LIFE HISTORY AND SYNONYMY OF *GRYLLOPROCIPHILUS IMBRICATOR* (FITCH) (HOMOPTERA: APHIDIDAE)[1]

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ABSTRACT

Fagiphagus Smith, 1974, is considered to be a junior synonym of *Grylloprociphilus* Smith and Pepper, 1968, and *Grylloprociphilus frosti* Smith and Pepper, 1968, is a synonym of *Eriosoma imbricator* Fitch, 1851. *Grylloprociphilus imbricator* (Fitch), n. comb., has American beech (*Fagus grandifolia* Ehrh.) as its primary host and the roots of bald cypress (*Taxodium distichum* (L.) Rich.) as its secondary host. The synonymy is discussed and a description is given of the apterous alienicola. *Pheidole moerens* (Wheeler) and *Solenopsis invicta* Buren (Formicidae) have been found as ant tenders.

RESUMEN

Gagiphagus Smith, 1974, es considerado un sinónimo de *Grylloprociphilus* Smith y Pepper, 1968, y *Grylloprociphilus frosti* Smith y Pepper, 1968, es un sinónimo de *Eriosoma imbricator* Fitch, 1851. *Grylloprociphilus imbricator* (Fitch), n. comb., tiene "American beech" (*Fagus grandifolia* Ehrh.) como su principal hospedero y las raíces de "bald cypress" (*Taxodium distichum* (L.) Rich.) como su hospedero secundario. El sinonismo es discutido y una descripción dada del áptero "alienicola". *Pheidole moerens* (Wheeler) y *Solenopsis invicta* Buren (Formicidae) han sido encontrados como cuidadores de hormigas.

Grylloprociphilus imbricator (Fitch) was described from beech in 1851. Since that time, the life history and correct placement of the species has been questioned by many individuals. The present paper gives the life cycle, and our concept of the generic placement of the species.

Grylloprociphilus imbricator Fitch, NEW COMBINATION (Fig. 1, 2)

Eriosoma imbricator Fitch, 1951: 68:
Pemphigus imbricator.—Jackson, 1908: 189.
Schizoneura imbricator.—Davis 1913: 116.
Prociphilus imbricator.—Hottes and Frison, 1931: 372.
Grylloprociphilus frosti Smith and Pepper, 1968: 57.
Fagiphagus imbricator.—Smith, 1974: 14.

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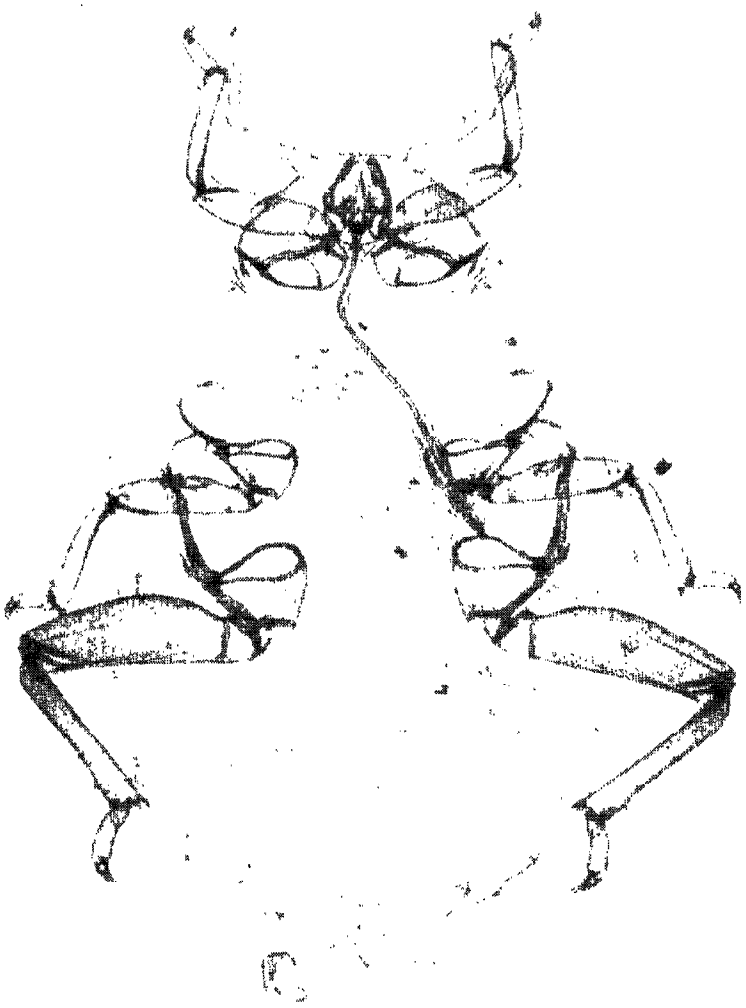

Fig. 1. *Grylloprociphilus imbricator*, apterous alienicola.

