

A NEW GENUS AND NEW SPECIES OF FELT SCALES (HOMOPTERA: COCCINEA: ERIOCOCCIDAE) FROM TIERRA DEL FUEGO (CHILE)

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ABSTRACT

Telmatococcus igniumterrae **gen. nov.** et **sp. nov.** is described and illustrated based on the material collected from a sphagnum bog in the extreme southern part of South America (Tierra del Fuego). The new monotypic genus differs from all known genera of Eriococcidae in having short cylindrical truncated setae of the anal apparatus and pouches with numerous quinquelocular pores near the anal apparatus. The habitat of the new taxon is characterized.

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Key words: Homoptera; Eriococcidae; scale insects; taxonomy; morphology; new species; new genus; sphagnum bog.

RESUMEN

Un nuevo género y una nueva especie de eriocóccido (Homoptera: Coccinea: Eriococcidae) de Tierra del Fuego (Chile)

Se describe e ilustra *Telmatococcus igniumterrae* **gen. nov.** et **sp. nov.** basado en el material recolectado en una turbera de esfagno situada en el extremo sur de Sudamérica (Tierra del Fuego). El nuevo género monotípico se diferencia de los restantes géneros de Eriococcidae por tener setas cilíndricas cortas y truncadas en el aparato anal y bolsas con abundantes poros quinqueloculares cerca del aparato anal. También se describe el hábitat del nuevo taxón.

Palabras clave: Homoptera; Eriococcidae; taxonomía; morfología; nuevo género; nueva especie; turbera de esfagno.

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Introduction

Hodgson & Miller (2010) recently published a generic revision and key of the South American felt scales (Eriococcidae) and provided a survey of the literature. According to these authors, at least 72 species and 24 genera are known in the region. Most of these

species inhabit tropical and subtropical zones and feed mainly on various trees and shrubs. In November 2015, the second author studied the macroinvertebrate communities of *Sphagnum* bogs in the utmost southern part of South America. In a bog situated on Tierra del Fuego, he collected three females of a previously unknown felt scale. After preparation and study, we

consider that they belong to a new species and new monotypic genus in the Eriococcidae.

All specimens were taken from two of five quantitative samples of sphagnum substrata taken in a *Sphagnum magellanicum* habitat up to a depth of ca. 20 cm from the surface (sample area 1/20 m²). The substrata were washed in sieves (with smallest mesh 0.5 mm), and then the macroinvertebrates were extracted by flotation in a strong solution of NaCl combined with hand-sorting of the coarse fraction.

All material is deposited at the Zoological Institute, Russian Academy of Sciences.

Telmatococcus gen. nov.

<http://urn:lsid:zoobank.org:act:8A48FE28-A1BF-4286-B76F-25DBEE1F4092>

TYPE SPECIES: *Telmatococcus igniumterrae* sp. nov.

DESCRIPTION. Female. Antennae 4-segmented. Legs small, with shortened segments; claw without a denticle. Anal lobes small, sclerotized; anal cleft with two small pouches (perhaps homologous to that in *Apiococcus* Hempel, 1900) filled with quinquelocular pores. Anal apparatus with 6 peculiar, very broad cylindrical setae. Quinquelocular pores forming a submarginal band extending from hind spiracle to anal cleft and also sparsely scattered in medial zone of thoracic sternites. Macrotubular and microtubular ducts present. Conical and lanceolate setae of different sizes numerous on dorsum and in a marginal zone on venter.

DIAGNOSIS. The new genus differs from all known genera of Eriococcidae in having short, cylindrical truncated setae of anal apparatus and pouches with numerous quinquelocular pores in the anal cleft.

The new genus is similar to *Montanococcus* Henderson, 2007 recently described from New Zealand, in the submarginal band of quinquelocular pores on the venter and in enlarged setae of anal apparatus, but these setae are not cylindrical and truncated. Also, *Montanococcus* does not have pouches with quinquelocular pores.

ETYMOLOGY. The genus name is constructed from the Greek word “telma”, which means wet marshy place, and usual ending of scale insect names “coccus”; gender masculine.

