

The material at hand contains seven specimens of *ferruginea minor* and one of *f. ferruginea*. The latter's beak falls within the range of the beak of the former, so the two forms are treated as one series. Of *leptorhynchus* there are eight specimens. There is no clear distinction of size between the sexes. The beak length is taken on a straight line from the mid-front edge of the cere to the tip of the culmen and the length of the unguis on a sagittal line from the angle between the maxillary shelf and the ventral face of the unguis to the tip of the culmen.

Averages with their standard deviations are given in the table. All the inter-specific differences are statistically significant but the difference in the ratios is the least significant.

	Bill length mm.	Unguis mm.	Unguis/bill length per cent
<i>ferruginea</i> .....	20 ± 1.7	7 ± 0.7	34 ± 1.9
<i>leptorhynchus</i> .....	33 ± 1.2	17 ± 1.4	50 ± 3.2

About half the significance of the difference in lengths can be assigned to the absolutely greater size of the bill in *leptorhynchus*, and if the total length of the bill were the same in the two species, it would be questionable whether the difference in unguis length would be statistically significant.

If the unguis are examined more closely, it is seen that the file on the ventral surface is similar, differing only in a detail indicating that *leptorhynchus* has had the unguis narrowed and elongated without real enlargement. In each species the file rugae form a series of chevrons with their apices posterior. Numerically, we may state the number of complete rugae which are anterior to the maxillary shelf and, following a + sign, the number of incomplete rugae on one side which are interrupted by the shelf. We may also state the approximate angle which the two arms of a chevron make with one another. We have for *ferruginea* about 9 + 2 and approximately 100° and for *leptorhynchus* about 9 + 4 and approximately 40°. This is just the sort of difference one would expect if one narrowed the maxilla of *ferruginea* without addition of substance. The really elongated unguis of *Ara ararauna* shows a file count of 13 + 1 and an angle of about 90°. It is to be noted that a variation in count of ten per cent or more, even between the two sides of the same beak is frequent in parrots and that the angle varies a few degrees in passing along the file.

The feathering and the coloration are remarkably similar in the two species although specific differences are evident. The rimal feathers (eyelashes) are setose (no barbs) in *ferruginea* but have one or two pairs of basal barbs in *leptorhynchus*, a difference that is no more than specific in other parrots. In the former species only the loreal and cere feathers are red, but in the latter this color extends onto the forehead a short way and is continued as a narrow line around the eye. The tips of the crown feathers are more extensively black in *leptorhynchus* than in *ferruginea*. In other respects the two are identical even to two uncommon characters: (1) plush-like anterior loreal feathers with elongated barbules and (2) tail quills with red barbs and black barbules.

The two species then stand as:

*Enicognathus leptorhynchus* (King).

*Enicognathus ferrugineus* (P. L. S. Müller).—JAMES L. PETERS, *Museum of Comparative Zoölogy*, and CHARLES H. BLAKE, *Massachusetts Institute of Technology, Cambridge, Massachusetts*

*Neocichla gutturalis* (Bocage) is a starling.—Though long regarded as a member of the family Timaliidae, *Neocichla gutturalis* should certainly not be kept in that group. If we must retain a family or subfamily for the babbling thrushes, it can only

be defined as a rather primitive section of the great warbler-thrush assemblage of ten-primaried song birds, including genera with very rounded wings, relatively long outermost primary, and tarsi often scutellate. The wing of *Neocichla* does not conform to such a description and many of its other characters are not thrush-like.

When Bocage described his *Crateropus gutturalis* (Jorn. Sci. Lisboa, 3: 272, 1871—Huilla, Mossamedes), he noticed that its wing differed markedly from that of other members of the genus, the outermost primary being short and narrow, scarcely one-third as long as the next quill, and the third and fourth primaries equal and longest. It was because of the shape of the wing and the length of the upper tail-coverts that R. Bowdler Sharpe, some five years later, proposed for it the monotypic genus *Neocichla* (Layard's Birds of South Africa: 215, 1876) without transferring it to any other family. Professor Reichenow (Vögel Afrikas, 3: 677, 1905) subsequently decided that *Neocichla* was intermediate in character between *Crateropus*, now known as *Turdoides*, and *Turdus* or *Geokichla* because of its pointed wing. The other characters, unfortunately, were not carefully weighed.

Many years ago I was struck with the close similarity of *Neocichla* to certain glossy starlings of Africa. If one could disregard color, it seemed to agree in many respects with *Lamprocolius chloropterus* and *chalybaeus*. To be sure, the only glossy black on *Neocichla* is to be seen on the wings, especially on the greater secondary-coverts; but several other African starlings have little black pigment, particularly *Spreo fischeri* and *Spreo albicapillus*. The latter species has considerable white on the exterior webs of the outer secondaries; and in *Neocichla* this white extends also to the inner webs, on the basal half of the quills. The whole wing of *Neocichla* is proportionately shorter than that of *Lamprocolius*, but the outermost primary is of about the same size. The white tail-spots and light-colored feet, though unusual in African starlings, are paralleled in many Asiatic members of the family.

