

## NOTES ON *HARRISONIELLA* (MALLOPHAGA), WITH SPECIAL REFERENCE TO THE GENOTYPE.\*

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BALFOUR-BROWNE (1944, p. 186) mentions as fallacious the belief that when a genus is divided the typical genus or subgenus should include the oldest-described species. Riley (1941) discusses and opposes the view that an author's determination of an insect when selecting it as a genotype must be considered to have been correct even if it is subsequently proved to be incorrect (a view which is not unfairly summed up by stating that the genotype is a name and not an insect). Since the case of the genotype of *Harrisoniella* is a nearly perfect example of the results of adherence to these rather widely-held views, and because the history of *Harrisoniella* presents one of the most extraordinary series of errors that is to be found even in the literature of the Mallophaga, I think it worth going into it at some length.

The facts are somewhat complicated, but will be briefly summarized later in this paper. They are as follows: *Pediculus diomedea* was described by Fabricius (1775, p. 808), and the name was misapplied by Dufour (1835) to a totally different insect, belonging to a different genus. Dufour's insect was later described by Giebel (1867, p. 195) as *Lipeurus ferox*. Piaget (1880, p. 334) suggested, quite correctly, that Dufour's insect was the same as *L. ferox* Giebel, and Taschenberg (1882, p. 145) placed *Pediculus diomedea* Fabricius in the synonymy of *Lipeurus ferox* Giebel (together with another insect which is not congeneric with either of them), in spite of the fact that if the two names referred to the same species, the name given by Fabricius would have the comfortable priority of 92 years over that given by Giebel. Taschenberg's quite incorrect synonymy was accepted by Kellogg (1896, p. 127), and it was doubtless this same error which led Harrison (1916, pp. 133, 134) to place *ferox* as a synonym of *diomedea* Fabricius, which he removed to his new genus *Esthiopterum*. Bedford (1929, p. 529) erected the genus *Harrisoniella* with "*Esthiopterum diomedea* (Fabricius)" as genotype; his generic description is perfectly clear and definitely fits *L. ferox* Giebel. Subsequently I had occasion to examine the original description of *Pediculus diomedea* Fabricius, and found that it unquestionably refers to a *Perineus*, not a *Harrisoniella* (Hopkins, in Clay, 1940, pp. 300-301), and that therefore the supposed genotype does not conform to Bedford's description of the genus. At a still later date I was able to examine the Bedford collection, in which I found specimens

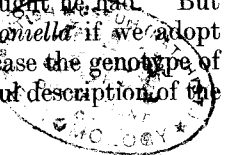
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of *ferox* labelled *Harrisoniella diomedae* (Fabricius); they were the only specimens labelled with this name, and are quite obviously the material from which Bedford drew up his description of the genus.

To summarize: Dufour misidentified *Pediculus diomedae* Fabricius; this error was accepted by later authors, and eventually led Bedford to make "*Esthiopterum diomedae* (Fabricius)" the genotype of *Harrisoniella*; actually Fabricius' species is a *Perineus*. There is conclusive proof that the species Bedford intended to make his genotype is *Harrisoniella ferox* (Giebel).

Turning to the question of the earliest-described species being selected as genotype, not only is there no rule to this effect in the International Rules of Zoological Nomenclature, but there is not even a recommendation that this should be done. The only recommendation bearing on this point is that one should "show preference to the best described, best figured, best known, or most easily obtainable species or to one of which a type-specimen can be obtained," and this is normally in direct contradiction with the selection of the oldest-described species, for the identity of these old species is nearly always in doubt in Mallophaga, and some of the accepted synonymies are wildly incorrect (*Pediculus collurionis* Schrank is usually placed in the genera *Menopon* or *Menacanthus*, of the suborder Amblycera, but study of the original description shows that it is undoubtedly a *Philopterus*, belonging to the suborder Ischnocera). If, therefore, we are to designate as genotypes the earliest-described species, we are liable to find ourselves with genera belonging to one suborder while the supposed genotype belongs to another. The most ordinary common sense dictates that an author should designate as genotype of any new genus a species about whose identity there can be no doubt; this will very often be a new species, the only one he knows by personal observation. It is only fair to state that Bedford had no choice in the matter, for (accepting the synonymy given by Harrison, 1916) the genus *Harrisoniella* is monotypical.

