

MALLOPHAGA (BITING LICE) AND ANOPLURA
(SUCKING LICE). PART I: AUSTRAGONIODES
(MALLOPHAGA) PARASITIC ON PENGUINS
(SPHENISCIFORMES)

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Abstract The populations of *Austrogoniodes* Harrison from the penguin genus *Pygoscelis* (Sphenisciformes) are discussed, and a new species parasitic on *P. papua* and *P. antarctica* is described. Another new species is described from *Eudyptes crestatus*, and a key is given to the known species of *Austrogoniodes*, together with their host and geographical distribution as at present known.

Through the kindness of Dr. J. L. Gressitt it has been possible to examine specimens of *Austrogoniodes* from the three species of *Pygoscelis*. The populations parasitic on two of these prove to belong to a new species which I have much pleasure in naming after Dr. Gressitt. The opportunity is taken to describe another new species which is named in honor of Dr. von K  ler for his publications on the morphology and taxonomy of the genus.

***Austrogoniodes antarcticus* Harrison, 1937**

Figs. 1, 2, 6, 8, 9, 16, 18, 19, 20, 28

Type Host: *Pygoscelis adeliae*
(Hombron and Jacquinot)

Austrogoniodes antarctica Harrison, 1937, Australas. Antarct. Exped., Sci. Rept. (C) 2:20, pl. 1, figs. 6, 7.

Description.—*Male and Female.*—Shape and general characters of the head as in Fig. 28. (The position and number of head setae do not provide taxonomic characters within the *antarcticus* group; these are similar to K  ler (1952, Fig. 20), with some individual variation in position and number of the small dorsal spinelike setae.) Temple seta 5 long in male and short in female (Fig. 28, 5). Thorax as in Fig. 1, with pronotal seta short and spinelike in both sexes; margin of pteronotum with 4 short spinelike setae, 3 long setae each side, and 3–5 long posterior setae; ventrally with one long lateral seta (Fig. 1a). Two to 3 minute, spinelike pterosternal setae between bases of last legs. Internal lateral thickening of segments II–VII as in Fig. 18 and internal prolongation (see note 1) of II as in Fig. 16. Tergal thickening of male abdominal segments II–VIII (II is first apparent segment) divided in midline, that of IX a single tergite, narrowed to a varying extent in places each side (Fig. 6). Tergal thickening of female II–VIII divided, that of the

last segments forms a single plate; vulval edge straight; the internal sclerite associated with the opening into the genital chamber of spermathecal tube (spermathecal sclerite) is U-shaped with basal part either interrupted or thinner than the rest (Fig. 20). Male genitalia as in Figs. 2, 8, 9.

Chaetotaxy of Abdomen.—Tergal setae comprise 1 or more minute spinelike lateral setae each side and centrally a row of long setae and some spinelike ones; one of the lateral setae probably represents the postspiracular seta, but it has not been possible to see any associated sensillae; similar minute spinelike setae at ends of row of tergoventral setae and all tergoventral setae of male VIII are here given as tergoventrals. Lateral minute spine-like setae: ♂, II–VI, 1–2 each side; VII, 2–3. ♀, II–VII, 1 each side; VIII, 2 long and 1 short and fine. Tergoventral setae: ♂, II–V, 4–6 long setae of uniform length and 0–2 minute spinelike setae each end of row; VI–VII, 4–6 long and shorter setae, spinelike setae as in II–V; VIII, 5–7 each side, total: 11–13, \bar{X} (3): 12; IX, 2–3 each side, total: 4–6, \bar{X} (3): 4–7. ♀, II–VII, 4 long setae; VIII, 0 + 0. In both sexes tergum II with 2 long anterior central setae. Sterna with long and medium setae usually separated by short, spinelike setae (Fig. 19), total numbers as follows: ♂, II, 6; III, 8–10; IV, 11–13; V–VI, 11–12; VII, 10–11; VIII, 1 + 1 or 2 + 1; marginal setae of last segment: 10–13. ♀, II, 6–7; III, 7–10; IV–V, 11–13; VI, 8–13; VII, 9–11; VIII, 2–3; IX, 2; vulva: 15–20, the outer 2–3 each side longer than inner ones, but there are no long curved setae each end as is characteristic for many species of *Austrogoniodes*. Pleural setae each side: II, 4 sp. (=spinelike); III, 4–5 (♂), 4–6 (♀) sp., 2 L (=long); IV–V, 4 sp. 2 L; VI–VII, 4 sp., 3 L; VIII, 2–3 sp., 3 L. On segments II–V one of the spinelike pleural setae is laterodorsal and the