Other points of which the significance has been overlooked are these: the feet are closely similar in form to those of *Lamprocolius*, not like those of true thrushes; the bill, nostril, and frontal feathering are readily matched in the genus *Lamprocolius*; and the rictal bristles are so reduced as to be almost invisible. The loreal feathering is unusually smooth, and merges at its upward edge with the frontal feathering almost exactly as in the glossy starlings, whereas in *Turdoides* the junction with the rather stiff frontal feathers is abrupt.

In juvenal dress *Neocichla gutturalis* is conspicuously streaked and spotted with black on throat and breast. But it is not thrush-like in being spotted on the wing-coverts; and the squamate pattern on hind-neck and back, due to light edgings, is not entirely lost in the adult plumage. Black spotting on the chest is conspicuous in the juvenal plumage of *Pholia sharpii*, another African starling; and both females and young of *Cinnyricinclus leucogaster* are heavily streaked below.

Perhaps it was I who prompted the remark by Dr. Herbert Friedmann (Journ. Washington Acad. Sciences, 20: 434, 1930) that *Neocichla* might prove to be a starling rather than a babbler. But my colleague, Dean Amadon, in his paper on 'The Genera of Starlings and their Relationships' (Amer. Mus. Novitates, No. 1247: 1-16, 1943) excluded *Neocichla* from the Sturnidae. I was absent from New York at the time, and regret that I could not discuss the matter with him. For years I had been placing *Neocichla* among the starlings in the typewritten list of Congo birds which I supplied to a number of ornithologists abroad. In 1944, Mackworth-Præd and Grant (Ibis, 86: 444) agreed with Dr. Friedmann's suggestion that *Neocichla* must be allied to the starlings, and I believe that their brief remarks should be expanded.

One would surely expect significant differences in behavior between a starling and

the babbling thrushes; I regret never having seen *Neocichla* alive. Its range is restricted to a rather narrow belt running from southern Angola to the Luangwa Valley in Northern Rhodesia and to the central regions of Tanganyika Territory. The observations of Dr. R. Böhm, Dr. S. A. Neave, Dr. A. Monard, and Dr. J. M. Winterbottom all show close agreement with regard to its behavior. *Neocichla gutturalis* is very sociable, living in pairs, small parties, and flocks numbering up to thirty or more. It is wary and active, keeping mostly rather high up in the trees of light savanna woodlands, "miombo" or "mopane bush," to which it is largely confined. Its calls are shrill, even confused or parrot-like, and to Böhm and Winterbottom they suggested the voice of *Turdoides*. But it must be remarked that the haunts of *Turdoides* are much more apt to be thickets, and they are eager to keep out of the sight of man.

In October and November, 1929, my friend Frederic G. Carnochan collected two specimens of *Neocichla* in the region of Tabora, Tanganyika Territory. The following year I asked for his opinion of their relationship. Without hesitation, Mr. Carnochan expressed his conviction that they were starlings. He had found them in flocks numbering up to forty or fifty birds in "miombo" or *Berlinia* woods, and noticed that they sometimes fed on the ground in open spots. Natives spoke of them as "ngoye," a name used for glossy starlings as well; and they caught both *Neocichla* and *Lamprocolius* with lime-sticks placed about a small hut or blind. There a boy would hide, holding a live decoy and making it call.

Comparing all the evidence, I find that there is nothing in the known ways of life of *Neocichla gutturalis* that may not be regarded as starling-like. When its nest is found I expect it to be placed in a hollow in a tree. In Tanganyika Territory the breeding season must come during the first half of the rains. Carnochan secured a male with enlarged gonads in early October, Böhm reported one in early December. Flocks of young were seen by Böhm in March, and Loveridge obtained a young bird in full juvenal plumage near Kilimatinde early in that same month. In Mossamedes Province, Angola, Dr. W. J. Ansorge took young birds in the latter part of January, and at that season the adults were molting their primaries. So breeding seemed to have taken place about six weeks earlier than it would in East Africa.

Comparison of four adults from Tanganyika Territory with eight from Angola confirms the validity of *Neocichla gutturalis angusta* Friedmann (Journ. Washington Acad. Sci., 20: 434, 1930—Muhulala, Kilimatinde, Tanganyika Territory). Angolan birds, adult and young, all have large whitish areas at the tips of the outer rectrices. In the East African specimens these are much narrower or reduced to mere fringes. I find no significant difference in size; wings and tail of Angolan examples may average a couple of millimeters longer.

I am firmly convinced that *Neocichla* should be assigned to the family Sturnidae, and that it is rather closely allied to *Lamprocolius*, despite the difference in coloration.—JAMES P. CHAPIN, *American Museum of Natural History, New York*.

**A new genus of Sylviidae from the vicinity of Lake Tanganyika.**—One of the rare warblers of the eastern Congo, known only from the highland northwest of Lake Tanganyika, was described as *Sylvietta neumanni* by Lord Rothschild (Bull. Brit. Orn. Club, 23: 42, 1908) and figured in color by Doctor Hartert (Novit. Zool., 26, pl. 5, 1919). All but one of the specimens known—and the total scarcely exceeds a dozen—were collected by Rudolf Grauer before 1911 on the highland to the northwest of Baraka at elevations of 1900 to 2000 meters. A single example was secured by J. Sterling Rockefeller and Charles B. G. Murphy in 1929 at Kisale on the Elila River, at a similar elevation.