Telmatococcus igniumterrae sp. nov. (Fig. 1)

<http://urn:lsid:zoobank.org:act:58EDCC7F-5AA4-4F92-896F-5BF7758A76E7>

MATERIAL. **Holotype:** female, Chile, Tierra del Fuego, between Lago Fagnano and Seno Almirantazgo, 54.49162°S / 68.89957°W, 103 m altitude, sphagnum bog, in *Sphagnum magellanicum* habitat, 4.XI.2015, A. Przhiboro; **paratypes:** 2 females on separate slides, with the same collecting data.

DESCRIPTION. Female. Body broadly oval, up to 2 mm long. Antennae very short, about 110 µm long, 4-segmented. Legs small, with shortened segments; hind coxae enlarged, lie on membranous mound, with numerous cuticular protuberances; claw without a denticle, but with a protruded basal part (see figure); claw digitules with clavate apex, equal in size and form. Anal lobes small, sclerotized, protruding; anal cleft with two small pouches, each with a small pouch filled by quinquelocular pores. Anal apparatus with 6 very broad cylindrical truncated setae similar in size with a diameter of anal ring and with two rows of spinulae (poorly visible). Spiracle with enlarged atrium filled by numerous quinquelocular pores. Quinquelocular pores (each with heavily sclerotized rim) forming a submarginal band extending from hind spiracle to anal cleft; also sparsely scattered medially on head and thoracic sternites. Macrotubular ducts, each about 25 µm long, sparsely scattered on both dorsum and venter except medially and submedially on venter. Microtubular ducts, each about 8 µm long, structure hard to discern, numerous, scattered on both dorsum and venter. Conical and lanceolate setae of various sizes, numerous on dorsum and in a marginal zone of venter; medial zone of venter covered with smaller and thinner conical setae and small flagellate setae. Additionally ventral surface of body and surface of legs covered with very numerous minute spinulae.

Males and morphology of larvae unknown.

ETYMOLOGY. The species name is an adjective based on the Latin translation of the collecting locality “Tierra del Fuego”.

HABITAT. The sampling locality is a small mountain meso-oligotrophic non-forested sphagnum bog surrounded by open woodland (Fig. 2). The type specimens were collected from moist substratum in the *Tetroncium magellanicum* - *Sphagnum magellanicum* association forming a carpet community predominated by *Sphagnum magellanicum* (Fig. 3). Two species of flowering plants, namely, *Schoenus ?andinus* (Cyperaceae) and *Tetroncium magellanicum* (Juncaginaceae), were abundant in the samples or/and on the perimeter of the sampling areas where the material of the new species was found. Several other plant species were also present but sparse, i.e., *Caltha appendiculata* (Ranunculaceae), *Chilotrimum diffusum* (Asteraceae), *Empetrum rubrum* (Empetraceae), *Nanodea muscosa* (Sanatalaceae), *Nothofagus antarctica*, *N. betuloides* (Nothofagaceae), *Pernettya pumila* (Ericaceae) and *Rostkovia magellanica* (Juncaceae). Most probably, the new taxon feeds on *Schoenus* species, which was the only angiospermous plant species occurring in the two samples but absent from all other (23) samples taken by the second author. Moreover, the type species of the related New Zealand genus *Montanococcus*, *M. graemei* Henderson, 2007, was collected from *Schoenus pauciflorus* (Cyperaceae).