rest lateroventral, on VI–VIII the extra long seta is laterodorsal; on VIII the shorter laterodorsal pleural seta may be short and spinelike or somewhat longer and finer.

Material Examined.—4♂, 8♀, in Bishop Museum from *Pygoscelis adeliae*, Cape Evans, Antarctica, 9 Jan. 1960, Gressitt.

***Austrogoniodes gressitti* Clay, new species**

Figs. 3, 5, 7, 10, 21

Type Host: *Pygoscelis papua papua* (Forster)

In general habitus this species resembles *antarcticus* closely but is easily separated by the characters of the male genitalia and the form of the spermathecal sclerite.

Description.—*Male and Female.*—Head and thorax as in *antarcticus*, but there is variation in the number of spinelike setae on posterolateral margins of pteronotum: 4–5 each side in male, 3–4 in female; posterior pteronotal setae 5–6. General characters of abdomen as in *antarcticus*, but in male, tergum IX is sclerotized centrally with or without a small lateral discrete area each side (Fig. 5, X): in female, spermathecal sclerite U-shaped (Fig. 21). Male genitalia differ from those of *antarcticus* in characters (amongst others) of endomerall plate, which is joined laterally by an arm each side to basal apodeme, and in shape of median penial sclerite (Figs. 3, 7, 10).

Chaetotaxy of Abdomen.—Lateral tergal setae as in *antarcticus*. Tergocentral setae: ♂, II–VII, 5–8 mainly long, uniform setae with 0–3 spinelike setae each end of row, IV–VII include some shorter setae; VIII, 6–9 each side, total: 14–17, \bar{X} (4): 15.3; IX, 3–4 each side, total: 7–8, \bar{X} (4): 7.5. ♀, II–VII, 3–6 long setae; VIII, 0 + 0. Sternal and pleural setae similar in number to those of *antarcticus*.

Material Examined.—8♂, 4♀, in the Bishop Museum from *Pygoscelis p. papua*, South Georgia, 17 May 1963, H. B. Clagg. Holotype: ♂ in the Bishop Museum (No. 7111). Paratypes: 7♂, 4♀, with data as given above.

Six ♂, 5♀ from *Pygoscelis antarctica* (Forster), Anvers I., Antarctica, J. L. Gressitt, and 1♀ (B.M. N.H.) from the same host, Discovery Expedition 1925–1927.

Remarks.—In the characters of the male genitalia and the spermathecal sclerite these specimens agree with *gressitti*; in the sclerotization of tergum IX, males from *Pygoscelis antarctica* are somewhat intermediate between those of *A. antarcticus* and *A. gressitti*, some of them having only a small lateral area of sclerotiza-

tion as in some specimens of *gressitti*, and others having this area enlarged and almost meeting the central area of sclerotization. In the small number of specimens available, both sexes from the three species of *Pygoscelis* show some differences in total size, the *adeliae* parasites being the smallest and the *papua* ones the largest, with those from *antarctica* being intermediate; however, the measurements of those from *P. papua* and *P. antarctica* show overlap, and one male from *papua* is smaller than any of the three males from *P. adeliae*. The population from *P. antarctica* is here included in the species *gressitti*, sens. lat.

***Austrogoniodes keleri* Clay, new species**

Figs. 4, 11, 12, 22, 33

Type Host: *Eudyptes c. crestatus* (Miller)

This species belong to the *hamiltoni* species group (= *Cesareus* Kéler); the head resembles that of *hamiltoni* and the male genitalia are most similar to those of *macquariensis* within this species group. The combination of the characters of these two structures distinguish *keleri* from all other known species. The female is unknown (see note 2).