Fitch (1851: 68) described *Eriosoma imbricator* from beech in New York. Since that time, *G. imbricator* has been placed in *Schizoneura* Hartig (Davis 1913: 116); *Pemphigus* Hartig (Jackson 1908: 189); *Prociphilus* Koch (Hottes and Frison 1931: 372), and *Fagiphagus* Smith (Smith 1974: 14). Smith and Pepper (1968: 57-60) described *Grylloprociphilus frosti* but did not have information concerning the host.

In 1978-79 apterous and alate viviparae of *Grylloprociphilus frosti* Smith and Pepper were collected from the roots of bald cypress (*Taxodium* distichum (L.) Rich.). First instar nymphs from apterous viviparae were identical to the first instar nymphs from alate viviparae of *Eriosoma imbricator* Fitch from beech. Also, alate viviparae of *E. imbricator* from beech have been placed in plastic bags containing the seedlings of bald cypress and the first instar nymphs from these alate viviparae fed readily on the roots

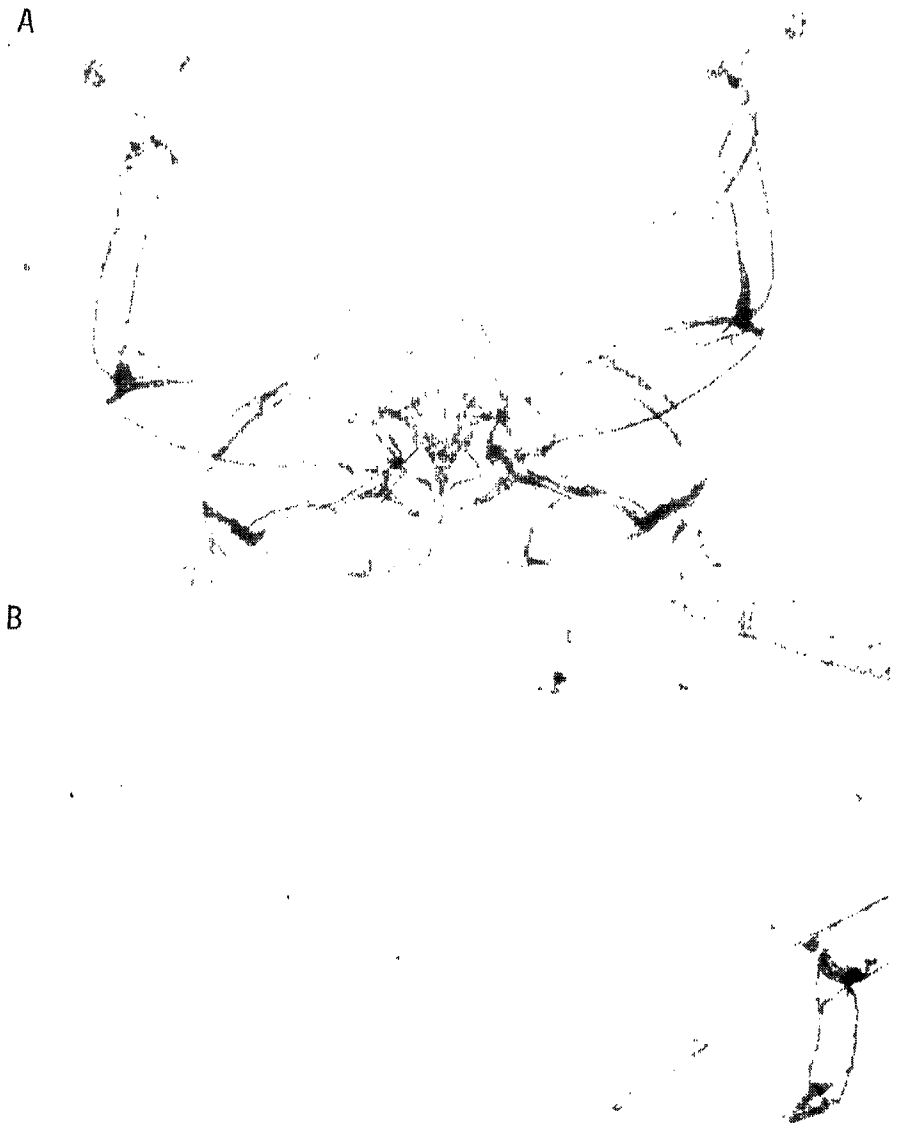

Fig. 2. *Grylloprociphilus imbricator*, apterous alienicola. A.) Head and antennae. B.) Abdominal apex.