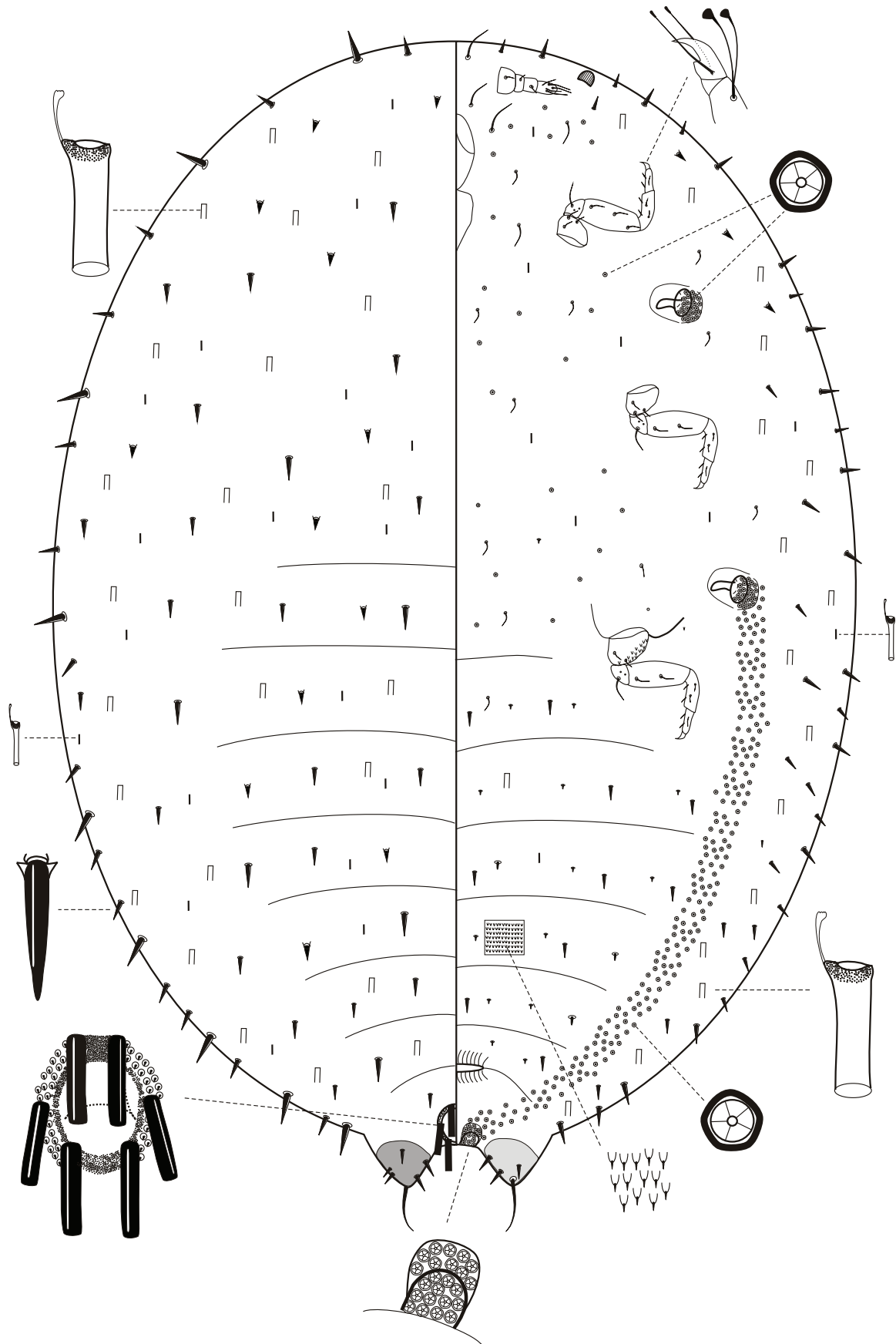


Fig. 1.— *Telmatococcus igniumterrae* **gen. nov.** et **sp. nov.**, holotype.

Fig. 1.— *Telmatococcus igniumterrae* **gen. nov.** y **sp. nov.**, holotype.



Figs. 2-3.— 2) The type locality, a small mountain meso-oligotrophic non-forested sphagnum bog surrounded by open woodland. 3) The habitat of the new genus, *Tetroncium magellanicum* - *Sphagnum magellanicum* association forming a carpet community predominated by *Sphagnum magellanicum* (the photo illustrates the exact point of sampling of the new genus).

Figs. 2-3.— 2) Localidad tipo, una pequeña montaña, no boscosa, con turbera meso-oligotrófica rodeada de bosque abierto. 3) Hábitat del nuevo género: asociación *Tetroncium magellanicum* - *Sphagnum magellanicum* que conforma una comunidad con predominio de *Sphagnum magellanicum* (la foto muestra el punto exacto de la toma de muestras del nuevo género).

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