THE STRIGIPHILUS CURSITANS GROUP (PHTHIRAPTERA: INSECTA)

by

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ABSTRACT

A new species of *Strigiphilus* Mjöberg (Philopteridae) parasitic on the owl *Ninox novaeseelandiae* (Gmelin) is described and compared with other members of the *S. cursitans* (Nitzsch, 1861) species group. Notes on this group are included and *Eichlerius* Zlotorzycka and *S. glaucidii* Zlotorzycka are placed in synonymy.

Clay (1966) placed a number of species in the *cursitans* group having the following characters in common: tergum III without post-spiracular setae; male tergite VII not continuous across segment; ocular seta long; basal apodeme with central forked prolongation not fused to penis; female without well pigmented semi-circular sclerite anterior to opening of spermathecal tube. Within this group there are a number of taxa with characteristic external genitalia as shown for *cursitans* in Clay (1966), fig. 27 and in text-figs.3-8. Populations belonging to the *cursitans* group have been given names as shown in Clay (1966) but there is insufficient material available to decide on the status of all these names. However, it is possible to say that the populations from *Ninox novaeseelandiae* are separable and are here described as new.

The characters of importance in separating the taxa in this group are the shape and size of the head, the form of its anterior plate and the shape of the anterior margin of the dorsal plate of the male copulatory apparatus. The forked prolongation of the basal apodeme, the penal arms and the penis are liable to so much distortion in mounted specimens that they are of doubtful value as taxonomic characters. The sclerotization and pigmentation associated with the opening of the spermathecal duct is slight, difficult to see and shows individual variation depending perhaps on preparation techniques. Carriker (1966) mentions a characters. "thickened, spine-like rod attached near the end, on the inside of tibiae 2 and 3"; it is not clear what is meant by this. If it is the structure shown in this position in his figures (e.g. fig. 18) then it appears to be one of the stout tibial setae probably found in some form throughout the Ischnocera and which cannot be used as a generic character in *Strigiphilus*.

Strigiphilus vapidus sp. n.

(Text-figs. 1,3,5,6,8)

Type host: *Ninox novaeseelandiae ocellata* (Bonaparte, 1850)

This species is distinguished from other members of the *cursitans* group by the proportions of the anterior plate and the details of the male genitalia. It resembles most closely *cursitans* (Nitzsch) and *touleskovi* Balat.

Description: General characters as shown for *senegalensis* in Tendeiro (1963). Size and proportions of head as in *cursitans* (see below under Dimensions), with some differences in the form of the anterior plate (text-figs. 1-2). Pterothoracic trichobothrium lateral and its associated spiniform seta near the latero-posterior group of seta; posterior setae: 2 + 3--3 + 2 or 2 + 4--4 + 2 with occasional

asymmetry of one seta in these groups. Mesosternal setae 2-3; metasternal setae 3-5. Shape of abdomen as in *senegalensis*. Shape and size of pleurites in *Strigiphilus* show some individual variation probably due to the preparation of specimens, but in specimens which appear to show maximum width of the pleurites those of the new species are narrower than those of *cursitans* and *senegalensis*. Male genitalia similar to those of *cursitans* but differing in details (text-figs. 3-8).

Chaetotaxy of the Abdomen: This is similar in the related species mentioned above and the variation is such that it cannot be used for specific separation. It is given here for a male and female of the new species only. In the *cursitans* group and perhaps in all *Strigiphilus* species, the outer seta each end of the line of tergo-central setae on terga II-VIII is separated by a gap from the rest of the setae and has a larger alveolus; on terga IV-VII it is near and inner to the post-spiracular setae. These last setae are not included in the count of the tergal setae. Male, terga II, 15 with two anterocentral; III, 18; IV, 20; V, 16; VI, 15; VII, 12; VIII, 8; IX, 3 + 3. Sterna: II, 9; III, 15; IV, 17; V, 14; VI, 10; VII, 1 + 1; VIII-IX, 4 + 3. Pleura (male and female): II, 0 + 0; III, 1 + 1 short and spiniform; IV, 1 + 1 medium length; V, 2 + 3; VI-VII, 4 + 4; VIII, 4 + 4, one each side being the trichobothrium; IX, 3 + 3. Female, terga: II, 16 with two anterocentrals; III, 20; IV, 22; V, 18; VI, 18; VII, 14; VIII, 10; terminal segments, 2 + 2. Sterna: II, 8; III, 16; IV, 19; V, 16; VI, 14; VII, 4. Setae at base of terminal sternite vary from 4-6 each side, mean 5.15.

