

## The Identity of *Nirmus eos* Giebel (Mallophaga: Philopteridae) from the Rose-breasted Cockatoo (Psittaciformes)

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**ABSTRACT:** *Nirmus eos* Giebel is established as a valid species within the genus *Neopsittaconirmus*, with *Cacatua roseicapilla*, the Rose-breasted Cockatoo, the type-host. Both sexes of this louse species are described and illustrated.

As summarized by Guimarães (1974), it has been impossible to place *Nirmus eos* Giebel to the specific or even generic level. The species was originally described by Rudow (1870) based on an early instar nymph, with the host given being as a psittaciform, *Cacatua roseicapilla* Vieillot, the Rose-breasted Cockatoo. It has not been possible, based on this nymph, to include the species in, or exclude it from, *Neopsittaconirmus* Conci, where Hopkins and Clay (1952) had tenuously placed it. Their placement in this genus was apparently based on the fact that the nymph was of the nirmoid type and the host was in the genus *Cacatua*. *Neopsittaconirmus* is the only known genus to fulfill both of these conditions. However, in the absence of further collections from *C. roseicapilla* yielding *Neopsittaconirmus*, no resolution of this matter was possible. Guimarães (1974) could only include *N. eos* as a *species inquirendae*. Price and Emerson (1978), in a further treatment of *Neopsittaconirmus* from *Cacatua* hosts, could likewise take no action on this name, other than to surmise "... the type-host locality in Australia and placement [of the host] in the subgenus *Eolophus* Bonaparte would seem to justify its anticipated uniqueness, should it eventually be shown to be a *Neopsittaconirmus*."

We have recently received a series of *Neopsittaconirmus* lice collected off *C. roseicapilla* in South Australia. These have proven to represent a species distinct from all other known members in the genus. Therefore, following the suggestion of Guimarães (1974) that the name *N. eos* be given to the nirmoid Mallophaga found on *C. roseicapilla*, we herewith describe and illustrate both sexes of the adults of this louse species.

### *Neopsittaconirmus eos* (Giebel)

(Figs. 1-7)

*Nirmus tenuis* Rudow, 1870, Z. Ges. Naturwiss. 35:471. Type-host: *Cacatua eos* = *Cacatua roseicapilla* Vieillot.

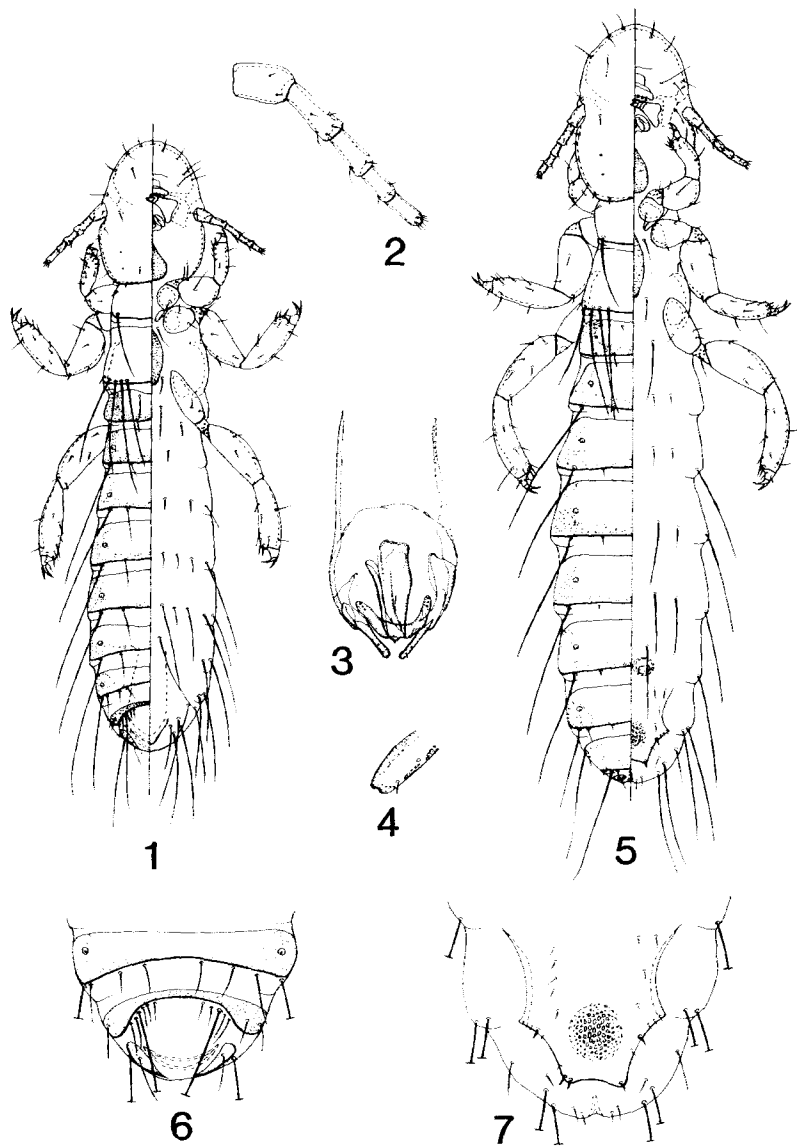
*Nirmus eos* Giebel, 1874, Insecta Epizoa:181. *Nomen novum* for *Nirmus tenuis* Rudow (*nec* Burmeister, 1838).