Description.—*Male.*—This species can be compared with *A. conci* (Kéler), fully described and figured in Kéler (1952: 223). Shape of head as in Fig. 22; other characters as in *conci*. Thorax as in *conci*, pteronotum with a continuous row of marginal setae: 4 + 4 short, stout, spinelike setae and 16 + 13 long, stout setae and 1 + 1 long and 1 + 1 spinelike ventrolateral setae. Abdomen as shown for *conci*; genitalia as in figures.

Chaetotaxy of Abdomen.—Terga II–VII laterally with 1 long seta and 0–1 or more minute, spinelike setae each side of this seta; tergoventral setae long with a varying number of minute, spinelike setae each end of row. Lateral and tergoventral setae: II, 19; III, 16; IV, 21; V, 27; VI, 27; VII, 25; VIII, 13 + 13; IX, 7 + 7; tergum II with 6 anterior setae (owing to distortion of terga the above counts may not be accurate). Sternal setae as in *conci*, each segment with a row of long setae interspersed with short, stout, spinelike setae; terminal segment with 34 long setae. Pleural setae similar to those of *conci*: II with 5 + 5 stout, spinelike setae; II–V with 2 fine laterodorsal setae each side and 2 long and a number of stout, spinelike lateroventral setae each side; VI and VIII with an additional long laterodorsal seta each side; VII with 1 fine seta and 1 long, stout laterodorsal seta.

Material Examined.—1♂ from *Eudyptes c. crestatus*, Kidney I., Falkland Is. A male from *Pygoscelis papua*, Falkland Is. (London Zoo), 3 Apr. 1950, and a male

TABLE 1. Measurements of individual males and females of *Austrogoniodes gressitti*, n. sp.

| | Males | | | Females | | |
|------------|-------------------------------|--------------------------------|---------------------------|-------------------------------|--------------------------------|---------------------------|
| | <i>P. adeliae antarcticus</i> | <i>P. antarctica gressitti</i> | <i>P. papua gressitti</i> | <i>P. adeliae antarcticus</i> | <i>P. antarctica gressitti</i> | <i>P. papua gressitti</i> |
| | Length, mm | | | | | |
| Head | 0.39 | 0.41 | 0.41 | 0.44 | 0.44 | 0.44 |
| Abdomen | 0.76 | 0.79 | 0.82 | 0.88 | 0.91 | 0.99 |
| Total | 1.31 | 1.34 | 1.39 | 1.42 | 1.53 | 1.56 |
| | Breadth, mm | | | | | |
| Head | 0.48 | 0.48 | 0.48 | 0.52 | 0.52 | 0.52 |
| Prothorax | 0.24 | 0.24 | 0.25 | 0.28 | 0.27 | 0.27 |
| Pteronotum | 0.37 | 0.39 | 0.39 | 0.42 | 0.44 | 0.42 |
| Abdomen | 0.64 | 0.64 | 0.70 | 0.71 | 0.72 | 0.72 |
| | Head Length, mm | | | | | |
| Range | 0.39–0.40 | 0.39–0.41 | 0.39–0.41 | 0.42–0.44 | 0.43–0.45 | 0.43–0.45 |
| Mean | 0.395 (4) | 0.397 (6) | 0.397 (7) | 0.431 (8) | 0.441 (6) | 0.442 (4) |
| | Head Breadth, mm | | | | | |
| Range | 0.47–0.49 | 0.46–0.49 | 0.46–0.48 | 0.52–0.54 | 0.51–0.53 | 0.51–0.54 |
| Mean | 0.480 (4) | 0.470 (6) | 0.469 (7) | 0.527 (8) | 0.520 (6) | 0.525 (4) |
| | Total Length, mm | | | | | |
| Range | 1.31–1.34 | 1.34–1.36 | 1.29–1.40 | 1.36–1.42 | 1.47–1.56 | 1.55–1.59 |
| Mean | 1.313 (3) | 1.350 (5) | 1.370 (6) | 1.400 (7) | 1.510 (6) | 1.570 (3) |
| | Abdomen Length, mm | | | | | |
| Range | 0.69–0.74 | 0.73–0.76 | 0.72–0.80 | 0.70–0.85* | 0.80–0.88 | 0.89–0.91 |
| Mean | 0.714 (4) | 0.775 (5) | 0.776 (6) | 0.764 (8) | 0.845 (6) | 0.900 (3) |

