

# A New Species of the Genus *Steatococcus* Ferris, 1921 (Homoptera, Coccinea: Margarodidae) with Some Additions to the Fauna of the Republic of Mali<sup>1</sup>

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**Abstract**—*Steatococcus hystrix* sp. n. (Margarodidae s. l.), collected in Mali on the stem of *Combretum glutinosum* Perrottet, 1828, is described and illustrated. A widely distributed Afrotropical soft scale (Coccidae) species, *Udinia catori* (Green, 1915), is recorded for Mali for the first time. Additional locality data are provided for another Afrotropical soft scale, *Pulvinaria tenuivalvata* (Newstead, 1911).

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Information about the scale insect fauna of Mali is very limited; 21 species from only three families have been reported up to now from this country according to the compilation on-line database ScaleNet (Garcia Morales et al., 2016). All these species are widely distributed Afrotropical and/or pantropical pests of agricultural and ornamental plants. As far as we know, no special study of the scale insect biodiversity in this sub-Saharan country has ever been performed, and the actual number of the scale insect species there is unknown. However, it is very likely that the desertification and catastrophic enlarging of the anthropogenic landscapes in Mali have resulted in depletion of the native fauna of scale insects (as well as that of most other groups of animals and plants). During winter and autumn of 2017 the second author, A.V. Stekolshikov, visited Mali twice, in the dry and wet seasons, correspondingly, in the course of the investigation of aphids (Aphidinea). Additionally, he collected 8 species of scale insects, most of which had been recorded from Mali. One of the collected species is new to science and is described below, whereas one more species, widely distributed in the Afrotropical Region, is recorded here from Mali for the first time.

All the collected material is deposited in the Zoological Institute, Russian Academy of Sciences, St. Petersburg (ZIN).

The numerical indices with “K” designate the collection number of female series and the corresponding series of microscopic slides.

Family **MARGARODIDAE** s. l.

