

Two birds collected by the Knudsen-Machris Expedition at Bura on the lower Tana River, southeast Kenya, on 15 and 23 March 1963, also belong to this new race. They are now in the Los Angeles County Museum, and we are indebted to Dr. Herbert Friedmann for lending them to us for comparison and allowing them to be included in this paper. They are very similar to the type, except that the upperparts are a shade darker grey, and the dark streaks on the underparts are somewhat broader. Their measurements are: wing 114, 117; tail 50, 58.

Chapin (1930, p. 8) gives the extreme dimensions for *Otus senegalensis* (Swainson) (we follow White (1965) in believing African birds to be races of *Otus scops* rather than a separate species, *senegalensis*), as: wing 117–143; tail 49.5–70. *Nivosus* is thus an extremely small bird, especially in the wing measurements, one of the Bura birds being outside the range given by Chapin, with a wing of only 114.

The three specimens of *nivosus* fall within the range given by Chapin (1930, map p. 10) for *Otus scops graueri* Chapin. White (1965) considered none of the populations of mainland Africa to be sufficiently distinct to warrant separation, and lumped them all under *senegalensis*. Whatever the validity of this judgment, the three *nivosus* are so much paler than anything in the A.M.N.H. collection, with no intergrades seen, that we think they warrant separation. *Distribution*. Lower Tana River and Lali Hills, southeast Kenya.

#### BUBO AFRICANUS (Temminck)

A series of pale specimens from the same general area as the new race of *Otus scops* has been collected recently, and they are likewise worth describing. We name them:

#### ***Bubo africanus tanae* subsp. nov.**

*Type*. Carnegie Museum No. 140191; adult male; Garissa, Tana River, Kenya; 30 June 1960; Arthur C. Twomey, collector. *Measurements of type*. Wing 315; tail 167.

*Description*. Differs from both other races of the species, *B. a. africanus* and *B. a. cinerascens*, by its markedly paler colouration. This extends to almost all parts of the plumage, but is particularly noticeable on the underparts. The legs, feet, and under tail coverts are white, not brown or grey, with a reduced amount of barring; the face is pale greyish white, not brown, with poorly marked brown rings; the top of the head is heavily spotted with white.

Four other pale birds referable to *tanae* have recently been collected. A second adult male collected on the same day as the type at Garissa is smaller (wing 290) and a shade darker on the legs, but otherwise identical. A pale bird was collected at Bura, on the Tana, 50 miles south of Garissa, by the Knudsen-Machris Expedition on 22 March 1963, and another still farther south on the Tana, about 20 miles north of Garsen, by Burt Monroe, Jr. on 3 August 1961 (now in the collection of Louisiana State University). Their wings measure 308 and 312 respectively. Monroe's bird is pale but with a light cinnamon wash, which we attribute to erythrism. Similar examples of erythrism can be found in this species. Another example of *tanae* was collected by Twomey in the Lali Hills (39° 15' E, 3° 0' S) north of the Galana River, about 75 miles southwest of Garsen. It is slightly darker than the other examples of *tanae*.

The principal differences between nominate *africanus* and *cinerascens* are size and eye colour. Chapin (1939, p. 382) gives the range of wing size for *africanus* as 310–360, and for *cinerascens* as 295–328. Less readily discernible is the finer barring of the underparts in *cinerascens*, and it also seems to us there is some slight difference in bill colour, the tip of the upper mandible tending to be lead grey in *cinerascens* and dark horn in *africanus*.

With regard to size, *tanae* is certainly closest to *cinerascens*. Wings of the five birds described above have a range of 290–315, with an average of 306. *Tanae*, therefore, averages slightly smaller than *cinerascens* and considerably smaller than *africanus*.

With regard to eye colour, *tanae* is closest to *africanus*, as four out of the five birds have the yellow eye of *africanus*. The Bura bird, according to the label, had brown eyes.

As for plumage colour, *africanus* is on the whole paler than *cinerascens*, but not nearly as pale as *tanae*. The range of *tanae* lies between those of the other two, while the bird is paler than either, so there is no cline in plumage colour here.

*Tanae* has the finer barring of the underparts found in *cinerascens*, and likewise the beak colour of *cinerascens*.

Birds on the Northern Uaso Nyiro River at Chandler's Falls are said by Jackson (1938, p. 644) to be *cinerascens*. This is 150 miles N.W. of Garissa. Two birds collected by the Knudsen-Machris Expedition on 2 March 1963 at a point 50 miles west of Garissa on higher ground (2,000 feet, whereas Garissa is 600 feet) are of interest. One is dark enough to be *cinerascens*, the other is paler, intermediate in colour between *tanae* and *cinerascens*. Both have dark eyes. This locality is only 50 miles from the type locality of *tanae*, and between it and the known locality for *cinerascens* at Chandler's Falls, and intergrades between *tanae* and *cinerascens* might be expected to occur here.

#### GLAUCIDIUM TEPHRONOTUM Sharpe

An example of this species was collected in the Impenetrable Forest at 5,000 feet, 6 August 1960. It was an adult male.

It was compared by M. Anton De Roo with the type of *G. t. kivuense* Verheyen at Tervuren, and in his view was identical with it except for a few very minor differences. The main difference was the larger size of Twomey's bird (wing 120 vs. 113 in the type). But the five other specimens of *kivuense* at Tervuren have wings 116–121, thus helping to bridge the gap.

De Roo further mentioned (pers. comm.) that on examination of the series of *medje* and *kivuense* at Tervuren, he found intermediates both in size and plumage, and concluded that *kivuense* was probably not separable from *medje*, a conclusion also reached by White (1965).

The Uganda bird was compared with the types of *G. t. medje* and *G. t. lukolelae* Chapin. The latter race is also lumped by White (loc. cit.) with *medje*. In size, the Uganda bird was intermediate, the wing being 120 vs. 115 in the type of *medje* and 127 in the type of *lukolelae*. In the colour of the upperparts it is much closer to *lukolelae*, though a little browner. The white tail spots are rounder and smaller than in *medje*, which in turn has smaller tail spots than *lukolelae*. The dark spots below are somewhat broader than in *lukolelae*, thus much broader than in *medje*.

Apart from the unique type of *G. t. elgonense*, this is the first record of the species for East Africa. However, in 1966, two more specimens were secured in the Kibale (Mpanga) Forest in Uganda by R. Glen and A. Williams for the Los Angeles County Museum. Dr. Friedmann has kindly allowed us to mention them in this paper.

These birds are very similar to Twomey's bird and are thus referable to *kivuense*, should this prove to be a valid race.

There is much individual variation in this species, which, together with the fact that there are very few specimens in collections, has resulted in some confusion in the naming of races. In the two Los Angeles birds, both from the same forest, one has much more rufous on the underparts than the other, and one shows greater contrast between the greyer head and the browner back than the other. More complete series are needed in order to separate racial characters from individual variation.

#### INDICATOR PUMILIO Chapin

An adult male collected at 5,000 feet in the Impenetrable Forest, 6 August 1960. Wing 71, tail 48, culmen to base 9.