of bald cypress. We now believe *Fagiphagus* Smith to be a synonym of *Grylloprociphilus* Smith and Pepper and *G. frosti* to be a synonym of *Eriosoma imbricator*. Therefore, the new combination would be *Grylloprociphilus imbricator* (Fitch).

Description

For descriptions of the fundatrices, fundatrispuriae and first instars from fundatrispuriae see Smith (1974: 14-7) under *Fagiphagus imbricator* (Fitch).

Apterous alienicola: Cleared specimens dusky on antennae, rostrum, and legs; remaining portions of body pale.

Antennae 5- or 6-segmented, if 5-segmented the penultimate segment enlarged. Primary rhinaria ciliated. Head usually with 3 ocelli in place of eyes; some specimens with compound eyes plus ocular tubercle with 3 ocelli. Rostrum attaining abdomen. RIV+V with 4 accessory setae. Distal end of tibiae with 6 dagger- shaped setae, other setae on tibiae hair-like. Metafemora distinctly larger than other femora. Tarsal chaetotaxy 1(3)-2-2.

Abdominal segments III to VI, each with 4 wax plates; abdominal segment VII with 2 wax plates. Cauda rounded and bearing 2-4 setae, usually with 4, 2 of which are about twice as long as the other 2.

Measurements: (In millimeters). A. [1 specimen, antennae 5-segmented]:

Body 1.6. Antennal segment III, 0.06; IV, 0.05; V, 0.08+0.02. RIV+V, 0.12; metatibiae, 0.37; metatarsomere II, 0.13.

B. [1 specimen, antennae 6-segmented]:

Body 3.3 Antennal segment III, 0.14; IV, 0.09; V, 0.11; VI, 0.13+0.03. RIV+V, 0.16. Metatibiae, 0.74; metatarsomere II, 0.20.

Collections: On roots of bald cypress (*Taxodium distichum* (L.) Rich.), Gainesville, Florida, 8-V-1979 (D. Culbert), apterous alienicola; 24-VIII-1979 (C. Riherd), apterous alienicola and alatoid nymphs; 3-XII-1979 (H. A. Denmark), apterous alienicola and alatoid nymphs; 18-XII-1979 (C. Riherd), apterous alienicola, alatoid nymphs and seuparae; 18-IV-1980 (H. A. Denmark), apterous alienicola and nymphs; 13-V-1980 (H. A. Denmark), apterous alienicola and nymphs. For collections of *G. imbricator* on beech see Smith (1974: 17).

Biology: Nymphs of fundatrices and/or fundatrispuriae have been collected on beech in North Carolina from 28 April to 24 November. Sexuparae have been collected "flying" from 18 November to 3 February in NC, PA, GA, and FL (Smith and Pepper 1968, Smith 1974).

Apterous viviparae have been collected on bald cypress at Gainesville, Florida from 8 May to 15 May the following year. Thus, it appears that *G. imbricator* can survive on bald cypress without returning to beech.

The ants *Pheidole moerens* (Wheeler) and *Solenopsis invicta* Buren (Formicidae) were observed tending *G. imbricator* on the roots of bald cypress in a greenhouse at Gainesville, Florida.

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A NEW SPECIES OF *SCAPTIA* (*SCAPTIA*) FROM BOLIVIA (DIPTERA: TABANIDAE)[1]

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ABSTRACT

Scaptia (*Scaptia*) *nigribella*, New Species, from Bolivia is described and figured. It is compared to the sympatric and also most similar congener *S.* (*S.*) *aureopygia* Philip.

RESUMEN

Scaptia (*Scaptia*) *nigribella*, una nueva especie de Bolivia es descrita e ilustrada. Es comparada a la coextensiva distribución del congénero similiar *S.* (*S.*) *aureopygia* Philip.