But we have not yet settled the question of what is the genotype of *Harrisoniella*, the insect Bedford had before him or the name which he (misled by earlier authors) misapplied to it. I must express my amazement (as a field naturalist for as long as I can remember, and a systematist for over 20 years) that there should be any controversy over this point. To me it is merest common sense that the genotype is an insect and not a name, what the author of the genus had before him and not what he thought he had. But let us examine what is the position of *Harrisoniella* if we adopt the view that the genotype is a name: in this case the genotype of *Harrisoniella* is a *Perineus*, and Bedford's careful description of the



genus becomes sheer nonsense because it does not fit the genotype, which is absurd. On the other hand, if the genotype is an insect, all we have to do is to substitute "*Esthiopterus diomedae* (Dufour *et auctorum, nec Fabricius*)" for "*Esthiopterus diomedae* (Fabricius)" as genotype of *Harrisoniella*, and this is the course I intend to follow. Not only is this course in accordance with common sense, but it also conforms to the spirit and even the letter of the Rules of Nomenclature; the description is the essential part of the erection of a new genus, and designation of a genotype, eminently desirable though it is, was not obligatory prior to January 1, 1931, in order to make the genus valid.

As regards the species in the genus, unfortunately I do not possess sufficient material to permit of a revision, but it appears to me that the forms found on most of the albatrosses are at least subspecifically distinct, and I think some notes on the forms described from different host-species may be useful to other workers on Mallophaga. The confused synonymy (on the assumption that forms found on different hosts are not the same) illustrates very well the pernicious practice of redescribing Mallophaga from material not collected from the original species of host.

The principal troubles with regard to the species have been the description of nymphs as adults and the identification of all adults as one species, whereas several species or subspecies seem to be concerned. The first valid name in the genus is *Lipeurus ferox* Giebel, described from a single male obtained from a dry skin of *Diomedea melanophris*; Taschenberg's description under this name is of a male and a "female" (the latter actually a last-stage nymph) from *D. exulans*. Kellogg (1896, p. 114, pl. 7, figs. 1, 2) described a younger nymph (probably third-stage), which he believed to be a female, as *Lipeurus densus*, and (*loc. cit.*, p. 127, pl. 9, figs. 1, 2) described adults of the same species as *Lipeurus ferox* Giebel: his material was from *Diomedea albatrus*, and the species found on this host must stand as *Harrisoniella densa* (Kellogg) in spite of the fact that the type is a nymph. Subsequently Kellogg invariably identified all nymphs from any species of albatross as *densus* and all adults as *ferox*. In particular, he described (Kellogg, 1899, p. 28, pl. 3, fig. 2) as the male of *densus* a last-stage nymph, from *Diomedea nigripes*, which had the basal segments of the antenna swollen and would possibly have produced a male. Waterston (1914, p. 311) came very close to recognizing Kellogg's error when he wrote of specimens from *D. exulans* which he determined as *densus* "occurring with *L. ferox* Giebel, of which, at first, we took this form to be the immature stage. Kellogg's ♀ type was not full grown, but later he described the adult ♂"; it is reasonable to assume that Waterston read Kellogg's statement that his 1899

specimen was a male as implying that its genitalia were developed. Harrison (1937, p. 29) clearly had an inkling that several species were concerned, and stated that *densus* was "based upon immature specimens"; he still used the name *diomedae* as an earlier name for *ferox*, and repeated the erroneous statement that Fabricius' material was from *D. exulans*; yet another element of confusion is introduced by the fact that Harrison died before the publication of the genus *Harrisoniella* and therefore referred *diomedae* to *Perineus*—the genus (from which *Harrisoniella* is possibly inseparable) to which *Pediculus diomedae* Fabricius does in fact belong. Whether *Harrisoniella* is a good genus or not, it is at least extremely unlike *Perineus* in superficial characters, and but for Dufour's mistake it is most improbable that anyone would ever have confused *Perineus diomedae* (Fabricius) and its allies with *ferox* and its near relatives.

At this point it will be as well to summarize the various names under their respective hosts:

From *Diomedea albatrus* Pallas: *Lipeurus diomedae* Giglioli, *L. densus* Kellogg, 1896, *L. ferox* "Giebel" Kellogg, 1896, *L. densus* Kellogg and Chapman, 1899, p. 96, and *L. ferox* "Giebel" Kell. and Chap., 1899, p. 97. The correct name for this species is *Harrisoniella densa* (Kellogg).

From *Diomedea melanophris* Temminck: *Lipeurus ferox* Giebel, and *Harrisoniella diomedae* "(Fabricius)" Bedford. The proper name of this species is *Harrisoniella ferox* (Giebel).

From *Diomedea nigripes* Audubon: *Lipeurus densus* "Kellogg" Kellogg, 1899, p. 28, pl. 3, fig. 2.

From *Diomedea exulans* Linn.: *Philoapterus diomedae* "Fabricius" Dufour, *Lipeurus ferox* "Giebel" Taschenberg, *L. ferox* "Giebel" Neumann, *L. densus* "Kellogg" Waterston, *L. ferox* "Giebel" Waterston, *Esthiopterum diomedae* "Fabricius" Harrison, *Perineus diomedae* "Fabricius" Harrison.

From *Diomedea epomophora* Lesson: *Harrisoniella diomedae* "(Fabricius)" Thompson.

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