFT (*TACHORNIS* *PARVUS*) IN GERMAN EAST AFRICA

BY ARTHUR LOVERIDGE

*Nest and Eggs.*—When out collecting one morning at Morogoro, I came across a small colony of swifts nesting in the banana-palms which line the sides of the road. The lowest

nests were 12-15 ft. from the ground, and were attached to the frond of the leaf just below its union with the mid-rib of the leaf. The inner side of the leaf being concave, a few feathers are gummed to its surface over an area  $4\frac{1}{2}$  in. in length and 2 in. in width which is the width of the frond. At the lower end of the patch the shallowest of cups is formed, and the two white eggs rest upon this and are gummed to the back of the nest. These eggs will not fall out though the nest be turned completely topsy-turvy and the branch that bears it be roughly shaken. The eggs in the first nest could be seen whilst standing directly underneath.

*Incubation.*—The incubating parent grasps the back feathers of the nest with its claws and presses itself against the eggs; of seven nests examined to-day, in three cases it was the male incubating the eggs, and in the remaining four, females.

There is always more or less of a breeze here and frequently a strong wind rising to a gale after sunset. As may be imagined the fronds are swaying up and down nearly all the time and the back of the brooding bird is often underneath.

*Young.*—When hatched the young cling tenaciously to the feathery wall, and on my disturbing two they actually lowered themselves down, and as far as possible into their old egg-shells which of course continued to occupy the cup-part of the nest. The latter swarmed with bird lice and several other species of minute parasites. Two youngsters which were in the downy stage could scarcely be distinguished from the feathers which comprised the nest.

*Contents of nests—*

1. Single eggs highly incubated.
2. Two eggs, one incubated or bad, the other almost fresh.
3. Two eggs, both highly incubated.
4. One egg broken and bad, and one newly fledged bird.
5. Two young birds only a couple of days old.
6. Two downy young.
7. Empty except for crushed egg-shells, the young having flown.

Though the palms bearing these nests were just out-

side the hut occupied by my boy, on having these nests pointed out to him, he insisted they were the work of insects, and would not believe them to be the work of birds till he saw the eggs. Certainly at a little distance they appeared as a cobwebby mass.

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NOTES OF INTEREST ON SOME EAST  
AFRICAN BIRDS

BY V. G. L. VAN SOMEREN, M.B.O.U.

The following observations may be of interest to fellow-workers in African Ornithology.

*Quelea aethiopica*, var. *intermedia*.—The females of this species when coming into full plumage assume a pale cadmium yellow bill, not wax-red as in the males.

*Vidua serena*.—Out of a large series of thirty live birds collected in January of this year, only seven turned out to be females. All the birds were alike in plumage until April, when the males moulted, assuming the typical black and white plumage, while the seven females took on a more sober plumage, being much darker on the back than formerly, and much more ochraceous sandy on the lower surface, the bills turning from vermilion wax-red to dark brownish horn or red-brown with black culmen.

*Coturnix delegorguii*.—The female of a pair, which have been kept apart from other Quails and were living in a run with insect-eating birds, has laid up to date 112 eggs. She commenced laying December 20, 1913. The eggs were not removed unless there were more than sixteen in the nest, and then twelve were always left to induce the bird to brood, but this she refuses to do. The series has been preserved and shows a great variation in colouration, size, and shape, but uniform in shell density.

## CONCERNING BABOONS

BY A. BLAYNEY PERCIVAL

Amongst all African natives the story of baboons stealing children is common, and Rider Haggard makes it a great point in one of his books.

Authentic cases are, however, very rare, so the report sent in by Mr. G. H. Goldfinch, Game Ranger, West Kenia, is particularly interesting. He writes: 'I have often heard of baboons trying to steal children, but I have not come across an authentic case before. One tried to steal the child of a Kikuyu woman on the Hon. R. B. Cole's farm (West Kenia). She was in the forest collecting firewood, and in rescuing the child was rather badly bitten in leg and arm. I do not know what a baboon would do with a baby, but presumably take it up and drop it, as is their way with puppies and kittens. About the same time another child disappeared altogether from the same place and was supposed to have been stolen, but it seems quite likely it may have been taken by baboons.'