Scaptia Walker (Pangoniinae: Scionini) is predominantly an Australasian genus, with members also occurring in temperate and high altitude southern South America. Mackerras (1955, 1960) gave a complete discussion of classification, characteristics and distribution of the genus *Scaptia*, and Fairchild (1969) provided a key to and notes on the 4 South American subgenera of *Scaptia*. For South American species there are recent reviews of the subgenus *Pseudoscione* Lutz (Wilkerson and Coscarón, 1984) and the subgenus *Scaptia* (Coscarón and Wilkerson, in press). On a recent visit to Bolivia I collected a single, distinct species of *Scaptia* (*Scaptia*), but unfortunately, this collection was made too late to include it in the above review of the subgenus.

Scaptia (*Scaptia*) *nigribella* Wilkerson, NEW SPECIES
(Fig. 1-4)

A medium-sized nearly entirely black and black haired species with a sparsely grayish pollinose frons, face, and pleura. Scutum obscurely striped,

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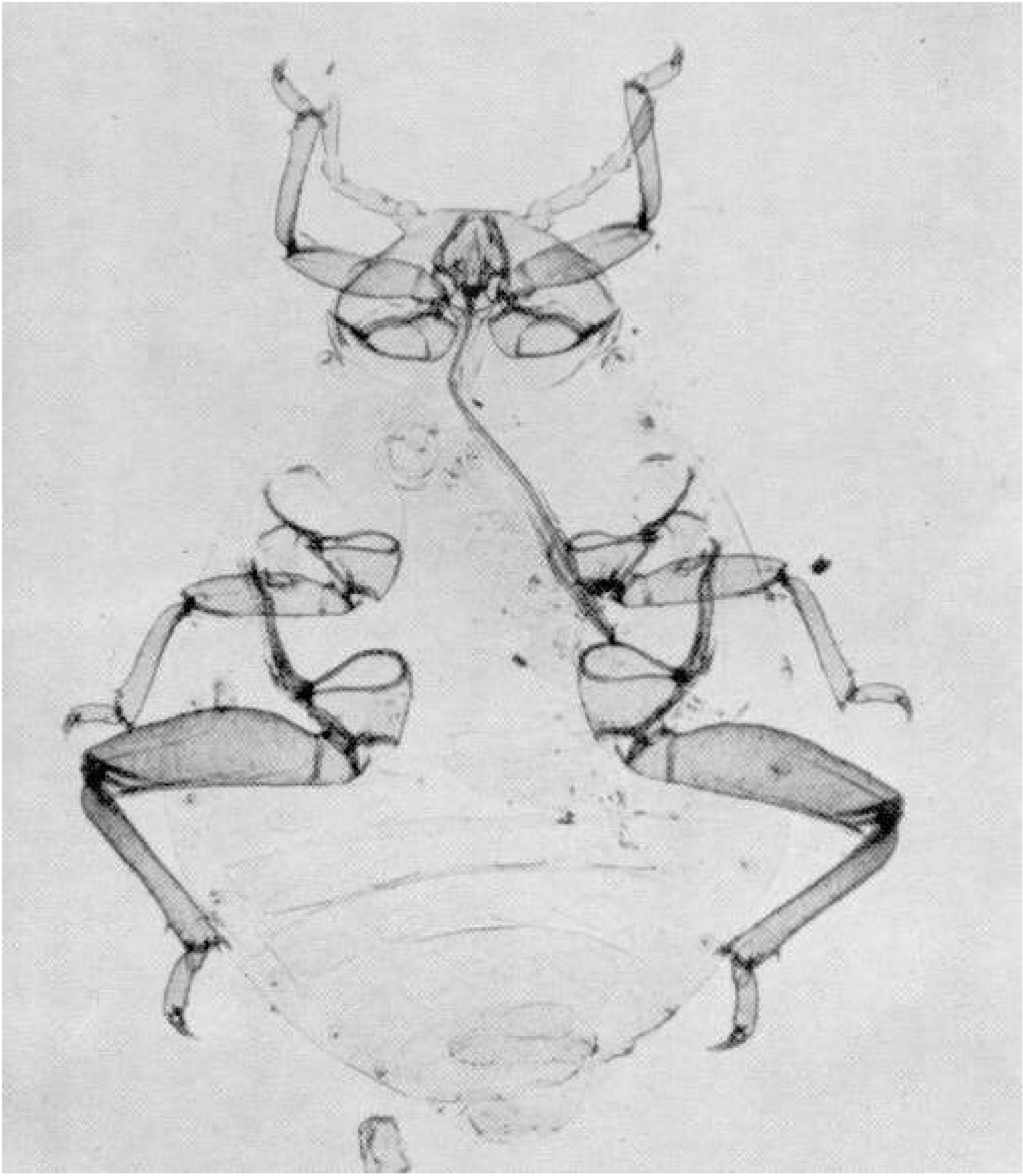