* Some of these specimens have perhaps contracted slightly during preparation.

in the Emerson Collection from *Eudypetes chrysolophus*, Gibbs I., S. Shetlands, 18 Feb. 1966, Flint & Watson (G. Watson, 197644), can also be included in this species. Females resembling others identified as *macquariensis* (see note 2) were taken from the last two host individuals, but as there were also males of *macquariensis*, it is not possible to say to which species these females belong. Holotype: ♂ in the British Museum (Nat. Hist.), slide no. 698, from *Eudypetes c. cretatus* (Miller), Kidney I., Falkland Is.

KEY TO THE SPECIES OF *Austrogoniodes*

MALES

1. Abdominal segment II with internal sclerite curved round base of leg 3 (Fig. 13) [Internal abdominal thickening bifurcate (Fig. 40); *mawsoni*: 1st antennal segment enlarged; conus attenuated; all lateral setae¹ of terga II–VII, minute, spinelike; genitalia (Fig. 40)] *mawsoni*
- Abdominal segment II without sclerite curved round base of leg 3 2 *brevipes*

- 2(1). 1st antennal segment enlarged; conus attenuated (Fig. 4) 3
- 1st antennal segment not enlarged; conus not attenuated 8
- 3(2). All lateral setae of terga II–VII minute, spine-like; genitalia (Fig. 39) [3rd antennal segment without tooth] *waterstoni*
- One of lateral setae of terga II–VII of medium length; genitalia not as above 4
- 4(3). 3rd antennal segment without tooth; lateral margin of head not deeply indented posterior to lens [genitalia as in Fig. 34] *macquariensis*
- 3rd antennal segment with tooth (Kéler, 1952, Fig. 15); lateral margins of head deeply indented posterior to lens (Fig. 22) 5
- 5(4). Parameres pointed distally (Fig. 36) *conci*
- Parameres bifurcate distally 6

TABLE 2. Measurements of one individual male of *Austrogoniodes keleri*, n. sp.

| | Length, mm | Breadth, mm |
|-------------|------------|-------------|
| Head | 0.42 | 0.67 |
| Prothorax | 0.19 | 0.36 |
| Pterothorax | 0.14 | 0.66 |
| Abdomen | 1.05 | 0.84 |
| Total | 1.81 | — |

¹ Not to be confused with the dorsal pleural setae (see under *antarcticus*).

- 6(5). Parameres deeply bifid and parts widely separated (Fig. 38); endomeres with thickened curved ends *bicornutus*
 Parameres and endomeres not as above 7
- 7(6). Paramere bifurcation usually appears shoe-shaped, i.e. inner arm short, outer arm turned outwards (Fig. 35) *hamiltoni*
 Paramere bifurcation not as above (Fig. 33) *keleri*
- 8(2). Genitalia with 2 medianly fused bladder-like lobes anterior to penis (Fig. 42) *strutheus* & 9
 Genitalia not as above 11
- 9(8). Endomeral plate with distinct fine dentation; penis distally blunt (Fig. 42) *cristati*
 Endomeral plate without distinct, fine dentation; penis distally pointed (Fig. 43) 10
- 10(9). Shape of head and marginal carina as in Fig. 26 *bifasciatus*
 Shape of head and marginal carina as in Fig. 25 *demersus*
- 11(8). Endomeral plate fused to basal apodeme (Fig. 7) *gressitti*
 Endomeral plate not fused to basal apodeme (Fig. 8) *antarcticus*