## PRECOCITY IN ORANGE-SEEDLINGS

BY C. M. DOBBS

During the last year or so we have raised a certain number of orange plants from seed, and in many cases these young plants, when about eight months old and about 2 or 3 in. high, have produced a single flower on the very top of the stem. In several cases this has been followed by a perfectly formed miniature orange about  $\frac{1}{4}$  in. in diameter. So far none of these oranges has ripened, as the fruit generally falls off after a certain time, but the mere fact that such a diminutive plant can form a fruit seems somewhat remarkable. It may of course be nothing out of the ordinary, but I have never seen a phenomenon of this kind before.

## CURIOS GROWTH OF WILD RUBBER-VINE

BY C. M. DOBBS

In Sotik, Lumbwa District, on the farm of Messrs. John Morgan & Sons, is to be seen a most extraordinary freak growth of a wild rubber vine. The vine, 1-1½ in. thick, passes right through the trunk of a tree about 18 in. in diameter. The most probable explanation of this phenomenon is that when the vine and tree were both very young, the vine grew across a fork in the tree. The vine by constant friction rubbed away the bark of the tree, and in the course of time the fork closed over the vine and the wound healed up. At the present time the joint where the vine passes through the tree is about 9 or 10 in. below the fork.

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 EUROPEAN CRANE

BY V. G. L. VAN SOMEREN

A specimen presumably of the Common European Crane, *Megalornis grus grus*, Linn., was procured at Kepsaret, Uasin Gishu, on June 7, 1915.

Attached to one of its legs was an aluminium ring bearing the following inscription :

ORNITH. KOZPON  
 BUDAPEST  
 HUNGARIA 8.7.14

Mr. Wood of the Forest Department, who shot the bird, reported it as being a specimen of the Crowned Crane, but I hardly think this is correct, unless a bird of this species, which had been in captivity and had been 'ringed,' had subsequently escaped.

As is well known, the ringing of migratory birds is carried out on a large scale, both at home and abroad, with the idea of being able to keep track of such birds during their wanderings, either of spring or autumn.

The European Crane is found over the greater part of Europe and Asia, and migrates to *North Africa* during the winter. It has not, so far as I am aware, been reported so far south as East Africa.

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### FIGHTING LIZARDS

By C. M. DOBBS

Some weeks ago in Sotik two lizards were observed on the ground, one of which had got the end of the other's tail firmly gripped in its mouth. The one whose tail was being bitten was in its turn biting a piece of stick, possibly to try to get hold of something so as to drag its tail out of the other one's mouth, or to alleviate the pain caused by the bite.

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### SUPERNATURAL BELIEFS OF THE LUMBWA

By I. O. ORCHARDSON

The supernatural beliefs of the Lumbwa may be divided into sections, viz. : (1) those dealing with the 'Spirits' of the dead, and (2) those connected with their form of Sun worship.

The former play the greater part in their daily life, and, in fact, most of their doings are dictated, at least to some extent, by fear of, or care for, these departed spirits or 'Oik.'

The 'Oik' seem to have a permanent abiding-place 'below,' but there is a distinct belief in the migration of souls curiously blended with a very sound theory of heredity.

Apparently the 'Oik' or 'Spirits' of the dead are a malign influence much to be feared and conciliated. I have not yet been able to ascertain whether their evil character is abated when the spirit is re-embodied. At any rate the universal belief is that when a father dies, his spirit ('Oindet') passes into his grandchildren. It is noteworthy that women also

are allowed 'Oïik,' and that the 'Oindet' of the woman passes equally into the grandchildren—the grandchildren thus inheriting the characteristics of the grandparents. (Now the modern study of heredity shows this to be actually the case, viz. that the hereditary transmission of characteristics is rather from grandparent to grandchild than from parent to child.)

A custom corresponding closely to Christian baptism combines both the Sun worship and Spirit belief. Thus, when a child is born, the father must call the spirits of the grandparents, or—if not dead—of some other suitable near relation to enter into the child. If this is not done, the child, lacking an 'Oindet,' will not thrive and will probably die. Thus the 'Maboita,' a small stack of sticks specially selected, six varieties of small trees, tied with a special creeper, is erected outside the hut (if not already in existence for other purposes referred to later) and in the morning, while the sun is still in the east, the baby is brought out and held with its face towards the sun. Asista, God of the Sun, is asked to accept the child and look after its welfare; at the same time, milk and beer (made from honey) are sprinkled on the child. If a person becomes sick it is attributed to the 'spirit' of the patient, and a goat is sacrificed in order—I am told—to scare away the spirit, but it would seem more probably to pacify it. If possible, the goat is sacrificed on the spot where the grandfather (or whoever the spirit was supposed to emanate from) died.