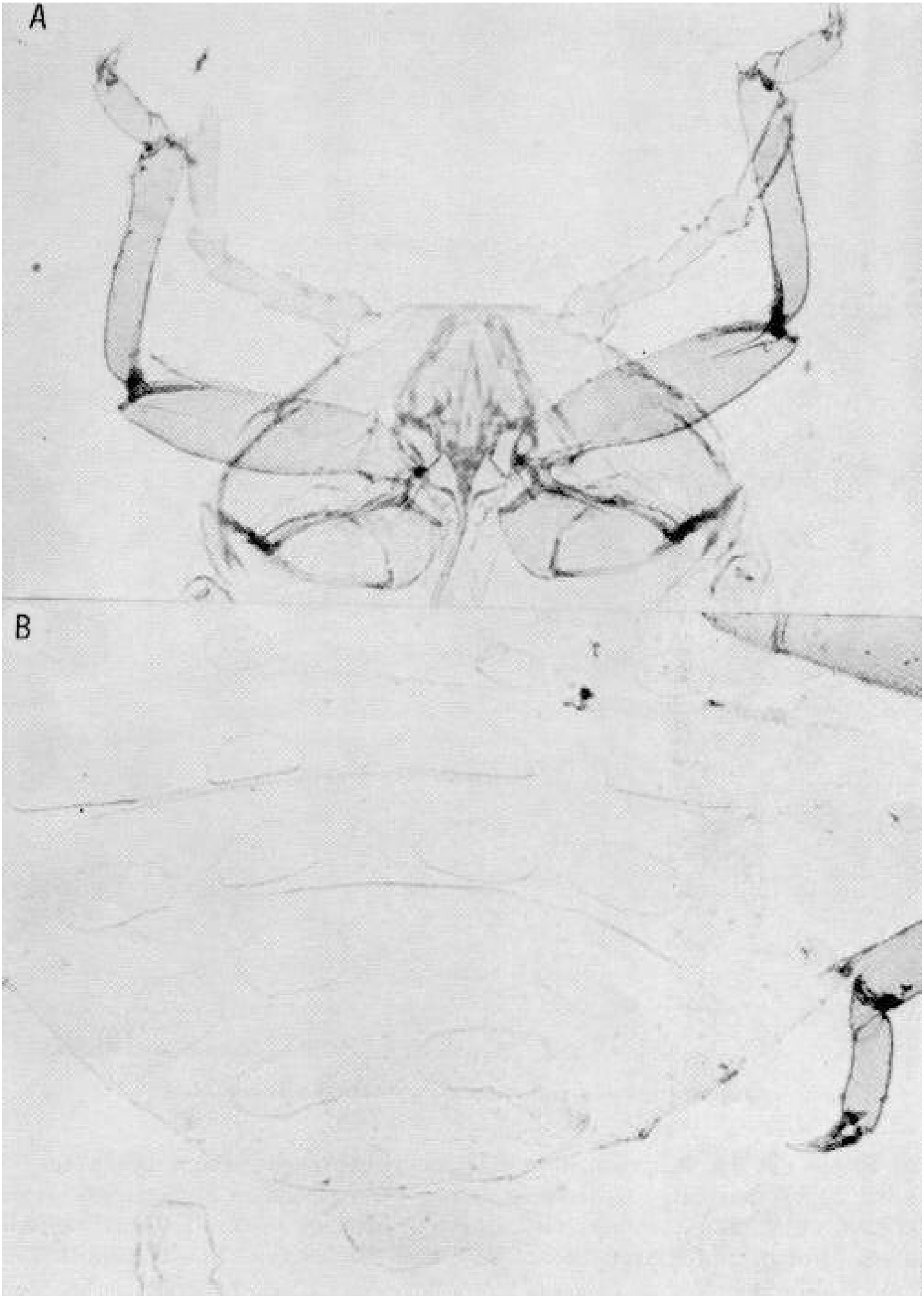
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