

MALLOPHAGA FROM TRISTAN DA CUNHA

PART II

Some Remarks on the Genus *Longimenopon* Thompson, 1948

BY

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With 8 Figures in the Text.

Some time ago Miss Theresa Clay, British Museum (Natural History) asked me whether I was prepared to work out the *Longimenopon* material collected by the Norwegian Expedition to Tristan da Cunha in 1937-38. I agreed with this proposal especially as thereby I got a welcome opportunity to compare the British Museum *Longimenopon* material and had some hope of reaching a result which would allow a first review of this hitherto quite unsatisfactorily known genus.

The difficulty of dividing the genus *Longimenopon* into natural groups of species and at the same time arranging it satisfactorily results from the fact that the populations from different hosts are connected to each other by intermediate forms, in other words are forming «clines». The characters concerned are the main distinctive criteria such as size of body and shape of head. It goes without saying that these circumstances make it difficult if not impossible in many cases to fix the limits of the single natural units clearly. Furthermore, the male genitalia which serve in bird lice generally as good criteria for the separation of species do not help much in *Longimenopon* because in all species examined this apparatus in the main is of the same shape (Fig. 1). On the other hand *Longimenopon* has some more general interest as its different forms show how from the simple, primitive, roundheaded forms (Fig. 2a) (as a hypothetical phylogenetic starting point) the more complicated «higher» forms with heads of the «*Colpocephalum*»-type (fig. 2c) may have developed, a process, which in the phylogeny of the Amblycera has obviously taken place independently

more than once. Moreover the classifying of the different populations of *Longimenopon* according to this mode of evolution could give us a hint as to which forms we have to consider as primitive (at least in the characters of their heads) and which as more advanced, this by the rules of parallel evolution might also be valid for their hosts.

Unfortunately the small amount of material available is insufficient, taking into account the considerable variability of the different *Longimenopon*-populations, to pass in each case a well founded taxonomic judgement and to decide how the limit of the single species should be drawn. I have, therefore, on configuration of the head, distinguished for the present, three groups of approximate equal stages of organisation, a primitive (Fig. 2a), an intermediate (Fig. 2b) and a developed one (Fig. 2c) which I suppose are more likely to be species groups than real species and, therefore, with the progress of scientific knowledge might very well become a number of smaller natural units (species).

***Longimenopon infans* n. sp.** (Fig. 2a, 3, 4).

Type host: *Bulweria bulwerii*.

Measurements.

Sex	Width of head	Length of head	Width of Abdomen	Total length
♂	0,36-0,37	0,35-0,36	0,48	2,02
♀	0,37-0,38	0,36-0,37	0,53	2,14

Head roundish, nearly as long as wide, sides of head weakly concave, hind margin of head straight.

Holotype ♂ and allotype ♀ from *Bulweria bulwerii*, Canary Islands, Meinertzhagen Coll. No. 11129 and 1 other ♀ with data as listed above, paratype. 1 ♀ from *Oceanodroma monorhis socarroensis* obviously belongs to this species too, but is somewhat larger (width of head 0,40, length of head 0,38).

***Longimenopon puffinus* Thompson, 1948** (Fig. 2 b).

Type host: *Puffinus pacificus cuneatus*.

Measurements.

Sex	Width of head	Length of head	Width of Abdomen	Total length
♂	0,42	0,38	0,58	2,17
♀	0,44	0,42	0,66	2,48

The *Longimenopon*-populations collected under this species name occupy an intermediate position between the forms of the *infans*-group and those of the *galeatum*-group in the shape of the head. The sides of the head are moderately but clearly concave, the outlines of the temples are rounded, the hind margin of the occiput is straight. It seems unlikely that the forms here under consideration belong to one single species. Much more probably all these morphological similar populations are forms which are not necessarily nearer related to each other, but in different respects have reached the same phylogenetic level. As prototype of these intermediate forms I point to *Longimenopon puffinus* from *Puffinus pacificus cuneatus*, though I am not quite sure, whether the two paratypes examined, for which I am much indebted to Mr. Gordon B. Thompson, *sensu stricto* belong to the same species or subspecies. Thus the female specimen from the type host possesses a straight hind margin of the head and the male from *Puffinus nativitatis* — beside further smaller differences — a concave one. Nevertheless I unite under this species name provisionally the populations from *Puffinus pacificus*, *nativitatis* and *Pterodroma brevirostris*, as well as one single specimen each from *Pterodroma arminjoniana*, *Oestrelata affinis* and *Bulweria columbina*, which of course may be stragglers.

Specimens from *Pterodroma incerta* which in a wider sense also belong to the *puffinus*-group are much larger than typical *Longimenopon puffinus*, wherefore I prefer to describe them here as

***Longimenopon elliotti* n. sp.** (Fig. 5, 6).

Measurements.

