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Stray Notes on Mallophaga.—XI.

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89.* *Mallophaga and the Phylogeny of their Hosts.*

Credit for suggesting that correct deductions as to the phylogeny of groups of birds may be drawn from the Mallophaga that infest them is usually given to Kellogg, who put forward this idea rather tentatively in 1896 and

* Owing to an unfortunate error, for which I am to blame, the notes forming part X of this series (Ann. Mag. Nat. Hist. (12) iii. pp. 230–242), which ought to have been nos. 75–88, were numbered 70–82. The correct numbering starts again with this part.

much more explicitly in 1913 (see, for instance, Hopkins, 1942, *Ibis*, p. 98). But though there is little doubt that Kellogg formed the idea independently, there is a very much earlier and quite explicit reference to the principle. Sir W. Jardine, in his account of the biology of *Prionites* (Jardine, 1841) states (pp. 326, 327), in the course of a discussion of the relationships of these birds: "One other remarkable analogy we would notice, and one perhaps by which it has not yet struck ornithologists to trace the alliance between the various groups. The birds in spirits afforded numerous specimens of *Nirmi*, some of which were sent to Mr. Denny, who is now engaged on a monograph of the British species of this very curious race of insects. That gentleman obligingly furnished the drawing for the annexed wood-cut, and the following remarks: 'It belongs to one of the genera most numerous in species, the most striking character is the great size of the trabeculæ or moveable organs before the antennæ; I know of no species in which they are so large and thick; the nearest approach is in those species infesting the Crow family; you will see these organs thick and strong in the *Nirmi* from the Jay, Raven, Carrion Crow, Rook and Jackdaw'."

It is not altogether clear from the above account whether the idea was Jardine's or Denny's, but perhaps justice will best be served by crediting it to them in partnership. However that may be, Jardine and Denny have many years' precedence over the next author known to have suggested this line of approach to bird-phylogeny.

90. *The Identity of* Phagopterus columbæ *Freire and Duarte.*

Freire and Duarte have described a supposed new genus (1944, p. 13) and species (p. 14, figs. 1–3) of Mallophaga from *Columba livia domestica*, Rio Grande do Sul, Brazil. Although the writers claim to describe both sexes, and even the male genitalia, a glance at the photomicrographs is sufficient to show that the specimens are merely nymphs of *Columbicola*, which are well known to be very adult-like and to have heads very differently shaped from those of adults of their own species. The "male" in this particular instance is a specimen that has been partly dried so that the abdomen is unnaturally narrow,

especially posteriorly ; I do not know what the supposed male genitalia are, but the description is entirely unlike that of the genitalia of any member of the Phthiraptera.

It is not the first time that the very adult-like nymphs of *Columbicola* have given rise to such a mistake, for Denny (1842, pp. 51, 131, pl. 9, fig. 7) described similar specimens as *Nirmus claviformis* just over a century before Freire and Duarte made a similar error ; he, also, thought that his material included both sexes, and the form he described is now known as *Columbicola columbæ claviformis* (Denny). Denny's form is probably correctly considered subspecifically distinct from that described by Freire and Duarte, which is unquestionably a synonym of *Columbicola columbæ columbæ* (Linn.), 1758.

91. *The Host-distribution of* Quadraceps houri *Hopkins.*

When describing *Quadraceps houri*, in note 74 of this series, I mentioned the obtaining of a single male from a skin of *Sterna v. vittata* Gmelin and stated that confirmation of this record would be of considerable interest because of the fact that *Sterna vittata* and *Sterna paradisæa* also have a *Sæmundssonia* (*S. lockleyi* Clay) in common, while *Sterna hirundo* has a different *Sæmundssonia* and a different *Quadraceps*.

Through the kindness of Mr. H. F. I. Elliott, first Administrator of Tristan da Cunha, this confirmation is now forthcoming, for two collections of Mallophaga obtained by him from *Sterna v. vittata* on Tristan da Cunha island both included *Quadraceps houri* (7 males 14 females and 7 males 2 females respectively), as well as numerous specimens of *Sæmundssonia lockleyi*.

I read this evidence to mean that *Sterna vittata* and *S. paradisæa* are very closely related—far more closely than either is to *Sterna hirundo*. The point is of special interest because *Sterna paradisæa* and *S. vittata* have widely separated ranges whereas the former species and *S. hirundo* have ranges that overlap. It is a further proof, if any were needed, that phylogeny and not geography is the dominant factor that governs the distribution of Mallophaga.

This seems a suitable opportunity to correct a slip in the original description of *Q. houri* : the plates I called tergal are in fact sternal.

