

Appendix D

Ectoparasites from Tahiti Petrels on Ta'u

Ectoparasites from a Tahiti Petrel specimen on Mt. Lata were collected by O'Connor and deposited with Dr. Ricardo Palma at Te Papa, National Museum of New Zealand, Wellington. Dr. Palma, in addition to identifying the specimens, provided background and their associations with Procellaridae. Dr. Palma would much appreciate any sample collected in the future (contact details below). Natural history and identification of the sampled lice as well as excerpted details from our correspondences follow:

The sample contained 14 lice (12 males, 1 female, 1 nymph) of the species *Halipeurus marquesanus* (Ferris, 1932).

It is unusual to have such a marked bias towards males, generally in lice and within *Halipeurus* in particular. Perhaps the fact that the host may be a chick might have some relevance. Later analysis of the specimen determined it was in fact a small adult bird.

Te Papa's collection includes samples of *Halipeurus marquesanus* (Ferris, 1932) from the following localities: Tahaa island (Society Is), Tavenni Island (Fiji Is), Marquesas Is, New Caledonia and New Zealand.

So far, the species *Halipeurus marquesanus* (Ferris, 1932) has been found on the Tahiti Petrel only. Two other species have been recorded from the Tahiti Petrel: one is *Ancistrona vagelli* (J.C. Fabricius, 1780), a species seldom collected, usually in very small numbers, but widespread on a great number of Petrel species. The other is a yet undetermined species of the genus *Saemundssonina*.

Potentially, the Tahiti Petrel may be host to lice belonging to other 3 - or even 4 - genera. Only further collecting will uncover what other louse species may be lurking in their plumage... Needless to say that you should not miss any future opportunity to delouse more of these very interesting birds.

The genus *Halipeurus* contains about 30 species all parasitic on Petrels of the genera *Pterodroma*, *Bulweria*, *Pseudobulweria*, *Puffinus*, *Calonectris*, *Pelecanoides*, *Pelagodroma*, *Oceanites*, *Halocyptena*, *Fregetta* and *Oceanodroma*.

Despite a request for additional parasite samples to be collected during processing of the Petrel specimen at the Smithsonian, and the importance these ectoparasites may offer for taxonomical clarity regarding Tahiti Petrels, these details were overlooked. Any future collections would be much appreciated by Dr. Palma, and could prove instrumental in determining the taxonomical status of Ta'u Petrel populations.

Few species of lice are known from this Petrel species (Tahiti), therefore any material is most welcome. Upon collection, preserve the specimens in ethanol or methanol but not in formalin. Send them in a strong vial, well cushioned inside a strong box to withstand the perils of the mail service. Address the parcel to Dr. Palma at the museum (see full address below) and declare them as "Dead insects for scientific studies". DON'T write the words "lice", "parasites", "ticks", "fleas" or anything which may make NZ agriculture officers (sometimes not well informed as to what these creatures are) weary and confiscate the specimens.

For any parasite, the host name is the most important piece of information. However, the locality & date of collection, the name of the collector and, in the case of internal parasites, the site within the body, are also important.

The locality - Ta'u Island, American Samoa - is perfect for a description...the locality of this sample is new for our collection. For louse ecological studies, it is good to have samples from a wide range of localities, especially if one is working with hosts covering a wide distribution”.

There is no problem whatsoever if the lice have been frozen... most of the lice I have here (over 100,000 of them) have originated from birds which were frozen prior to louse collection.

Most Petrels are parasitized by 4 or 5 louse species ALL co-inhabiting the same individual bird. The only difference is that some species are mainly found on the wings while others on the head and others on the belly, or back, etc.

Tahiti Petrels have *Halipeurus* on their wings, *Ancistrona* on the body and *Saemundssonina* on the head and neck, but there is still the possibility for other species of other genera to occur.

For future collections, follow above instructions from Dr. Palma, and send to: Ricardo L. Palma, Curator of insects, Museum of New Zealand Te Papa Tongarewa, P.O. Box 467, 169 Tory Street
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http://www.tepapa.govt.nz/our_resources/Bugs/collection_bugs.html