

Hartlaub's "Birds of Madagascar"

THE excellent review, exhibiting traces of a master's hand, of the above-named useful work, which appeared in *NATURE* (vol. xvi. p. 498) prompts me to offer some remarks on the ornithology of Madagascar and its neighbouring islands, and to take exception on two points therein laid down.

The first of these is propounded by your reviewer and seems to me absolutely contrary to fact. He says:—"Compared with Madagascar itself the appendent island groups are poor in species, although in every case there are many interesting forms among their winged inhabitants. The Comoro Islands muster only some forty-four species of birds, Mauritius about sixty, of which fifteen or sixteen have been introduced by man's agency, and Bourbon about the same number, while Rodriguez appears to have only about twenty-five species now existing in it, of which four or five are certainly recent introductions."

Now twenty years ago my friend, Mr. Sclater, in that remarkable paper of his on the geographical distribution of birds (*Journ. Linn. Soc. Zoology*, ii. p. 130), which so happily laid the true foundation for our present researches into the subject, showed that the proper mode of comparing the wealth or poverty of one fauna with another was to state the proportion which the number of species composing it bears to the area over which they range. The same view was adopted very shortly after by Mr. Wallace, who took occasion (*Ibis*, 1859, p. 449) to question certain of Mr. Sclater's results, and its correctness seems to have been since generally admitted. Yet, applying this test to Madagascar and its neighbouring islands, we find a state of things to exist very different from that which your reviewer has alleged. The area of Madagascar is said¹ to be 10,751 German square miles, that of the Comoros collectively 38'57, of Mauritius 34'76, of Bourbon 42'05, and of Rodriguez 5. It will be sufficient for my purpose to compare the first and last of these. Your reviewer is willing to allow twenty indigenous species to Rodriguez; then—

Area of Rodriguez.	Area of Madagascar.	Species in Rodriguez.	Species in Madagascar.
5	10,751	20	x
$x = \frac{10,751 \times 20}{5} = 43,004.$			

But instead of an avifauna of 43,004 species, or about four times the number known to exist throughout the whole world, Dr. Hartlaub gives it 218, and your reviewer generously adds two more, making 220! Suppose (an extravagant supposition) that future explorations enable us to double the last number, it is Madagascar that will still be out of all proportion "poor in species" compared with "the appendent island groups," and not these with Madagascar.

The next point to which I must demur is that "the individuality of the fauna of Madagascar is so unique that even that of New Zealand can hardly be compared with it." I will leave to fitter hands than mine to show that this is not the case generally, and shall only remark here that it is not so with birds. Of the sub-class *Ratitæ* there have been until lately five strongly-marked groups, each of which is equivalent to an "order" among the *Carnivora*. Now two of these groups were peculiar to New Zealand, and one (*Apterygida*) is so now, while the other (containing the families *Dinornithidæ* and *Palapterygida*) is but recently extinct. Willingly granting that *Epyornis*, when we

¹ Behm und Wagner, "Areal und Bevölkerung der Erde" (Petermann's *Geogr. Mittheilungen*, Ergänzungsheft, November 20, 1876).

know more about it, may prove to form a sixth group, the balance of "individuality," if I understand the meaning of the word, will still be on the side of New Zealand. Turning to the Carinate birds, *Harpagornis* stands alone, while *Cnemioornis* will certainly count for as much as the *Didida*. The extraordinary Mascarene Rails (*Miserythrus* and *Aphanapteryx*) are well represented by *Ocydromus*, which so much resembles them, and *Strigops* is undoubtedly a more abnormal form than, so far as we can judge, either *Lophopsittacus* or *Necropsittacus*; just as *Nestor* is more aberrant than *Coracopsis*, and *Heterolocha* than either *Fregilupus* or *Necropsar*. But there is no need to continue the list, and in conclusion I will only declare that I think far too highly of the fauna of Madagascar and of the Mascarene Islands to wish that its extraordinary peculiarities should be undervalued, though I do not want them to be unduly magnified at the expense of those of the fauna of New Zealand.

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