92. *The Host of* Sæmundssonia uppalensis (*Rudow*), 1870.

Rudow (Z. ges. NatWiss. xxxv. p. 455) gave the host of his *Docophorus uppalensis* as *Phaeton æthereus* and the locality as " Uppala in der Südsee ". Bearing in mind Rudow's habit of mistranscribing names (of which " *Tinnamus bannaquira* " for *Tinamus boraquira* is perhaps the best example) there can be very little doubt that " Uppala in der Südsee " is Upolu Island, Samoa, especially when we remember that Apia in this island was the local headquarters of the German firm of Godeffroy Bros., members of whose staff sent many zoological specimens home to Germany. And Rudow's description of the head of *uppalensis* agrees so well with material from tropic-birds that there is ample reason to accept that some species of *Phaëthon* was the true host of Rudow's species.

But there is much more difficulty as to what the species of *Phaëthon* may have been, because the only records of *P. æthereus* from Samoa are old ones (see Armstrong, 1932, ' Hand-list to the birds of Samoa ', p. 16) and are probably cases of misdetermination, this species not being reliably recorded from any part of the Pacific west of the Galapagos Isles. The species that are known to occur in Samoa are *P. lepturus* and *P. rubricauda* ; an adult of the latter could hardly be mistaken for *P. æthereus*, though doubtless an immature bird might, but *æthereus* and *lepturus* are very much alike even when adult. Moreover, although there are Samoan islets on which *P. rubricauda* may nest, it is apparently very rare on Upolu, for during the two years that I lived on the island I never recognized a specimen and Armstrong, during his longer residence, only saw one on one occasion (Armstrong, 1932, p. 13). *P. lepturus dorotheæ*, on the other hand, is common on Upolu, where it breeds in rot-holes in large trees.

The balance of probability is strongly in favour of Rudow's material having been obtained on Upolu Island from a misdetermined specimen of *Phaëthon lepturus dorotheæ* Mathews, and this bird should, as already suggested by Thompson (1940, Ann. Mag. Nat. Hist. (11) v. p. 49), be assumed to be the type host of *Sæmundssonia uppalensis* (Rudow). Like almost all other specimens from Rudow's collection, the type is lost.

93. *The Identities of three Forms described by Kellogg and Kuwana.*

In their paper of 1902 on Mallophaga collected in the Galapagos Islands, Kellogg and Kuwana rejected the theory that the multiplicity of records of Mallophaga from hosts on which they quite certainly do not normally occur permanently in nature might be due to the unsatisfactory technique by which they were collected, and considered that such records were due to exceptional conditions of propinquity between members of different groups of birds. In this they were almost certainly wrong, the real explanation for the abnormalities being the one they rejected, but in any case it is very desirable that the long lists of type-hosts they published for some of the forms they described should be reduced by selection as lectotype of a specimen from a host which the insect probably infests naturally, for Kellogg and his collaborators followed the old-fashioned and very unfortunate practice of not designating a type or a type-host. Through the kind co-operation of Professor Ferris in lending type-material from Kellogg's collection it has been possible to select lectotypes for three of the worst instances in this category.

Docophorus galapagensis was described (Kellogg and Kuwana 1902, p. 464, pl. 28, fig. 4) from "Numerous males from *Geospiza fuliginosa*, five specimens from Albemarle, Chatham and Narboro; *Geospiza conirostris* from Hood, *Geospiza fortis* from Albemarle, two specimens from *Camarhynchus productus* from Albemarle; *Camarhynchus prosthemalas* from Albemarle, and *Nesomimus parvulus* (Galapagos Islands)". It was only known to Kellogg and Kuwana in the male sex, and proves to be an unusual and exceptionally stout-bodied species of *Brüelia*. There seems to be no doubt that *Geospiza fuliginosa* is a natural host of this species, and a male (No. 1089) obtained from this host on Albemarle Island has been selected as lectotype of *Brüelia galapagensis* (Kellogg and Kuwana), 1902, p. 464.