When it was pointed out to one man who was making a sacrifice that the custom of only giving a small part of the meat to the spirit, and taking the rest home to eat, might anger the spirit, the suggestion was accepted seriously, and the total sacrifice was made—with a great moral struggle.

The 'Oïik' are occasionally supposed to enter into animals, usually 'unclean' ones, such as hyenas, mice, leopards, i.e. those that eat the dead bodies when persons are thrown out into the bush after death. They never enter into cattle and the like.

I know one family whose common 'Oindet' is supposed to originate from a leopard. There are several such families,

and when a leopard hunt takes place they are much in demand. They are called up and asked to tell the spirit of the leopard to cease its troubling.

Curiously enough, my *neapara* belongs to such a family, and, being a much enlightened boy, was in bad odour with the rawer natives; but when, with the loan of my shot-gun, he successfully (after incantations) exorcised the spirit of a leopard which had killed some goats on my farm he rose much in their estimation.

To revert to the 'Maboita' or 'stack of sticks' so frequently seen outside Lumbwa huts. This is not erected necessarily at the time the hut is built, but only when occasion arises for its services, which seem to be chiefly for the purification of persons who have committed crimes or offences. Again this is connected with Sun worship and not 'Oik,' for the sinner is faced towards the sun while it is in the east (even up to 11 o'clock). The old men of the district place grasses (of particular kinds) on his head and scatter native beer (made from honey) on him, telling him not to look to the west where the sun goes down—but to watch the east where Asista daily appears to care for the welfare of his people.

The sun is definitely regarded as the Beneficent Deity under the name of Asista. He causes the *wimbi* to grow, the cattle to thrive, and the spirits to enter into the children. An annual ceremony is still practised, especially in Buret and Sotik, asking Asista to give abundant crops, many cattle and children. At the sunrise ceremony a sheep is killed and certain rites performed with the fat and blood thereof. Before sunrise, on an eminence with a far view to the east, the old men, old women, and children gather, bringing a white goat decorated with many cowries and beads—also *kibuyus* and beer made from honey, not *wimbi*. A very large stack of sticks called 'Kapkoros' is erected and tied with its special creeper (the small ones outside the huts are just replicas of this). When the sun rises a procession leads the goat around the pile, and the milk and beer are scattered towards the sun, while the chief old man asks Asista to prosper them for the year. At eight o'clock the ceremony is finished.

Although the rain is attributed directly to the moon, yet

the natives believe that Asista is primarily responsible, deputing, however, the distribution to Arawet the moon, his wife. The stars complete the family as innumerable children.

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### ALBINISM

By H. G. B. HESSE

I was rather interested in some notes on Albinism in the March (1917) number of the JOURNAL.

I have come across about half a dozen albinos in South Africa. I know of four in the Barberton district who were Swazis, and two in Johannesburg, but I am not sure what tribe the latter belonged to.

As far as I can remember, I did not notice any sores or scabs on them, but that may be owing to the fact that the heat there is not so great as it is in East Africa.

As regards the colour of the hair; one albino in Barberton had almost white hair, probably owing to his great age; the others had quite red hair, not straw colour. The colour of the eyes was decidedly pink.

