

## SHORT NOTE

### Kermadec Petrels (*Pterodroma neglecta*) in the Atlantic Ocean - a rebuttal

MICHAEL H. TOVE  
303 Dunhagan Place, Cary, NC 27511, USA.  
[mtove@deltaforce.net](mailto:mtove@deltaforce.net)

Imber (2004), reporting the presence of Kermadec petrel (*Pterodroma neglecta*) in the Atlantic, asserted that the species may represent up to 5% of the breeding population on Ilha da Trindade (hereafter Trindade), and that it routinely penetrates into the northern Atlantic, with multiple occurrences off Hatteras, North Carolina, USA. I consider his paper to include significant errors and assumptions that raise doubt about the validity of his hypothesis.

Imber's (2004) hypothesis relies on four lines of, predominantly, second-hand evidence:

1. an assertion that Kermadec petrels have been documented, by specimens and photographs, as present in the Atlantic;
2. a reinterpretation of a single vocalization recorded from Trindade;
3. the apparent intestinal structure of a single specimen; and
4. an extrapolated correlation of feather lice species with petrel species

Imber (2004) cites four specimens (three from Trindade and one from Cheshire, United Kingdom) and four photographic sight records (three off North Carolina, USA, and one from the mountains of Pennsylvania, USA). I shall re-evaluate these eight records.

The earliest, and one of only two claims of Kermadec petrel from the Atlantic (other than Imber) was a 1908 specimen from Cheshire, United Kingdom. This record was not accepted by the British Ornithologists' Union (1998). Cramp and Simmons (1977) and Patteson & Brinkley (2004) have questioned the validity of the record, citing the possibility that the bird did not reach Cheshire naturally (i.e. it may have been transported on board a ship from the Pacific). Similarly rejecting

this record, neither Harrison (1983, 1987), Enticott and Tipling (1997) nor Tove (2000) included Kermadec petrel as an Atlantic-occurring species. To date, Imber (2004) apparently stands alone in accepting this specimen as both correctly identified to species and of natural origin.

Two specimens identified as Herald petrels (*P. arminjoniana*) were collected by Murphy (1915) on 8 April 1913 on Trindade. A third specimen ("spirit" specimen = preserved by chemical pickling) collected on Trindade on 28 December 1975 is similarly labeled as being a Herald petrel.

For accuracy, Imber refers to Herald petrels from Trindade as "Trindade petrels." This separation from Herald petrel (as a distinct species), while possibly correct, is not yet widely accepted in the scientific literature. Accordingly, I refer to all members of *P. arminjoniana* as "Herald petrel."

Apparently based on the presence of white inner webs and primary shafts, Imber (2004) has re-identified the three Trindade specimens as Kermadec petrel. However, both Kermadec and Herald petrels have white inner webs and primary shafts. Moreover, Murphy (1915) reported that while young Herald petrels have all dark primary shafts, they whiten with age and adults have white bases to their primary shafts. Considering that Imber (2004) cited Murphy (1915) it is curious that he failed to pick up on Murphy's discussion. The essential difference between the two species is the extent of the white, which is far greater in Kermadec than Herald, yet Imber provides no description that would justify a re-identification.

On 3 October 1959, Heitzelman (1961) filmed a petrel at Hawk Mountain, Pennsylvania, USA (apparently blown inland by a hurricane) which he identified as a Kermadec petrel. This sighting has since been the subject of much controversy. In 1998, the American Ornithologists' Union (AOU) accepted this sighting, but later reversed itself (Banks *et al.*, 2003, citing Hess 1997). The essential problem is that the bird exhibits large patches of white that are "atypical" of either species. Patteson & Brinkley (2004) concluded that, after making a frame-by-frame examination of the film, the bird was more likely an asymmetrically leucistic Herald petrel.

Imber (2004) cited me (Tove 2003) as providing evidence of a Kermadec petrel sighting from Hatteras, North Carolina, USA on 29 May, 1994. He correctly stated that this bird was "originally identified as *P. arminjoniana*" but implied that, somehow, its identification was later changed. This is not so. The bird in question was a dark phase Herald petrel observed at length as it flew and swam calmly near our boat for several minutes. At

no time did this bird ever exhibit an obvious white upper wing. However after my photographs were developed, I perceived what appeared to be white shafts at the base of the primaries. Curious about the primary shaft bases, I queried others via the internet. Ultimately, consistent with the report of Murphy (1915), we concluded that the bird was an adult Herald petrel. Imber's only awareness of this bird was from my informal e-mail postings, yet one of these internet conversations is his "literature citation." The photo in question has never been published and Imber has never seen it.

Imber (2004) cites two additional North Carolina photographic records published by Brian Patteson on his web site photo album ([www.brianpatteson.com](http://www.brianpatteson.com)). However, Brian (*pers. comm*) never claimed these birds were Kermadec petrels and has always listed them as "Herald petrel." The first was a moulting dark-phase bird photographed on 25 May 2001. In the photo, it exhibits what appears to be silvery flashes in the middle and distal regions of the primaries (i.e., not the bases as would be for Kermadec petrel). These "pale flashes" appear to be merely artifacts of light and camera angle. The second was a dark bird, also in heavy moult, photographed on 26 May, 2003. The bird was missing a single outer primary (P-8?) revealing the white inner web of the next outermost primary. However, none of the remaining primaries showed any hint of white from above, including the primary shafts.