Nirmus galapagensis was described (p. 471, pl. 29, fig. 5) from "Many males and females from four specimens of *Geospiza fuliginosa*, three from Albemarle and one from Chatham; *G. fortis* from Albemarle and Narboro; *G. conirostris* from Hood; *G. dubia* from Chatham; two

specimens from *Nesomimus macdonaldi* from Hood; *N. parvulus* from Narboro; *N. carringtoni* from Barrington; *N. melanotis* from Wenman; two specimens from *Camarhynchus productus* from Albemarle; *C. variegatus* from Narboro; *Pyrocephalus intercedens* from Narboro; *P. dubius* from Chatham; *Certhidea albemarlei* from Albemarle; *Myiarchus magnirostris* from Albemarle; *Coccyzus melanocephalus* from Chatham; *Actitis macularia* from Albemarle, and *Procellaria tethys* from Albemarle". Although Kellogg and Kuwana wrote of "many males and females" and purported to describe both sexes, the specimen shown on pl. 29, fig. 5 as a male is a female, and all the specimens sent by Professor Ferris are also of this sex. In fact, *Nirmus galapagensis* is the female of the species of which the male, just dealt with, was described as *Docophorus galapagensis*. It is obviously desirable that the type host and locality of the two sexes should be the same, and a female (No. 1070b) from *Geospiza fuliginosa* obtained on Albemarle Island has been selected as lectotype of *Brüelia galapagensis* (Kellogg and Kuwana) 1902, p. 471, which is both a synonym and a secondary homonym of *B. galapagensis* (Kellogg and Kuwana) 1902, p. 464.

The third form was described (p. 474), as *Nirmus vulgatus galapagensis*, from "Many males and females from *Geospiza fuliginosa*, nineteen specimens from Albemarle, five from Narboro, three from Chatham, one from Hood; *G. fortis*, three specimens from Albemarle; *G. dubia*, two specimens from Chatham; *G. conirostris*, from Hood and Gardner; *G. intermedia* from Chatham; *Nesomimus macdonaldi* from Hood and Gardner; *N. parvulus* from Narboro; *N. adamsii* from Chatham; *N. carringtoni*, two specimens from Barrington; *Camarhynchus productus*, two specimens from Narboro; *C. affinis* from Albemarle; *C. prosthemelas* from Albemarle; *Certhidea albermarli* from Albemarle; *C. beckii* from Wenman; *Dendroica aureola* from Albemarle; *Pyrocephalus intercedens* from Albemarle; *Sterna fuliginosa* from Clipperton Island". So many of the syntypes are from *Geospiza fuliginosa* that this is obviously a natural host. Unfortunately the only males in the series sent by Prof. Ferris (one from *G. fuliginosa* and one from *Nesomimus macdonaldi*) are headless, so a female (No. 1006 a) from *Geospiza fuliginosa* from Narborough Island has been

selected as lectotype of *Brüelia galapagensis* (Kellogg and Kuwana) 1902, p. 474 (*nec* p. 471). The name is invalid, being a primary homonym of that of the form described by the same authors on p. 471 and a secondary homonym of that of the one they described on p. 464. As the species is practically certainly distinct from any other that has been described I think it justifiable to rename it ; I therefore propose *Brüelia chelydensis** as a *nomen novum* for *Brüelia galapagensis* Kellogg and Kuwana 1902, p. 474 (*nec* p. 464 nor p. 471).

94. *Emendation of the Name* Sæmundssonia clayi *Hopkins*, 1949.

Article 14 of the International Rules of zoological Nomenclature prescribes that specific names given in honour of modern persons should be formed by adding *i* to the exact and complete name if it is that of a man or *æ* if it is that of a woman ; in the revised version of certain of the rules that was passed by the 13th International Congress of Zoology at Paris this provision is retained and in addition it is definitely enjoined (Bull. zool. Nomenclature, iv. p. 68) that names contravening any of the provisions of Article 14 (and certain other articles) are automatically to be corrected by subsequent authors, the emended form of the name ranking for priority from the date of publication of the incorrect form and its authorship being attributed to the author of the incorrect form.

In note 56 of this series (1949, Ann. Mag. nat. Hist. (12) ii. pp. 29-32) I named a species in honour of Miss Clay (as is obvious from the fact that I mentioned her more than once in the note) but inadvertently wrote *clayi* instead of *clayæ*.

The name of the species I named on p. 32 of note 56 is *Sæmundssonia clayæ* Hopkins 1949, not *S. clayi* as inadvertently published.

References.

Denny. 1842. Monographia Anoplurorum Britanniæ.
Freire and Duarte. 1944. Bol. Soc. brasil. Med. vet. xiii. pp. 13–15, figs. 1–3.
Jardine. 1841. Ann. Mag. nat. Hist. (1) vi. pp. 321–328.
Kellogg and Kuwana. 1902. Proc. Wash. Acad. Sci. iv. pp. 457–499.

* *Chelys*=a tortoise, *chelydes* the tortoise-islands, *chelydensis* pertaining to the tortoise-islands.