FEMALES

1. One lateral seta of terga II-VII long [Temple seta 5 long] 2
 All lateral setae on terga II-VII short, spinelike 5
- 2(1). Lateral internal thickening (with or without central pigmentation) present between segments VIII & IX (Fig. 50); spermathecal sclerite as in Figs. 31, 47 *macquariensis*
 Without above combination of characters 3
- 3(2). Spermathecal tube opens anteriorly to spermathecal sclerite (Fig. 29) *conci*
 Spermathecal tube opens in sclerite 4
- 4(3). Lateral pouches of genital chamber not greatly expanded laterally (Fig. 46); spermathecal sclerite bilobed anteriorly (Fig. 32) *bicornutus*
 Lateral pouches greatly expanded laterally (Fig. 44); spermathecal sclerite as in Fig. 30. [antennal fossa with twisted, hyaline outgrowth Fig. 23] *hamiltoni*
- 5(1). Abdominal segment II with internal sclerite curved round base of leg 3 [vulva without long curved setae at each end] 6
 Abdominal segment II without internal sclerite curved round base of leg 3 7
- 6(5). Shape of head as in Fig. 24 *brevipes*
 Shape of head as in Fig. 27 *mauwsoni*
- 7(5). Vulva margin markedly concave with 2 or more long curved setae each end (Fig. 49) 8
 Vulval margin flattened without long curved setae each end (Fig. 20) 11
- 8(7). Dorsum of preantennal region with toothlike projection (Fig. 14) [temple seta 5 short; without well marked spermathecal sclerite] *waterstoni*
 Dorsum of preantennal region without toothlike projection 9
- 9(8). Temple seta 5 short; vulva with many long curved lateral setae; spermathecal sclerite as in Fig. 49 10
 Temple seta 5 long; vulva with fewer shorter curved lateral setae; spermathecal sclerite as in Fig. 48 *cristati*
- 10(9). Shape of head and marginal carina as in Fig. 26 *bifasciatus*
 Shape of head and marginal carina as in Fig. 25 *demersus*
- 11(7). Spermathecal sclerite in the form of a complete U (Fig. 21) *gressitti*
 Spermathecal sclerite U-shaped with base interrupted or thinner than rest (Fig. 20) *antarcticus*

NOTES

1. Abdominal Thickening. The abdomen of the species of *Austrogoniodes* is characterized by lateral patterns of pigmented thickening; these are formed by outgrowths from the inner side of the tergites and are of various thickness and fused together in various ways. They appear different when viewed from different angles and may become somewhat distorted in specimens mounted under a cover glass. In those species of which specimens have been dissected, tergite II has a simple inner flap (Figs. 15, 16) which articulates with the thickening of III. In *A. mauwsoni* there is an additional discrete sclerite (Figs. 13, 17) in segment II; the lateral, more dorsal end of this sclerite is bifid, one arm resting against the inside of tergite II and the other against the inner flap of II and the thickening of III; the other swollen end of this sclerite curves round the base of the third leg and forms a conspicuous feature of the abdomen (Fig. 13). The single female type of *brevipes* has a similar sclerite round the base of the leg, but its exact shape cannot be seen in the undissected specimen.

The females of *macquariensis* differ from all known species of *Austrogoniodes* in having lateral internal thickening between VIII and IX. This thickening is somewhat circular in shape with outer striations and a central area which is either colorless like the rest, or pigmented to a greater or lesser extent (Fig. 50).

2. Females of the *hamiltoni* Species Group. Some difficulty was found in assigning the females to the males in this group which comprises *A. hamiltoni*, *A. conci*, *A. bicornutus*, *A. keleri*, and *A. macquariensis*. In the British Museum (Nat. Hist.) and other collections, males and females of different species are found mounted on one slide; this is probably due to only small samples of the total mallophagan fauna of any one individual penguin being collected, and to the number of species which may occur on one host. For instance, *Eudypates crestatus* is recorded as the host of

