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THE SYSTEMATIC POSITION OF THE
BIRD GENUS APALOPTERON

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The Ornithological Society of Japan's (1942) list of Japanese birds indicates that, by 1942, 100 species of birds had been reported from the Bonin Islands, an oceanic group of volcanic origin lying about 500–600 nautical miles southeast of Yokohama. Of these, only 19 species (four of them by then extinct on the islands) were known to have bred. Of the 19, eight pelagic forms (two albatrosses, four shearwaters, one gannet, and a tern) may be disregarded at this time. Of the land birds, seven are mere races of species common in the Japanese Archipelago (one hawk, one pigeon, one bulbul, one crow, one thrush, one warbler, and one greenfinch), while two (a pigeon and a hawfinch), extinct and not examined by me, may be presumed to have had similar origin. An anomalous element in the avifauna is found in the former presence of a night heron characteristic of the coasts and islands of the southwestern Pacific and otherwise not occurring north of the Palaus and the Philippines. Finally, there is the genus *Apalopteron* Bonaparte, the subject of these remarks.

First named *Izos familiaris* by its discoverer, F. H. von Kittlitz,¹ and considered a bulbul, it was removed to the "Timaliidae" by

¹ Mem. Acad. Imp. Sci. St. Petersbourg, vol. 1, pt. 3, p. 235, pl. 13, 1830.

Bonaparte² in 1854 as a monotypic genus, *Apalopteron*. Sharpe (1882, p. 120, footnote) restored it to the bulbuls as a member of the type genus *Pycnonotus*, and the most recent Japanese writers, using the name *Apalopteron*, have retained it in that family. Delacour (1946, pp. 21, 29), on the other hand, has considered it to be a timaliine closely related to the genera *Actinodura* and *Minla*. It is my contention, however, that *Apalopteron* is in fact a fairly typical genus of the Australasian Meliphagidae or honey-eaters.

The true meliphagid tongue, fringed and quadrifid at its distal end, has been most recently discussed and portrayed by Scharnke (1931, pp. 454-466) in the genera *Myzomela*, *Myza*, *Melidectes*, *Orodytes*, *Philemon*, *Xanthotis*, *Ptiloprora*, and *Toxorhamphus*; by the same author (Scharnke, 1932, pp. 117-119) in *Promerops*; and by Dorst (1952, pp. 185-214) in *Meliphaga*, *Gliciphila*, *Melithreptus*, *Zanthomiza*, *Meliornis*, and *Melipotus*. Comparison of the flattened tongue of *Apalopteron* (pl. 1) with the drawings of the tongues of *Myzomela* and *Philemon* (Scharnke, 1931, pp. 456, 457) and the schematized drawing of the tongue of *Meliphaga* (Dorst, 1952, p. 187) will show that all are modeled upon a common pattern.

The Meliphagidae are unusual, if not unique, among oscinine birds by their pervious nostrils. I have noted this character in freshly collected specimens representing the Australian genera *Melithreptus*, *Entomyzon*, *Ramsayornis*, *Conopophila*, *Myzomela*, *Meliphaga*, *Lichmera*, *Myzantha*, and *Philemon*. Specimens of *Apalopteron* in the U. S. National Museum that quite certainly have never had the nostrils pierced by a needle are similarly devoid of the narial septum.

Such unspecialized genera of the Meliphagidae as *Myzomela*, *Lichmera*, *Ramsayornis*, *Conopophila*, *Meliphaga*, et al. have the tarsus in the adult so obscurely scutellate as to appear booted (bilaminar behind), although scutellation is usually apparent in the young. The tarsus of adult *Apalopteron* shows the same quasi-booted aspect, and it is interesting to note that, according to a recent communication from Dr. Yamashina, scutellation cannot be seen even in the newly hatched chick.

In its gross external features, *Apalopteron* certainly more nearly resembles the unspecialized honey-eaters than it does any member of either the Pycnonotidae or the Timaliinae. Its but slightly decurved bill, with strongly operculate nostrils, is not strikingly different from that of *Lichmera*, while its general coloration and pattern about the head are reminiscent of those found especially in certain species of *Meliphaga* (e. g., *M. chrysops* and *M. melanops*). The short, somewhat recurved, bristle-like feathers that appear on the front and

² Comptes Rendus, Acad. Sci. Paris, vol. 38, pp. 54, 59, 1854.



PLATE 1.—Dorsal view of tongue of subadult *Apalopteron familiare*. Magnification, $\times 15$.

throat of *Apalopteron* seem to be identical with those seen in the two above-named species and many others.

Yamashina (1930, pp. 332-334) has reported upon six nests of *Apalopteron*, each of which contained either two brown-spotted, greenish blue eggs or two naked nestlings. Five of the nests were constructed principally of fibers of *Pandanus* and *Livistona*, one (in a *Livistona* flower) wholly of *Livistona* fibers. The cup-shaped nest, the materials used, the number of eggs, and the nakedness of the chicks all would, if the bird were native to Australia, be used to confirm the view that it is a typical honey-eater. (It should be mentioned, however, that the eggs of the Australian species of the unspecialized genera seem always to have a pinkish or buffy rather than a greenish blue ground color.)

The food habits of *Apalopteron*, and its probable role as a pollinator of one or more species of ornithophilous plants, are of prime importance. Dr. Yamashina has written to me that his visits to the Bonins, in winter and spring, did not coincide with the true season of flowers, and that he found the birds then feeding on insects and fruits: ". . . when we broke a large fruit of *Pandanus*, *Apalopteron* gathered to eat its seeds." He adds that *Apalopteron* (in captivity) likes sweet food and delights in sugar-water or honey added to its diet. Parenthetically, it may be noted that insects and fruit seem to be the primary foods of many of the Meliphagidae, with pollen and nectar only secondary ones.

At discovery the Bonins were described as wholly overgrown with a dripping forest of tall trees. The endemic flora was of mixed provenience, some of the genera having originated in temperate eastern Asia, while others, perhaps a majority, were unquestionably of Oceanic origin and here reached their northernmost outpost from the Papuan matrix. Hosokawa (1934, pp. 201-209, 657-670) has discussed the phytogeography of the Bonins and has pointed out that, among the botanical curiosities of the islands, are a palm, *Cyphokentia* (a genus otherwise restricted to New Caledonia and the Samoan Islands), and an arborescent lobelioid (whose nearest relatives are restricted to the Hawaiian Islands). Endemic plants of Oceanic origin that may have had a special relationship with *Apalopteron* are *Myoporum boninense* (northernmost representative of a Papuan family highly attractive to the Meliphagidae) and the *Lobelia* (whose allies are favored feeding flowers for the Hawaiian Drepaniidae). While settlement of the islands has brought about immense alteration of the flora, it may be supposed that *Apalopteron* has benefitted by the introduction of such fruits as the banana, orange, mango, papaya, guava, longan, persimmon, and passionfruit, to say nothing of the ornamental, often nectariferous, plants common to subtropical gardens.

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