The second line of evidence offered by Imber (2004) relates to a single vocalization recorded by Silva (1995) on Trinidad. While Imber admits that Silva did not claim to have recorded anything other than Herald petrels on Trinidad, he reinterprets one call described by Silva. From Imber's discussion, it appears that his only exposure to this call was by Silva's "wording and/or translation . . . by phonetics." Imber then supports his claim by comparing four sonograms of Kermadec petrel calls with a reprint of Silva's (1995) symbolic ("phonetic") description. Unfortunately, it is impossible to make sense of this highly esoteric comparison. Regardless, Imber concludes this particular call "has no equivalent in any description of Trinidad/Herald petrel calls from anywhere" and "is clearly the call of Kermadec petrels [sic]."

There are several specific problems with Imber's (2004) conclusion; he provides no insight into how he links Silva's phonetic description to sonograms of Kermadec petrel calls; provides no sonogram of Herald petrel for comparison; and does not indicate how Herald petrel was eliminated. Moreover, the complete range of call variations for both these petrel species is not known. As such, there is simply no way to know how "unusual" one particular call may actually have been. Furthermore, Imber does

not mention whether Silva claimed this call to be uniquely recorded from an unknown bird or one of many calls recorded from a bird of otherwise unchallenged identification.

The third line of evidence offered by Imber (2004) relates to the intestinal structure of a single pickled specimen at the US National Museum (Smithsonian, Washington, DC, USA). Following a single paragraph stating that "a Kermadec petrel had 82 helicoidal twists [and] Herald petrel had only 34 twists. . . " Imber comments, without elaboration, that he "examined the intestines of one spirit specimen from Ilha da Trinidad" and that they were "like those of a Kermadec petrel from the Pacific." However, he provides no factual basis for this conclusion (e.g., how many coils the "spirit specimen's" intestines actually had) and offers no insight as to how statistically reliable the number of helicoidal twists as a species identifier might be. He does, however, note that 58% and 56% respectively were left-handed (thus presumably 42% and 44% respectively were right-handed), a comparison sufficiently close to 50/50 to raise serious doubt about the statistical reliability of coil counts as species identifiers.

The fourth line of evidence offered by Imber (2004) is from the feather lice species found on the Trinidad specimens. He states that there is a tendency for different species of feather lice to be hosted by particular bird species but that this is a statistical relationship and not absolute. Then, despite his own caveat, he concludes that because the louse species (*Halipeurus kermadecensis*) common to Kermadec petrels in the Pacific was found on Trinidad specimens, those individuals must be Kermadec petrels. For Imber to make this conclusion, there would have to be not just a correlation, but an absolute host-specific relationship of one louse species to one petrel species. I am unaware that such a relationship has ever been demonstrated in birds much less in *Pterodroma* petrels.

In summary, all but one of Imber's cited recent northern Atlantic occurrences are strongly denied by the actual observers, and those identifications are supported by photographic evidence. The claim of Kermadec petrel from Pennsylvania, USA, has been rejected by all other reviewing bodies. Imber offers no compelling evidence that three museum specimens of Herald petrel from Trinidad were misidentified by their collectors and by every subsequent handler of them. He relies on his own re-interpretation of an esoteric, second-hand description of a single, possibly aberrant, call of unknown identity to declare that Kermadec petrel is a breeding species on Trinidad Island. Ultimately, there is no credible evidence that Kermadec petrel occurs in either the South Atlantic or North Atlantic. Until solid evidence to the contrary is offered, the

traditional consideration that Kermadec petrel is a Pacific-occurring species should continue to stand.

#### LITERATURE CITED

- Banks, R.C.; Cicero, C.; Dunn, J.L.; Kratter, A.W.; Rasmussen, P.C.; Remsen, J.V. Jr.; Rising, J.D.; Stotz, D.F. 2003. Forty-fifth supplement to the American Ornithologists' Union checklist of North American birds. *Auk* 121:985-995.
- British Ornithologists' Union 1998. *The British list*. Tring, British Ornithologists' Union.
- Cramp, S., and K. E. L. Simmons, eds. 1977. *Handbook of the birds of Europe, the Middle East and North Africa*. Vol. 1. Oxford University Press, Oxford.
- Enticott, J.; Tipling, D. 1997. *Seabirds of the world*. Stackpole Books, Mechanicsburg, Pa.
- Harrison, P. 1983. *Seabirds: An identification guide*. Croom Helm, Kent.
- Harrison, P. 1987. *A field guide to seabirds of the world*. Stephen Greene Press, Lexington.
- Heitzelman, D. S. 1961. Kermadec petrel in Pennsylvania. *Wilson Bulletin* 73:262-267.
- Hess, P. 1997. The "Hawk Mountain Petrel": First Pennsylvania record, but which species? *Pennsylvania Birds* 11:2-5.
- Imber, M. J. 2004. Kermadec petrels (*Pterodroma neglecta*) at Ilha da Trindade, South Atlantic Ocean and in the North Atlantic. *Notornis* 51:33-40.
- Murphy, R. C. 1915. The bird life of Trinidad Islet. *Auk* 32:332-348.
- Patterson, J.B.; Brinkley, E.S. 2004. A petrel primer. The gadflies of North Carolina. *Birding* 36:586-596.
- Silva, G. L da 1995. Aspectos da biologia reproductiva de *Pterodroma arminjoniana* (Giglioli and Salvatori, 1869) (Aves: Procellariidae) na Ilha da Trindade, Atlantico Sul. M.Sc. (Zoology) dissertation. Rio de Janeiro, Universidade Federal do Rio de Janeiro.
- Tove, M. H. 2000. *Guide to the offshore wildlife of the Northern Atlantic*. University of Texas Press, Austin, Texas.

**Keywords** Kermadec petrel; Herald petrel; *Pterodroma neglecta*; *Pterodroma arminjoniana*; Atlantic Ocean; distribution; identification