

G. PELLIZZARI, F. KOZÁR

**Two new species of *Greenisca* Borchsenius, 1948 (Coccoidea Eriococcidae)  
from Italy and Greece**

**Abstract** - Two new species of *Greenisca* Borchsenius (Coccoidea Eriococcidae) are described from Italy and Greece.

**Riassunto** - *Due nuove specie di Greenisca Borchsenius (Coccoidea Eriococcidae) in Italia ed in Grecia.*

Due nuove specie di *Greenisca* Borchsenius (Coccoidea Eriococcidae) raccolte rispettivamente in Italia e in Grecia vengono descritte e illustrate.

**Key words:** Coccoidea, Eriococcidae, *Greenisca alpina* sp.n., *Greenisca hellenica* sp.n..

The systematics of Eriococcidae at genus level appears rather controversial. Köhler (1998) in the Palaearctic Catalogue follows the works of Borchsenius (1949), Danzig (1980), Koteja & Zak Ogaza (1981) and Kosztarab & Kozár (1988) and recognises *Acanthococcus* Signoret, *Eriococcus* Targioni Tozzetti, *Greenisca* Borchsenius, *Gregoporia* Danzig, *Kawekia* Koteja & Zak-Ogaza and *Rhizococcus* Signoret as separate valid genera.

Williams (1985) considers the above reported genera (with the addition of *Gossyparia* Signoret and excluding *Gregoporia*) as synonyms of *Eriococcus*.

On the other hand, Miller & Miller (1992, 1993) and Miller & Gimpel (1996) discuss the systematics of the Eriococcidae and conclude that *Greenisca*, *Gregoporia*, *Kawekia* and *Rhizococcus* are synonyms of *Acanthococcus*.

According to Köhler (l.c.) 11 species are known in the Palaearctic Region in the morphologically related genera *Greenisca*, *Gregoporia*, *Kawekia*. Kozár & Hippe (1996) described one more species of *Greenisca* from Switzerland. Recently two apparently new species of *Greenisca* have been recorded in Italy and Greece. The description of new species can help to clarify the question of genera in this group of Eriococcidae.

## MATERIALS AND METHODS

The insects were collected from host plants. The holotype of *G. alpina* is deposited in the collection of the Institute of Agricultural Entomology, University of Padova, Italy, and the holotype of *G. hellenica* in the collection of the Plant Protection Institute, Hungarian Academy of Sciences Budapest, as microscopic slides.

*Greenisca alpina* Pellizzari, sp. n. (Fig.1)

MATERIAL EXAMINED: holotype female: Italy, Croce d'Aune (Belluno), m 1011 a.s.l., on leaves of Gramineae, 21.VIII.1990, slide n. 299/1. Paratypes: two females from the same place and host plant, slides n. 299/2, 299/3, deposited in the Institute of Agricultural Entomology, Faculty of Agriculture, University of Padova, Italy. Additional material: two females, Italy, Col Perer (Belluno), m 1028 a.s.l., on leaves of Gramineae, 16.VIII.1985, slides n. 124/1, 124/2.

DESCRIPTION OF ADULT FEMALE: living female enclosed in a white, felted eggsac. Mounted female elongate oval, 3.7 mm long and 1.56 wide. Anal lobes well developed, each lobe with an apical seta and three dorsal enlarged conical setae (two inside and one outside) 52 µm long.

DORSAL SURFACE: with 1 or 2 marginal enlarged conical setae present on VI and VII segment (totally 2 or 4 spines on the last segments). Each seta 30-45 µm long. Some minute and stiff spines on head. Minute pointed setae 6.4 µm long, scattered. Tubular ducts of two sizes (16 µm long, 9.6 µm wide, and 16 µm long, 4 µm wide respectively) scattered on head and thorax, less numerous on venter. Thick-walled five-locular pores, (3.2 µm in diameter), rarely trilocular, not numerous, scattered on the dorsal surface. Presence of dermal spinules on the central area of the last three segments. Anal ring with an incomplete double row of round pores and 4 pairs of setae.

VENTRAL SURFACE: antennae with 6 segments, 230 µm long (the third segment the longest, 97 µm long). Legs well developed. Hind trochanter + femur 200 µm long, hind tibia 135 µm long, hind tarsus 142 µm long. Hind coxa with translucent pores on outer half, trochanter with 2 pores, tibia with 4 setae; claw slender, 33 µm long, with a minute denticle near the apex; claws digitules slender and longer than the claw; tarsal digitules longer than claw. