

THE WILSON BULLETIN

A QUARTERLY MAGAZINE OF ORNITHOLOGY

Published by The Wilson Ornithological Society

VOL. 86, No. 3

SEPTEMBER, 1974

PAGES 197-320

THE MADAGASCAR CRESTED IBIS, A THREATENED SPECIES IN AN ENDEMIC AND ENDANGERED AVIFAUNA

G. STUART KEITH, A. D. FORBES-WATSON, AND D. A. TURNER

The Madagascar Crested Ibis (*Lophotibis cristata*) occurs both in the humid forest of the east and the dry forest of the west in the Malagasy Republic (formerly Madagascar). Rand (Bull. Amer. Mus. Nat. Hist., 72: 143-499, 1936) found the bird common 40 years ago, but in our experience in 1972 it was distinctly uncommon. Thus it may already be declining in numbers, and certainly it is threatened by the destruction of its forest habitat. This is a handsome ibis with a large crest, and wings that are conspicuously marked with white in flight. Typically, the crest is not elevated in undisturbed *Lophotibis*, as illustrated in the accompanying photograph of a feeding individual (frontispiece). When alarmed the ibis raises its crest quickly and then lowers it.

Lophotibis is an exceedingly shy bird which feeds quietly on the forest floor during the day. While observed by Frank Gill in the forest at Ankara-fantsika, an ibis appeared to pick up insects and millipedes from among the dry leaves on the ground. At dawn and dusk these ibises fly around uttering a loud, far-carrying, slightly raucous "work, work, work." The relationships of *Lophotibis* are uncertain, but we might speculate that it is closest to *Lampribus*, an African genus of shy forest-dwelling ibises which likewise have a bare face and a crest. Nevertheless, we do not regard *Lophotibis cristata* as really close to any living species, and we feel that it warrants a monotypic genus.

The Madagascar Crested Ibis has the dubious distinction of being the only Madagascar endemic currently protected by law in the Malagasy Republic. However, there are several rarer endemics there, as mentioned below. Furthermore, because of the great degree of endemism and other factors, concern is needed not just for the rarer species, but for the entire endemic Malagasy avifauna.



Madagascar Crested Ibis,
Lophotibis cristata,
Ankarafantsika Reserve.



Closeup of the same ibis,
showing lowered crest.
Photographs by Frank B. Gill.

Madagascar has long been famous for the high levels of endemism in its avifauna. It boasts five endemic families (Mesitornithidae, Leptosomatidae, Brachypteraciidae, Philepittidae, and Vangidae, including *Hypositta*), one endemic subfamily (Couinae), and 39 endemic genera. Of the 187 breeding species (excluding seabirds and introduced species), no less than 129 (69 percent) are endemic at the species level, plus an additional 25 at the subspecies level. With the exception of one recent introduction, all but three resident passerine species are endemic.

The preservation of this magnificent avifauna should be a matter of the utmost concern. Man has probably already been directly responsible for several extinctions, including the flightless elephant-birds (Aepyornithidae). These birds were still present on the island when the first settlers arrived, about 1,000 years ago, and were doubtless exterminated by man and his animals. The cuckoo, *Coua delalandei*, largest of its kind and hunted both for food and its feathers, has not been reliably recorded since before 1834. A number of other species are extremely rare, e.g. *Eutriorchis astur* (Accipitridae), *Tyto soumagnei* (Tytonidae), and *Neodrepanis hypoxantha* (Philepittidae), although there is no evidence that man is directly responsible for the scarcity of any of them. Although the toll is disheartening, the avifauna is still relatively intact, and the Madagascar species list compares favorably with that of many other parts of the world. The situation is deceptive, however, and could change very rapidly for the worse—particularly through habitat destruction.

The endemic avifauna of the Malagasy Republic is dominated by species that are largely or wholly confined to various types of forest, i.e. 95 (74 percent) of the 129 species. The forests there, like those of so many other parts of the world, are being cleared and burnt at an accelerating rate to make way for agriculture. How much of the island was originally forested is unknown, but certainly it was much more than at present. According to aerial photographs, about 25 years ago there remained about 125,000 km² of forest, or 21 percent of the land surface (Chauvet, 1972. The Forests of Madagascar, in "Biogeography and Ecology in Madagascar," R. Battistini and G. Richard-Vindard (Eds.), The Hague, W. Junk. Monographiae Biologicae Vol. 21). Since that time more of the forest has been completely destroyed, at an estimated rate of 10–20 km² per year (Chauvet, *loc. cit.*). Our personal impression is that this estimate is far too conservative. On a flight up the east coast, which took us over the former range of *Coua delalandei*, we noted that Ile Ste. Marie was completely denuded of forest, as were most of the lowlands between Tamatave and Maroantsetra. Only scattered patches of scrubby second growth remained as evidence that the area was formerly forested. Observations from this and other flights lead us to think that only

about ten percent of Madagascar is forested today. Further, only 6,952 km² have been gazetted as nature reserves or national parks (1.2 percent of the land surface, 5.6 percent of the forest), and many of these reserves are not in key areas as far as birds are concerned.

There is little doubt that the endemic forest birds face extinction as their habitat is destroyed, starting with the rarest and most localized species. We know of only one locality each, for example, where the vangas *Xenopirostris polleti* and *X. damii* can be found. Add to this the fact that many forest birds seem ridiculously tame and sluggish, and some travel in flocks, thus making them vulnerable to indiscriminate collecting. Happily, the Malagasy Government is taking steps to control collecting that might threaten species of very local distribution.

In sum, the Crested Ibis and the many other endemic Madagascar birds are threatened with reduction of their numbers if not extinction. Of particular concern is the destruction of habitat, especially forest, but indiscriminate collecting is also a problem to be controlled.

We wish to thank Frank B. Gill for use of his photographs of the Madagascar Crested Ibis, which represent rarely obtained close-up views of this special species.

AMERICAN MUSEUM OF NATURAL HISTORY, CENTRAL PARK WEST, NEW YORK
10024 AND NATIONAL MUSEUMS OF KENYA, NAIROBI, KENYA.

NEW LIFE MEMBER



Homer N. Metcalf is now a Life Member of The Wilson Ornithological Society. Mr. Metcalf holds degrees from the University of Connecticut (1939) and Cornell (1943), and he also attended Claremont Graduate School. He is a member of numerous biological and other societies and is a professor of horticulture at Montana State University. His principal interests in ornithology are centered on field observations. He lives in Bozeman, Montana, and is single.