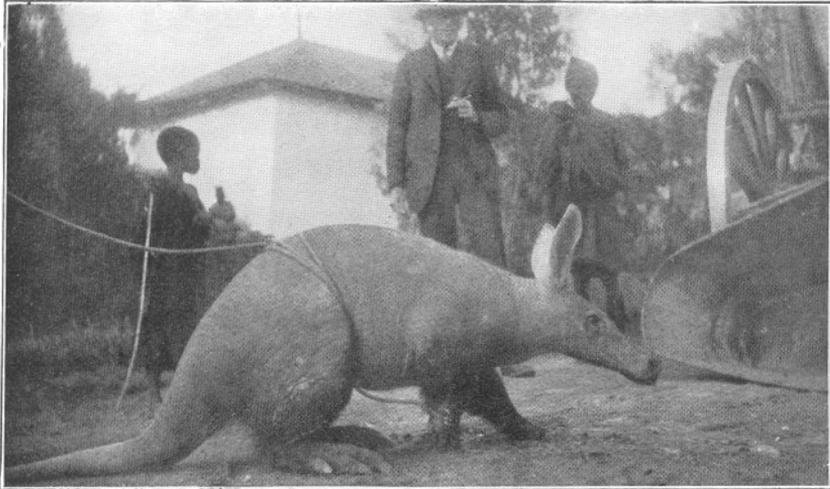
I have never seen an albino woman among the South African natives, nor have I heard of one. Is Albinism only found among males? I should be interested to know.

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### ALBINO CHILD

By A. M.-H.

When on safari at Mlalende, near Ndi, south-east of the Taita Hills, I saw an albino child. He was about ten years old; his skin was quite white, and his hair snow-white. The eyes were a watery blue, and he complained of the bright sunlight. There were marks on his face resembling very large freckles, and his lips were badly blistered by the sun. His father, mother, and two sisters are all quite black. The boy seemed quite intelligent, and willing to answer any questions.



ANT-BEAR OR AARDVARK.

*(Orycteropus afer.)*

By Capt. R. O. Crewe Read.

## ANT-BEAR OR AARD VARK

BY V. G. L. VAN SOMEREN

An extraordinary amount of interest has centred around the Aard Vark or Ant-bear (*Orycteropus afer*) during the last six months, owing to the fact that an unusually large number of specimens have been seen in broad daylight and quite a number shot. In one district alone, Uasin Gishu, about twenty specimens have been procured.

The Dutch residents state that the Aard Varks do not appear in daylight unless there is a drought on which is likely to last some time.

The natives of the Elgoyu district also hold the same view, and certainly the present drought and consequent famine, coupled with the abnormal number of Ant-bears seen, appear to corroborate this.

These animals are quite distinct from the Ant-bears of South America.

The African Aard Vark possesses teeth of a peculiar form, not found in any other animal. There are no teeth in front, but in adult specimens there are five teeth on each side of the mandible and maxilla. A cross-section of a tooth exhibits the presence of numerous tubes of polygonal shape.

The Aard Vark is widely distributed in East Africa.

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ANT-BEAR

BY CAPTAIN R. O. CREWE-READ

The Ant-bear of which we give an illustration, was dug out near Naivasha Railway Station by some natives, and brought up in a bath tub to the *boma*, where the photograph was taken. It must have weighed at least 120 lb., as it took four boys to lift it. It measured 62 in. from tip to tip, and stood about 24 in. at the shoulder. After the photograph was taken it was released, and promptly proceeded to burrow through the loose stone wall of the *boma*, and in a

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few seconds had nearly disappeared. It was hauled out by the tail and trotted down the road worried by dogs, which it completely ignored ; it then tried to enter the bar of the Rift Valley Hotel, but was gently but firmly prevented and went to ground in an old ant-bear hole just opposite. It seemed quite blind in the sun and blundered into anything that came into its path. It had no teeth, but extremely powerful claws which severely damaged the native who held it by the tail. The way it enlarged the hole, throwing out large stones with its powerful claws was a revelation.

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ANNUAL REPORT OF THE EAST AFRICA AND  
UGANDA NATURAL HISTORY SOCIETY, 1918

BY THE HONORARY SECRETARY

Your Committee has pleasure in submitting the Annual Report on the progress made by the Society during the year 1918.

During the greater part of the year the war has continued, and has affected even our small Society in no little measure.

*Membership.*—The Society is to be congratulated on the fact that, in spite of adverse circumstances, the membership has not decreased but increased—so much so that the total issue of our last JOURNAL, No. 12, was found to be insufficient and is already out of print. A second edition has had to be ordered !

The total membership for the year stands at 250. This, compared with the membership roll of the last three years, speaks for itself :

1915		1916		1917		1918
108	..	125	..	211	..	250

Of this total of 250 some 30 odd have not yet paid their subscriptions, but this is due to the fact that most of these gentlemen are on active service and so out of touch with regular postal service.

Seven resignations were accepted during the year, and it