

follows (Chapin, *op. cit.*, p. 574): wing, 341, 333; tail, 225, 234; culmen from cere, 26. Twomey's bird thus matches these two birds (both from Gabon), except for its somewhat longer tail. The black flank patches are somewhat less extensive than in the adult female in the A.M.N.H. collection, and Chapin (*op. cit.*, p. 574) made the same observation concerning the two Philadelphia birds.

The stomach contents comprised one small rodent.

FRANCOLINUS HILDEBRANDTI ALTUMI Fischer and Reichenow

An adult female, Uaso Nyiro River near Nanyuki, Kenya, 3 September 1964. Wing, 183.

When compared with a topotype from Naivasha in the A.M.N.H. collection, this bird showed the following differences:

- (1) Very heavy, dark brown spotting from throat down onto lower breast.
- (2) More prominent black and white markings on neck.
- (3) Greyer tinge to plumage of upperparts.

The bird was sent to Mrs. B. P. Hall in the British Museum, who kindly compared it with specimens in their collection. She reports (*pers. comm.*) that the bird has considerably more black patterning on the breast than the four females in the British Museum collection, and somewhat more extensive black and white markings round the neck. The colour of the back is not significantly different in Twomey's bird.

She mentions, however, that there is a cline in breast spotting in the four British Museum birds, the birds becoming more heavily spotted toward the north. She had earlier noted a similar pattern in the species as a whole (Hall 1963, p. 142). Twomey's bird fits in with this pattern; it is from the northernmost known locality of this race, and it is also the most heavily spotted.

Further collecting of very heavily spotted birds in the Nanyuki area might indicate that this is a race worthy of formal description; for the present, however, we prefer simply to place this specimen on record in the literature, especially as this species is subject to considerable individual variation.

TAURACO JOHNSTONI KIVUENSIS (Neumann)

Two adult males collected in the Impenetrable Forest, southwest Uganda, have the sides of the face feathered instead of bare and are therefore assignable to *kivuensis*. This is the race found in the Kivu highlands and on the volcanoes, and it has not previously been collected in East Africa. Williams (1959) reports seeing the bird in the Impenetrable Forest in 1958, but does not record that it was this race. There are also some recent sight records, e.g. by Mrs. Keith in June 1962, undoubtedly of this race, from the Uganda side of Mt. Muhavura on the Ruanda border. Apart from this, the only previously known locality for the species in East Africa is the Ruwenzori Mountains, where the nominate race occurs.

OTUS SCOPS (Linnaeus)

An extremely pale owl of this species was collected in southeast Kenya, which we consider warrants description. We therefore name it:

Otus scops nivosus subsp. nov.

Type. Carnegie Museum No. 140476. Adult female. Lali Hills, southeast Kenya, 19 August 1964. Arthur C. Twomey, collector. *Measurements of type.* Wing 119, tail 54. *Description.* Paler than any other race of *Otus scops*. Upperparts pale grey flecked with pale brown. Below, very pale grey, with a few pale brown flecks on chest; much white on lower belly and legs; under tail coverts white.

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 erythrisms. Similar examples of erythrisms 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*.