**MALE:** As in Fig. 1. Head evenly rounded anteriorly, only slightly wider across temples. Antenna (Fig. 2) essentially filiform, with basal segment somewhat enlarged. Pronotum with 1 long lateroposterior seta on each side; pteronotum with 4 very long and 1 short marginal setae on each side. Short marginal and short anterior seta on each side of abdominal tergite II (=first apparent tergite); very long and much shorter seta on III-VII; very long and 3 shorter setae on VIII; IX much narrowed (Fig. 6), with 1-2 lateral submarginal setae and marginal row of 4-5 short setae grouped around very long seta; terminally with very long and shorter seta. Conspicuous pattern of pigmentation involving lateral and posterior portions of abdominal tergites II-VIII, all of terminal tergites, and gular and ventral thoracic plates. Abdominal sterna II-VII each with 1-3 setae on each side, with lengths as shown. Genitalia (Fig. 3) relatively short and broad, with slender inwardly directed parameres; tip of each paramere truncate, with short subapical seta (Fig. 4); mesosomal processes and sclerites as shown.

**FEMALE:** As in Fig. 5. Much as for male, except as follows. Abdominal tergite IX not narrowed, with 1 very long and 2 short setae on each side. Ventral terminalia as in Fig. 7; subgenital plate with concave lateral and posterior margins, with chaetotaxy as shown; reticulation of genital chamber in form of single median circle, with densest particles medially.

**DIMENSIONS** (in mm): temple width, male 0.29-0.32, female 0.28-0.32; head length, male 0.38-0.43, female 0.41-0.43; prothorax width, male 0.20-0.23, female 0.19-0.21; pterothorax width, male 0.31-0.33, female 0.29-0.30; abdomen width, male 0.35-0.41, female 0.42-0.44; total length, male 1.64-1.84, female 1.77-1.96; male genitalia width, 0.11-0.12.

**REMARKS:** *Neopsittaconirmus eos* is readily distinguished from the other 3 species known from *Cacatua*, as well as from all others in the genus, by the following combination of characters: (1) the



Figs. 1-7. *Neopsittaconirmus eos*. 1. Male. 2. Male ventral antenna. 3. Male genitalia. 4. Tip of male genitalic paramere. 5. Female. 6. Male dorsal terminalia. 7. Female ventral terminalia.

broadly rounded preantennal head region; (2) the lack of a pronounced sexually dimorphic antenna; (3) the pigmentation pattern of the abdominal tergites and the ventral head and thoracic plates; (4) the chaetotaxy of the male abdominal tergite IX; (5) the details of structure associated with the male genitalia; and (6) the shape and chaetotaxy of the female subgenital plate along with the shape and size of the internal reticulate structure.

**MATERIAL:** 1 male, 1 female, ex *C. roseicapilla*, Victor Harbour, South Australia, 14.VIII.1983, D. C. Paton (B-37477); 1 male, ex *C. roseicapilla*, Adelaide, South Australia, 13.V.1983, C. Chambers (B-37368); 1 female, ex *C. roseicapilla*, Kingscote, Kangaroo Isl., South Australia, 7.XII.1982, J. Thurmer (B-37461).

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