Dimensions (in mm.): Temple width, ♂ 0.49-0.52, $\bar{X}$ 0.50 (11); ♀ 0.52-0.56, $\bar{X}$ 0.54 (10). Head length, ♂ 0.540-0.555, $\bar{X}$ 0.552 (11); ♀ 0.58-0.62, $\bar{X}$ 0.60 (10). C.I. ♂ 0.89-0.94, $\bar{X}$ 0.91 (10); ♀ 0.87-0.92, $\bar{X}$ 0.90 (10). Pronotum width, ♂ 0.32; ♀ 0.34. Pteronotum width, ♂ 0.46; ♀ 0.50. Total length, ♂ 0.84; ♀ 0.96. Measurements of male head of *S. cursitans* from *Athene noctua*: Temple width, 0.46-0.51, $\bar{X}$ 0.49 (10); head length, 0.51-0.55, $\bar{X}$ 0.53 (10); C.I. 0.89-0.93, $\bar{X}$ 0.91 (10). Head length and total length in both species does not include the hyaline margin.

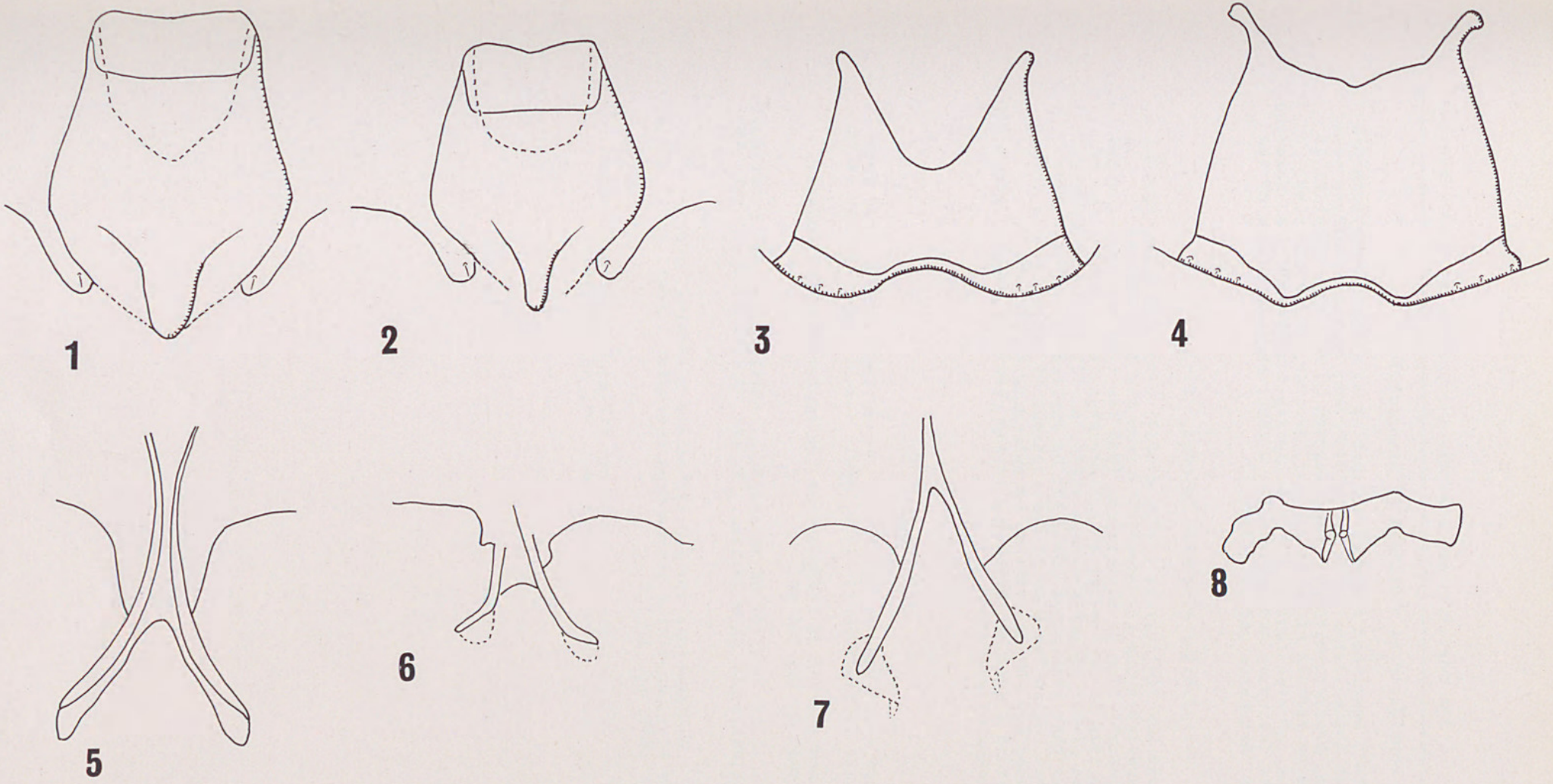
Material examined: Australia: 11 ♂, 10 ♀ from *Ninox novaeseelandiae ocellata* (Bonaparte), 20 miles E.S.E. of Agandys Hill, Pine Creek, Northern Territory, 25.viii.1968 (Harold Hall Expedition, BMNH). 5 ♂, 8 ♀ from *Ninox n. marmorata* (Gould), Perth, Western Australia, dates various (R. H. Stranger). 3 ♂, 1 ♀ from *Ninox n. leucopsis* (Gould), Rosevears, Tasmania, 5.ix.1965 (2 ♂) (R. H. Green); Flinders Island, Tasmania, 27.v.1971 (1 ♂, 1 ♀) (R. H. Green). New Zealand: 6 ♂, 4 ♀ from *Ninox n. venatica* (Peale), Wellington, 18.vi.1922 (E. Atkinson). 3 ♂, 3 ♀ from *Ninox n. novaeseelandiae* (Gmelin), Mt. Bruce, South Island, 6.ix.1971 (R. L. C. Pilgrim).