six species of *Austrogoniodes* and *E. chrysolophus* of seven; it is at present not possible to say how many of these are due to contamination during collecting, to temporary natural straggling, or belong to permanently established populations. By listing all the species of penguins, with their Mallophaga and localities (see below), it was possible by a process of elimination to make what is probably a correct assignment of females to males. It appears from the males that *bicornutus* is found only on *E. chrysolophus* and that *concii* and *hamiltoni* do not occur naturally on this host. Females of *macquariensis* from *E. chrysolophus* were identified by comparing them with those from other hosts on which this species is found. *A. hamiltoni* and *A. concii*, which occur together on one host species, were identified by finding collections from one host with a good series of only one species of male and presuming that the females present belonged to these males. The only species of which the female has not been identified is that of *A. keleri*; only three males of this species are known, and all have been taken from hosts on which *macquariensis* occurs, in two cases on the same host individual. Some of the larger females identified as *macquariensis* may prove to belong to this new species. With the small amount of material available it is difficult to use mensural characters, as *macquariensis* occurs on a wide range of hosts and within the species may itself have several populations, each restricted to the different hosts and perhaps separable only by statistical methods. Larger series from one host on which both *macquariensis* and *keleri* are known to occur would obviate these difficulties, and once two populations had been separated statistically, it would then be possible to compare specimens of these to find further constant morphological characters (Kim et al., 1966). Alternatively, the females of *keleri* may be quite distinct but are at present unknown. The females of the *hamiltoni* group are separable on the characters of the spermathecal sclerite, that is, the internal sclerite associated with the opening into the genital chamber of the spermathecal tube; also found in this group is a characteristic lateral pouch each side of the genital chamber with a thickened tip; the shape of this may appear somewhat different owing to distortion during mounting, but the pouches of *hamiltoni*, *bicornutus*, and *macquariensis* are usually diagnostic. Also diagnostic for *macquariensis* is the presence of internal thickening between segments VIII and IX (see Note 1). Females of *hamiltoni* may also be separable by the presence of a twisted, hyaline outgrowth from the

antennal fossa (Fig. 23); it is probable that these are sometimes lost in preparation of the specimen.

3. *A. struthus* Harrison, 1915. The description of this species was based on "numerous males and females", none of which can now be found in spite of extensive enquiries in England and Australia. The host is given as *Eudyptes sclateri* without locality, but "probably from one of the southern islands of New Zealand." The description and figures show without doubt that this species belongs to the *bifasciatus* group (that is *bifasciatus* Piaget, *demersus* Kéler, and *cristati* Kéler). The measurements given and the shape of the head and marginal carina as shown in the original figure are the same as in *demersus* (Fig. 25). It would, therefore, seem to be correct to make *demersus* a synonym of *struthus* if it were not for the host and locality records. It would be expected that the Mallophaga parasitic on *Eudyptes sclateri* would be distinct from those on *Spheniscus demersus*, and the distributions of the two species do not overlap, thus preventing contamination or secondary infestations; however, other species of *Spheniscus* overlap with other species of *Eudyptes*, which might have allowed ancient cases of secondary infestations. In Harrison (1937) specimens from *Spheniscus mendiculus* were identified as *struthus*, but as some of this paper was written after Harrison's death, it is possible that the differences between *cristati*, *bifasciatus*, and *demersus*, first recorded by Kéler (1952) were overlooked. Guimãraes (1938) made *struthus* a synonym of *bifasciatus*, but it is not known what specimens he had for comparison. Although it is probable that *struthus* will prove to be an earlier name for *demersus*, it is necessary to confirm that it does not represent a similar but distinct species parasitic on *Eudyptes*.

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LOCALITIES

ATLANTIC OCEAN:

Falkland Is.; South Georgia; Tristan da Cunha; Gough I.

INDIAN OCEAN:

Crozet Is.; Heard I.; Kerguelen Is.

SOUTH PACIFIC OCEAN:

Macquarie I.; Auckland Is.; Campbell I.; Antipodes Is.