Sex	Width of head	Length of head	Width of Abdomen	Total length
♂	0,48	0,47	0,68	2,42
♀	0,50	0,48	0,79	2,76

Holotype ♂ and allotype ♀ from *Pterodroma incerta*, Tristan da Cunha, 24/8 1951, H. F. J. Elliott (Brit. Mus. Coll.) and 2 ♀ with data as listed above, paratypes.

***Longimenopon galeatum* n. sp.** (Fig. 2c, 6, 7).

Type host: *Pelagodroma marina*.

Measurements.

Sex	Width of head	Length of head	Width of Abdomen	Total length
♂	0,39	0,34	0,55	2,07
♀	0,40	0,34	0,52	2,19

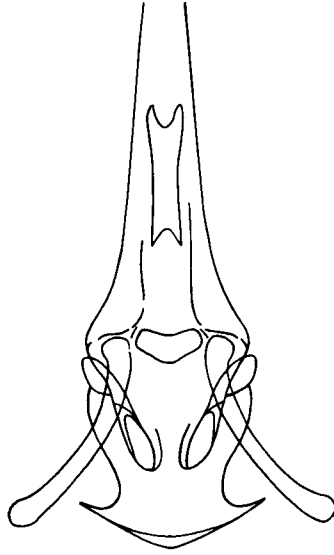


Fig. 1 Male genitalia of *Longimenopon puffinus* from *Pterodroma arminjoniana*.

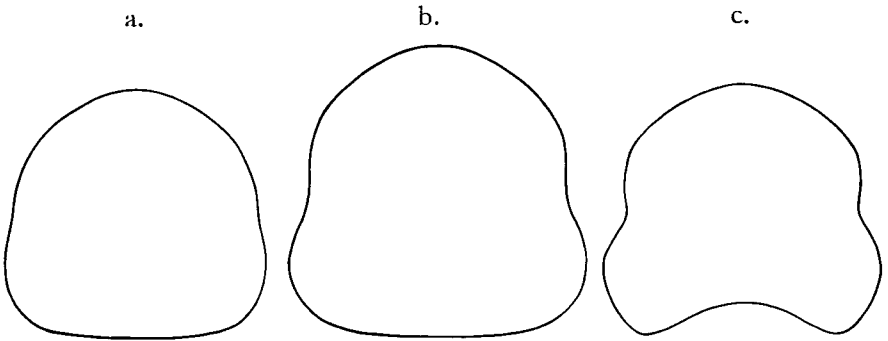


Fig. 2. Outlines of heads of female *Longimenopon* species.

a) *L. infans* n. sp. b) *L. puffinus* Thompson. c) *L. galeatum* n. sp.

3.



4.



5.



1. *Longimenopon infans* n. sp. ♂. X 60. 2. *Longimenopon infans* n. sp. ♀. X 60.
3. *Longimenopon elliotti* n. sp. ♂. X 50.

6.



7.



8.



6. *Longimenopon elliotti* n. sp. ♀. X 50.
7. *Longimenopon geleatum* n. sp. ♂. X 60. 8. *Longimenopon geleatum* n. sp. ♀. X 60.

Head clearly wider than long, sides of head strongly «Colpocephalum-like» indented, temples distinctly and angularly projecting, hind of occiput concave.

Holotype ♂ and allotype ♀ from *Pelagodroma marina*, Tristan da Cunha, 4/1 1938 (Norw. Exped. 1938) and 9 other ♀ from the same host paratypes. Here I place also 2 ♀ from *Pachyptila desolata altera*, Auckland Islands (Meinertzh. Coll. No. 16266) and 1 ♂ from *Pterodroma brevirostris* (Brit. Mus. Coll. No. 1067), Gough, 20/11 1952, H. F. J. Elliott.

References.

- KELOGG, V. L. and W. M. MANN: Entomological News, 23 (1912) p. 63.
THOMPSON, G. B.: Occ. Papers Bernice P. Bishop Mus. Honolulu, 19 (1948), p. 197.

RESULTS OF THE NORWEGIAN SCIENTIFIC EXPEDITION
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The Norwegian Scientific Expedition to Tristan da Cunha 1937-38 under the Patronage of H. R. H. The Crown Prince of Norway and supported mainly by Norwegian Scientific Funds and Consul Lars Christensen, stayed in Tristan da Cunha, Inaccessible, and the Nightingale group of islands from December 7th, 1937 to March 29th, 1938. The members were: Erling Christophersen (leader, botanist), Egil Baardseth (algologist), Allan Crawford (surveyor), I. C. Dunne (geologist), Ragnar Eggesvik (wireless operator), Yngvar Hagen (zoologist), S. Dick Henriksen (physician), Yngvar Mejland (assistant botanist), P. A. Munch (sociologist), Per Oeding (assistant physician), Erling Sivertsen (marine zoologist), Sevrin Skjelten (general assistant), and Reidar Sogmnæs (dentist).

The present series of results is edited by

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Oslo.