Holotype: Male in the Australian National Insect Collection from *Ninox novaeseelandiae ocellata* with data as given above.

Paratypes: 10 ♂ 10 ♀ with data as for holotype.

Notes on the *Strigiphilus cursitans* group

The *S. cursitans* group as restricted here contains all the species shown under this name in Clay (1966, p. 843) with the exception of *oculatus* (Rudow), *ceblebrachys* (Denny) and *speotyti* (Osborn) and with the addition of *S. acadicus* Emerson & Price, 1973; Ledger (1970) has figured the head of most of these species. In his paper Ledger has pointed out (p. 124) that the species *oculatus*, *ceblebrachys* and *zumpti* Ledger form a distinctive group and are better not included in the *cursitans* group. It is difficult, however, to see the advantage of the erection of the new subgenus *Eichlerius* Zlotorzycka, 1974 on morphological or any other grounds. The type species is *cursor* of the *cursor* species group (see Clay 1966, p. 841) and included in it are species belonging to the *cursitans* group *sens. str.* together with *heterogenitalis* Emerson & Elbel, belonging to the distinctive *macrogenitalis* species group. As there appears to be no advantage in giving the *cursor* species group a separate name,



TEXT-FIGURES 1 - 8

Text-figs. 1-2. Anterior plate. 1. *Strigiphilus vapidus* sp. n. 2. *S. cursitans* from *Athene noctua vidalii* Brehm. 3-8. Parts of male copulatory apparatus. 3-4. Dorsal plate. 3. *S. vapidus*. 4. *S. cursitans*. 5-7. Prolongation of basal apodome. 5-6. *S. vapidus*. 6. showing distortion. 7. *S. cursitans*. 8. *S. vapidus*, mesosome.

Eichlerius can be considered as a synonym of *Strigiphilus*.

Carricker (1966) described a number of species of *Strigiphilus* from New World owls of which those listed below probably belong to the *cursitans sens. lat.* species group; however, without an examination of the type material it is not possible to be certain of their status: *eleutus, perspicillatus, crucegerus, minimus, microgenitalis, jardini, speotyti altiplanus, s. desertae, s. magdalenae*. The following are unplaceable without an examination of the types: *lophostrix, heterurus* and *chilensis*.

Strigiphilus splendens (Giebel, 1874)

It is not clear why Zlotorzycka (1974, p. 337) describes a new species of the *cursitans* species group (*S. glaucidii*) from the type host of *splendens*. The specimen seen by Zlotorzycka from the type host and assumed to be *splendens* is said to be similar to *ceblebrachys*, but a comparison of the descriptions in Giebel of *ceblebrachys* (1874, p. 77) and of *splendens* (*ibid*, p. 79) shows that the latter could not be applied to the specimens seen by Zlotorzycka. Given the kind of descriptions of Giebel's date there seems to be no reason why the description of *splendens* should not be interpreted as that of a specimen belonging to the *cursitans* group; *glaucidii* thus becomes a synonym of *splendens*.

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