

NOTES ON THE AFRICAN SUNBIRD, *CINNYRIS AFRA GRAUERI* NEUMANN.

By John G. Williams.

(The Coryndon Memorial Museum, Nairobi, Kenya Colony).

The Ruanda Double-collared Sunbird (*Cinnyris afer graueri*) was described in 1908 by Neumann from material collected in the western Kivu Volcanoes. Since its discovery few ornithologists appear to have studied the bird in its natural haunts, the only notes on its habits that I can find being a brief account published by Count N. Gyldenstolpe (1) in his report on the results of the 1921 Swedish Expedition to Central Africa. In view of the paucity of information concerning this sunbird in existing literature it seems desirable that the present details be put on record.

The following data are compiled from field observations and specimens collected on Mts. Muhavura, Mgahinga and Sabinio in the Birunga range, south-western Kigezi, Uganda, during September 1946, when the writer was a member of the Coryndon Museum Gorilla Expedition to that region.

Plumages. Juvenile examples of *Cinnyris afer graueri* were not encountered but two immature males (age confirmed by state of skull ossification) collected on Mount Muhavura on 22nd September are retaining some worn juvenile plumage on the upper-parts and breast, indicating a moult from juvenile to first adult breeding plumage. The first adult male plumage closely resembles that of the fully adult male, but the red chest band is less extensive and the red duller in tone; also, the metallic green margins to the feathers of the upper parts are narrower. Neither of the two immature males exhibits any trace of red in the under tail coverts, this character being confined to a few old breeding males.

There would appear to be no eclipse plumage in males of this race (cf. Ibis 1945:156); several of the adult males in the series collected are retaining a varying number of worn metallic feathers on the upperparts and throat, indicating a moult from breeding plumage to breeding plumage.

Colours of soft parts: Iris dark brown: bill black: feet black.

Measurements. Adult Males: Wing 64-66 mm.; Bill 17-19.5 mm.; Tail 55-59 mm. (15 eastern Birunga specimens examined). Adult Females: Wing 58-61 mm.; Bill 16-18 mm.; Tail 45 m.m. (5 eastern Birunga specimens examined).

Distribution. *Cinnyris afer graueri* is the commonest sunbird on Mount Muhavura. One first encounters it in the forest just below the bamboo zone, where its range overlaps that of *Cinnyris regius kivuensis*. However, it is far from common at this altitude (circa. 7,500 ft.), but becomes more frequent after the bamboo zone is entered. Its centre of abundance is in the hypericum scrub immediately above the bamboos (alti. c. 9,000 ft.). Here it exists in unbelievable numbers, and several times I counted over thirty sunbirds, mainly adult males, feeding in a single flowering *Hypericum* tree. On the volcanoes Mgahinga and Sabinio it is also a common species, but not in such abundance as on Mount Muhavura.

General Habits. This species would appear to be rather less pugnacious than many other sunbirds, numbers often feeding together in the same flowering tree without excessive skirmishes between rival males. *Nectarinia johnstoni dartmouthi* was also observed feeding in the same tree as *Cinnyris afer graueri* without disturbance. In the field the male's red breast is most conspicuous, but the yellow pectoral tufts are often overlooked.

Food. *Hypericum* flowers were by far the most attractive to *graueri*, although it also visited various flowering creepers, but it was seen only rarely at flowers near the ground. It was also observed feeding amongst leafy branches of trees bearing no flowers, when its appearance was very tit-like. An examination of twenty stomachs gives the following result. In order of abundance,—spiders; minute insect remains, mainly coleoptera; small lepidopterous larvae (4 records); Diptera? Nectar was probably present, but is difficult to detect. In one freshly-shot specimen nectar dripped from the bill.

Voice. The usual call-note of *Cinnyris afra graueri* is a harsh, sharp (tsp) or 'chee', generally repeated twice. The male's song is a pleasing warble, rising in pitch towards the end and then dropping. A rendering of the song, recorded whilst listening to a bird singing, is as follows:—'chee-oo, che che,—chee-oo, che che,—se, se, se, se, se, se, se, se,—che chit,—che chit—che chit.'

Display. Although abundant and breeding, I saw males displaying on two occasions only. Once a male was seen to alight near a female, warble a few notes and drop its wings like a young bird begging for food. The female paid no attention, whereupon the male left, flew straight up into the air as if flycatching, and then returned to its original perch. The female then flew away, to be followed instantly by the male in hot pursuit. The second observation closely resembled the first, but the male when dropping his wings at the same time raised and fanned his pectoral tufts.

Breeding. On the Birunga Volcanoes breeding evidently takes place during the rains, commencing about the middle of September and continuing until at least November. This is estimated on the evidence of gonad development of adult males collected during September. There is also a secondary breeding season from late March until May; this is apparent from the presence of immature birds, 5-6 months old, during September, and Gyldenstolpe (1) records of nests under construction at the end of March.

Nest building appears to be carried out entirely by the female; no male was observed collecting or carrying nesting material, although the female was generally accompanied by the male to the immediate vicinity of the nest when building was in progress. Incubation is performed by the female alone; no indication of an incubation-patch was noted on any male collected.

Five nests were found in late September 1946. Two, on 23rd September contained c/1 fresh, c/1 incubation advanced. Both these nests were suspended from twigs at the end of thickly-foliaged branches, some six to eight feet from the ground, and well concealed amongst drooping leaves. Two uncompleted nests were located the following day by watching the females carrying nesting material; these were hanging from the ends of bamboo sprigs, between eight and ten feet from the ground, and again were well concealed by leaves. The fifth nest, which it was not found possible to examine, was hanging from the end of a leafy branch over a gorge. This nest was much less well hidden than the other four.

The nest of *Cinnyris afra graueri* resembles a larger edition of that of *Cinnyris reichenowi*. It is more or less rounded, the main structure measuring $3\frac{1}{2}$ " across by from 4"—5" high. It has a side-top entrance ($1\frac{1}{2}$ " x 1") with a small projecting porch, the *Thalictrum* stemlets and moss of which extend upwards and outwards, forming a tattered spire. Below the entrance loose nest material hangs raggedly from the nest, one to six inches below the main structure. The rest is composed of the hair-like flowering stalks of *Thalictrum*, *Usnea* lichen, fine shredded grass, strips of

bamboo leaves, moss and vegetable down, bound together with cobwebs. Nest lining is of well-packed vegetable down and a few doves' feathers. The nest is attached by twists of lichen and cobwebs for some two inches along the support twig.

One egg would appear to be the normal clutch, as in one of those collected incubation was advanced, and in the case of the fresh egg the female returned to the nest shortly after being disturbed. The egg of *Cinnyris afra graueri* is of a dull matt texture without gloss; ground colour white, almost obscured by ashy-grey freckling and clouding; a dark ring present at large end; markings generally merged and indistinct. One egg is also faintly and sparingly marked with pale brown streaks. Measurements:—20.5 x 12 mm.; 19.3 x 12.9 mm.

REFERENCE

- (1) Gyldenstople, Nils (1924). 'Zoological Results of the Swedish Expedition to Central Africa 1921, Birds.' Kungl. Sv. Vet. Akad. Handl. (3): 91.



The typical habitat of *Cinnyris afer Graueri Neumann*; high level *Hypericum* scrub on Mt. Muhavura, Birunga Volcanoes, Kivu.
Photo: J. G. Williams.



Nest of *Cinnyris afer graueri* Neumann.
Photo: P. R. O. Bally.



Egg of *Cinnyris afer graueri* Neumann.
Photo: P. R. O. Bally.