

## The Question of Species

By TOM IREDALE, Australian Museum, Sydney

Professor Wood Jones is sometimes regarded as being provocative, an adjective often applied to myself, so that kindred natures may reply to each other. As a systematic worker who has been mainly engaged in classifying animal forms by means of dead specimens, and as a field worker who has attempted to study living animals also, I would indicate how the concepts arrived at from each viewpoint coincide if the truth be in them. There is no difference in the result if the methods of each be correctly applied. Many years ago, before the present generation of iconoclasts arose, the same question was just as futilely discussed. One much-abused systematist dealing with dead things pointed out that each and everyone of these so-called "cabinet naturalists" had gained his experience in field work and was merely applying his knowledge of species in nature to the specimens before him. This generally applies to the best systematic workers to-day. It is admitted that every species shows variation and the limitation of the variation depends upon isolation plus that well-known unknown factor  $x$ . Wood Jones's special group named is that of the Petrel-like birds, and as this is the most difficult of all bird forms to study it is the least fitted for argument. Kleinschmidt's Formenkreises are the most unnatural of groups so that these should not be cited as recognizable units, while the instances cited are the curious exceptions that illustrate ornithology. Thus as the House-Sparrow and Tree-Sparrow are only alike "to unobservant people," then why mention them. I could bring forward hundreds of cases of dissimilar things appearing alike "to unobservant people" but that would not help the discussion of "What is a Species?" Again Wood Jones has cited the case of the Willow Titmouse, a puzzling species which is probably unknown to him autoptically as it is to most other students. I have been in the centre of discussions about this phantom and I would not like to class it as a "natural species." It would be much better cited as a fictional species, or even as a factitious one.

If Wood Jones were to investigate Australian bird life he would find many natural species that could be cited to illustrate better the theme "the question of species." It is better to practise than to preach, so I will provide as a suitable subject the Babblers. These are given as provided in the *Official Checklist of the Birds of Australia* of this Union, and then discussed as arranged in Mathews's latest *List of the Birds of Australasia*. The "Checklist" includes:

*Pomatostomus temporalis*, the Grey-crowned Babbler.  
*rubeculus*, the Red-breasted Babbler.  
*superciliosus*, the White-browed Babbler.  
*ruficeps*, the Chestnut-crowned Babbler.

Mathews adds the first two together under the name *Pomatostomus temporalis*, the Grey-crowned Babbler, but allows instead *Pomatostomus nigrescens*, the Red-breasted Babbler. Here we have a natural species split into two, but the division made at a different sector. The Grey-crowned Babbler lives all around Australia but the variation becomes very pronounced and notable in the north-west, and thus the "*Checklist*" marks the differential point as Alexandra, Northern Territory, whilst Mathews fixes it as about Wyndham, north-west Australia.

Both allow the White-browed Babbler as a distinct species, but as it is a southern, more inland, representative it would become part of a *Formenkreis* if we followed Kleinschmidt. The Chestnut-crowned Babbler might even be lumped into the *Formenkreis*—it certainly would have been by Kleinschmidt himself—but it appears now to live alongside the White-browed species in some localities. Thus our natural species would be the whole of the Babblers inhabiting Australia.

Having arrived at this delightful conclusion, how then do we express the variation seen in connection with them? Do we start splitting them up again or leave them in the unsatisfactory state we have driven them into? We will leave them for the present, and apply ourselves to the problems of the Petrel forms as suggested by Wood Jones, who asks.

"(1) Does a bird hatched and reared on any particular island, always, or usually return to that same island to breed?"

The answer is decidedly in the affirmative, as we have definite island colonies of such species as the White-winged Petrel, to cite a local instance. Every student of Petrels, such as Murphy, Stead and Falla, has come to this conclusion, although each was prejudiced against this view in the beginning. With birds of gregarious habits such as these there is always the possibility of strays, but so far very little is known regarding such for the causes given by Wood Jones.

"(2) In cases where two birds, separated by only trivial morphological characters (such as a slight difference in the breadth of the bill, or some such detail) have been recorded as breeding on the same island it would be of the utmost importance to ascertain if their breeding areas are entirely segregated."

I cannot reconcile this question with any specific case, and I cannot imagine such, but if there were a case it must be obvious that their breeding areas must be entirely segregated.

"(3) When and where does pairing take place?"

The birds arrive at the islands already paired as far as can be ascertained of birds that are nocturnal in habit. I cannot understand what this has to do with the taxonomist at all.

"(4) Exactly what variations of bill-form and of plumage are the ordinary expressions of age and sex?"

In the majority of Petrel forms the young are similarly coloured to the adult, and a fully-fledged immature bird is separable only by the ordinary signs of youth. The sexes also vary little in coloration but sometimes a little in size, the male being a very little larger, rarely of an appreciable amount.

Admitting these answers, are we any better off than when we began, because these factors appear to have very little effect upon "the definitive classification" and none upon the "nomenclature" of the Petrel forms.

To sum up, the question of species as regards Petrel forms is limited to our knowledge of specimens examined and criticized from experience in the field, and must always be subordinate to the personal equation of the critic.

Glancing at the "*Checklist*" and Mathews's "*List*" again we will note that the majority of species are very natural and require no revision from any viewpoint, the cases of three or four only providing problems through insufficient material. It would be absurd to suggest that classification should be held up until these points are cleared up.

In conclusion I would add that I have never yet found any great difference of opinion between the field worker and the museum specialist, for the very good reason that most museum specialists have done, and continue to do, field work in ornithology. Probably Wood Jones meant something else when he wrote "field worker."

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