Genus *Steatococcus* Ferris, 1921

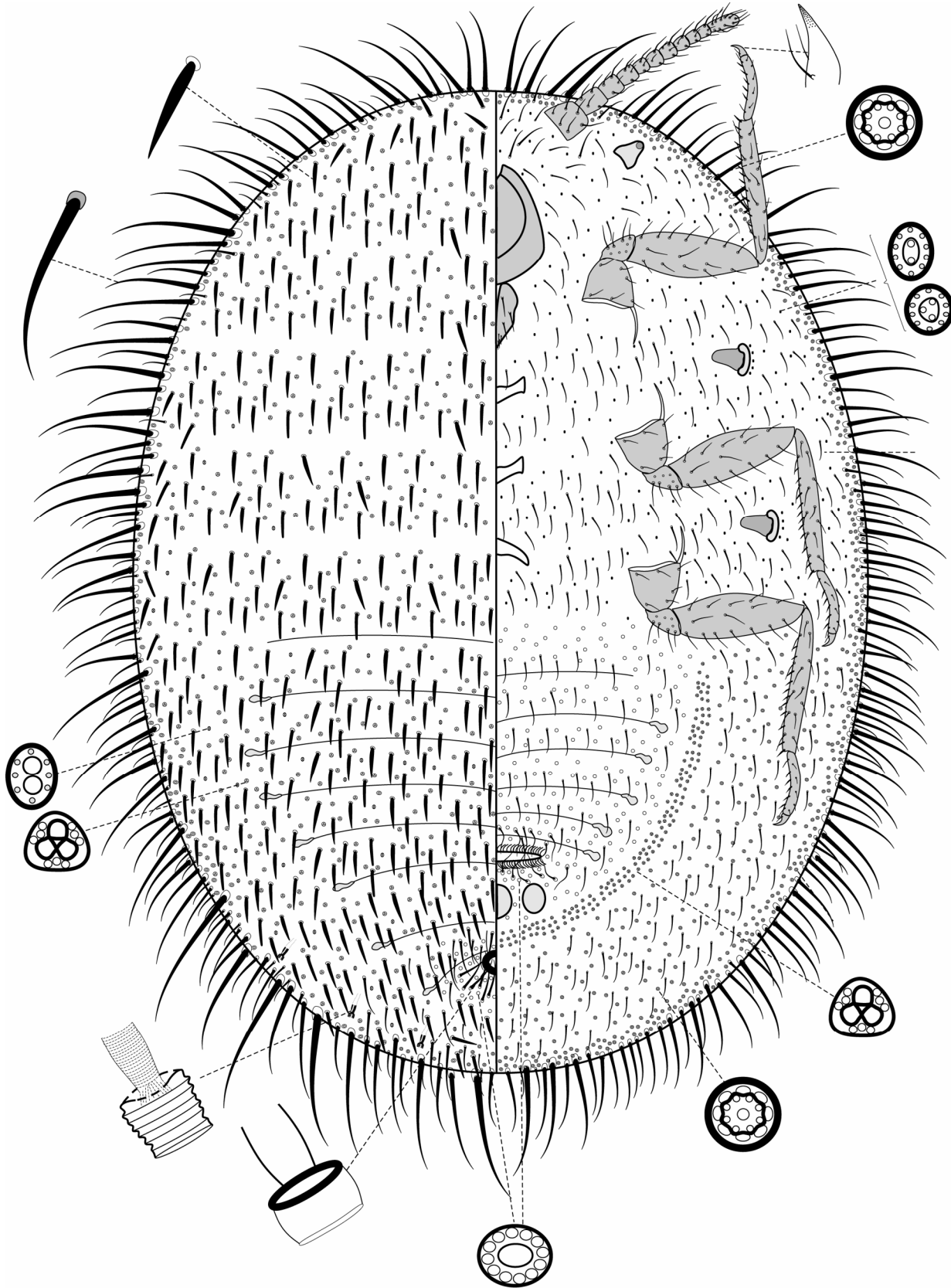
*Steatococcus hystrix*

Gavrillov-Zimin et Stekolshikov, sp. n.  
(see figure).

**Description. Female.** Body broad-oval, 5–7 mm long, in life evenly covered with soft loose wax. Cuticle of medial zone of abdominal sternites in mature female invaginating and forming marsupium.

Antennae 11-segmented. Legs well developed, without translucent pores; claw without denticle; claw digitules shorter than claw, with pointed apices. Anal apparatus consisting of simple sclerotized anal ring. Abdominal spiracles 3 in number, located on three posterior abdominal segments. Cicatrices numbering 3, large, oval, located posterior to vaginal opening. Multilocular pores, each about 8–10 μm in diameter, with trilocular center and 7–12 minute peripheral loculi, scattered over all of the dorsum, on ventral surface of cephalothorax, and, additionally, forming a band (several pores wide) along posterior and lateral margins of marsupium. Multilocular pores of the same size, but with bilocular center, occasionally present over entire dorsum and on ventral surface of cephalothorax. Multilocular pores, each about 12 μm in diameter, with internal ring of minute loculi and with peripheral ring of larger loculi, scattered in marginal and submarginal zones of ventral surface of body, and arranged in a band along entire body margin on dorsal and ventral sides. Multilocular pores, each about 12 μm in diameter, with large oval or triangular loculus in centre and with 9–12 smaller peripheral loculi, forming ag-

<sup>1</sup> This article was originally submitted by the authors in Russian and is first published in translation.



*Steatococcus hystrix* sp. n., holotype.

glomerations around anal and genital openings and also scattered in medial and submedial zones of abdominal sternites. Dorsal surface of body densely covered with thick spiniform setae. Long and thin flagellate setae, each about half as long as antenna, arranged in a band along all body margin. Ventral surface of body covered with numerous shorter and thinner flagellate setae.

**Males** unknown. Female ultimolarva differs from adult female in the 9-segmented antennae, absence of marsupium and marsupial band of multilocular pores.

**Taxonomic notes.** The genus *Steatococcus* belongs to the tribe Iceryini and combines marsupial species, whose females form intra-abdominal cuticular sac for bearing eggs till hatching of larvae. The taxonomic problems and the generic composition of the Iceryini were dealt with in the recent monograph on archaeococcids (Gavrilov-Zimin, 2018) provided also with modern keys to species of *Steatococcus* and related genera. The new species differs from all the African species of *Steatococcus*, as well as from all the African Iceryini, in the presence of numerous thick spiniform setae on the dorsum. Similar dorsal setae are known in some Neotropical Iceryini, but each of these Neotropical species has its specific features, for example, a characteristic combination of wax glands or cuticular tubercles, or lack of the marsupium (see figures in Unruch, 2008 and keys in Gavrilov-Zimin, 2018).

**Material.** Holotype, female, K 1422, **Mali**. *Mopti Province*: near Bandiagara escarpment, on a stem of *Combretum glutinosum* Perrottet, 1828, 9.X.2017 (A.V. Stekolshikov). Paratypes: female on separate slide, but with same collecting data as in holotype; 2 female ultimolarvae with same collecting data, each on separate slide.

**Distribution.** Republic of Mali.

**Etymology.** The name of the new species is a Latinized Greek masculine noun “hystrix” (“porcupine”).

## NEW FAUNISTIC DATA

### Family Coccidae

#### *Udinia catori* (Green, 1915)

**Material.** K 1337, **Mali**, about 60 km SW of Bamako, Kenieroba Village, on leaves of *Anacardium occidentale* Linnaeus, 1753, 20.II.2017, A.V. Stekolshikov.

**Distribution.** Recorded from several countries of Central and Eastern Africa; this is the first record for Mali.

#### *Pulvinaria tenuivalvata* (Newstead, 1911)

**Material.** K 1335, **Mali**, about 60 km SW of Bamako, Kenieroba Vill., on leaves and stems of *Andropogon gayanus* Kunth, 1829, 26.II.2017, A.V. Stekolshikov.

**Distribution.** A widely distributed African species, recorded for Mali in the catalogue by Ben-Dov (1993) without any information on the material and place of collection.

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