LIFE HISTORY AND SYNONYMY OF
GRYLOPROCIPHILUS IMBRICATOR (FITCH)
(HOMOPTERA: APHIDIDAE)¹

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ABSTRACT

Fagiphagus Smith, 1974, is considered to be a junior synonym of Grylloprocipilus Smith and Pepper, 1968, and Gryloprocipilus frosti Smith and Pepper, 1968, is a synonym of Eriosoma imbricator Fitch, 1851. Grylloprocipilus imbricato (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 alienlica. Pheidole moersens (Wheeler) and Solenopsis invicta Buren (Formicidae) have been found as ant tenders.

RESUMEN


Grylloprocipilus imbricato (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.

Grylloprocipilus imbricato Fitch, NEW COMBINATION
(Fig. 1, 2)

Eriosoma imbricato Fitch, 1951: 68:
Pemphigus imbricato.—Jackson, 1908: 189.
Schizoneura imbricato.—Davis 1913: 116.
Procipilus imbricato.—Hottes and Frison, 1931: 372.
Fagiphagus imbricato.—Smith, 1974: 14.

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Fig. 1. *Grylloprociphilus imbricato*, apterus alienicola.

Fitch (1851: 68) described *Eriosoma imbricato* from beech in New York. Since that time, *G. imbricato* 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 imbricato* Fitch from beech. Also, alate viviparae of *E. imbricato* 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 imbricatus* apterus aliencola. A.) Head and antennae. B.) Abdominal apex.

of bald cypress. We now believe *Poglyphagus* Smith to be a synonym of *Grylloprociphilus* Smith and Pepper and *G. frosti* to be a synonym of *Eriocephala imbricata*. Therefore, the new combination would be *Grylloprociphilus imbricatus* (Pitch).
Description

For descriptions of the fundatrices, fundatrigruminiae and first instars from fundatrigruminiae 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 b- or 6-segmented, if b-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. Metatibiae distinctly larger than other femora. Tarsal chetotaxy 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; metatarsosome 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; metatarsosome II, 0.20.


Biology: Nymphs of fundatrices and/or fundatrigruminiae 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.

References Cited


A NEW SPECIES OF SCAPTIA (SCAPTIA) FROM BOLIVIA (DIPTERA: TABANIDAE)²

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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.) auropygia 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.) auropygia Philip.

Scaptia Walker (Pangoniinae: Scionini) is predominantly an Australasian genus, with members also occurring in temperate and high altitude southern South America. Maeterlaria (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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