

Escaped pigs and the introduced rats are also causing heavy damage to the Kagu at the present time. They not only kill the birds but also destroy its food supply of land snails and large earthworms. Although the evidence supporting this statement is not conclusive, I often found snail shells in rat runways and burrow entrances and scattered about in other odd places. Many of these had been gnawed in typical rat fashion. Remnants of completely crushed shells found in the forest suggested the work of pigs because the Kagu itself has a unique method of breaking the snail shell. With a single blow of its powerful beak the shell is cracked about the middle, the body of the snail grasped and the remaining shell quickly removed by vigorous shaking. I observed this in captive Kagus, one of which I had for several months.

In some areas, many acres have been rooted up by the pigs. This continual rooting seems to have destroyed the requisite habitat of the snails and earthworms for I was able to find but few in such areas. The pig and rat may also take young birds and eggs.

Rattus norvegicus was not common in most of the habitat of the Kagu but was taken occasionally far from human habitation. Where lumbering and mining camps were in use, it was present, however, often in considerable numbers. I was unable to determine whether this species remained numerous in these areas long after these camps had been abandoned.

The three subspecies of the black rat, *Rattus rattus rattus*, *R. r. alexandrinus* and *R. r. frugivorus*, however, were found to be common to abundant around the abandoned camps, along forest streams, steep banks and in rotting logs and hollow trees. Their holes, runways, food detritus and feces were abundant in local areas in the mountain forests.

The Sambar deer (introduced) may have an increasingly detrimental effect on the Kagu by the destruction of cover, but during 1945 it was not common enough in the mountain forests of southern New Caledonia to be of importance. Cattle grazing has had no appreciable effect to date.

Thus these factors: (1) decimation by man through trapping and hunting (now prohibited); (2) predation by rats, cats, dogs and pigs; and (3) destruction of natural habitat of both the Kagu and its food supply by pigs, and by mining, lumbering and burning, are all hastening the extermination of this endemic species.—DWAINE WILLARD WARNER, *Laboratory of Ornithology, Cornell University, Ithaca, New York.*

***Microsittace* not different generically from *Enicognathus*.**—Recently we had occasion to examine the specimens in the Museum of Comparative Zoölogy of the two monotypic parrot genera, *Microsittace* Bonaparte, 1854 (southern Chile and Argentina) and *Enicognathus* Gray, 1840 (Chile). Although as species *M. ferruginea* and *E. leptorhynchos* are instantly distinguishable, there seem to be no sufficient characters to separate the genera. Ridgway (U. S. N. M., Bull. 50: 110, 1916), following Salvadori, would separate them on these characters:

Unguis of maxilla produced, at least as long as rest of maxilla, culmen as long as outer front toe with claw—*Enicognathus*.

Unguis short and strongly decurved, much shorter than rest of maxilla, culmen shorter than outer front toe without claw—*Microsittace*.

The measurements of the culmen relative to a toe prove nothing since the toes may be subject to undetected lengthening or shortening in evolution and there is no reason to suppose this is correlated in any particular way with the evolution of the beak. This is only a convenient way of obtaining relative measurements.

The distinction in the maxillary unguis is striking but not more so than the difference between *Licmetis* and one or two of the other subgenera of *Kakatoë*.

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