ANTARCTICA:

Mawson; George V Coast; McMurdo Sound; Ross I.; Anvers I.; S. Shetlands

HOST-PARASITE-LOCALITY LIST OF AUSTROGONIODES SPECIES
ON SPHENISCIFORMES

(Host names and order as in Peters (1931))

| HOST SPECIES | <i>Austrogoniodes</i> SPECIES | LOCALITY |
|--|--|--|
| <i>Aptenodytes</i> | | |
| <i>patagonica</i> | <i>brevipes</i> (Giebel, 1876) ² | Kerguelen Is. |
| <i>forsteri</i> | <i>mawsoni</i> Harrison, 1937 ² | Antarctica—McMurdo Sound; Mawson |
| <i>Pygoscelis</i> | | |
| <i>papua</i> | <i>gressitti</i> , sp. n. ² | S. Georgia |
| | <i>keleri</i> , sp. n. | Falkland Is. (Zoo) |
| | <i>macquariensis</i> Harrison, 1937 | Falkland Is. (Zoo) |
| <i>adeliae</i> | <i>antarcticus</i> Harrison, 1937 ² | Antarctica—George V Coast; Ross I. |
| | <i>bifasciatus</i> (Piaget, 1885) | Antarctica—George V Coast |
| <i>antarctica</i> | <i>gressitti</i> | Antarctica—Anvers I.; S. Shetlands |
| | <i>macquariensis</i> | S. Georgia (Zoo); S. Shetlands |
| <i>Eudyptes</i> | | |
| <i>pachyrhynchus</i> | <i>conci</i> (Kéler, 1952) | New Zealand—Otago |
| | <i>hamiltoni</i> Harrison, 1937 | Macquarie I. |
| | <i>macquariensis</i> | Macquarie I. |
| <i>sclateri</i> | <i>strutheus</i> Harrison, 1915 ² | Type locality unknown |
| | <i>cristati</i> Kéler, 1952 | New Zealand—Napier |
| | <i>conci</i> | Antipodes Is.; Campbell I.; New Zealand—Napier, Christchurch |
| | <i>hamiltoni</i> (1 ♀) | Antipodes Is. |
| <i>crestatus</i> (= <i>chrysocome</i>) | <i>conci</i> ² | Crozet Is.; Heard I.; Tristan da Cunha; Gough I.; W. Australia; New Zealand—Christchurch |
| | <i>hamiltoni</i> ² | Macquarie I.; Antipodes Is. |
| | <i>macquariensis</i> ² | Falkland Is. (♀ only); Macquarie I. |
| | <i>keleri</i> ² | Falkland Is. |
| | <i>cristati</i> ² | Heard I.; Tristan da Cunha; Macquarie I.; Antipodes Is.; New Zealand—Napier |
| <i>schlegeli</i> | <i>demersus</i> ³ | Zoo |
| | <i>hamiltoni</i> | Macquarie I. |
| | ? <i>strutheus</i> | Macquarie I. (Harrison, 1937: 15) |
| | <i>cristati</i> | Macquarie I. |

| | | |
|---------------------|---|--|
| <i>chrysolophus</i> | <i>bicornutus</i> (Kéler, 1954) ² | Heard I. |
| | <i>macquariensis</i> | Heard I.; S. Shetlands |
| | <i>keleri</i> , sp. n. (1 ♂) | S. Shetlands |
| | <i>conci</i> (1 ♂) ³ | Antipodes Is. |
| | <i>cristati</i> | Heard I.; S. Shetlands |
| | <i>demersus</i> ³ | Zoo |
| | <i>gressitti</i> ³ | S. Shetlands |
| <i>Megadyptes</i> | | |
| <i>antipodes</i> | | |
| <i>Eudyptula</i> | | |
| <i>minor</i> | <i>waterstoni</i> (Cummings, 1914) ² | Australia—N.S.W.; Tasmania; N. Zealand—Kaikoura Penin. |
| <i>albosignata</i> | <i>waterstoni</i> | N. Zealand—Banks Penin. |
| <i>Spheniscus</i> | | |
| <i>demersus</i> | <i>demersus</i> ² | S. Africa; Zoo |
| <i>magellanicus</i> | <i>bifasciatus</i> ² | Argentine; Zoo |
| | <i>demersus</i> | Zoo |

² Type-host.³ Presence probably due to temporary natural straggling or contamination.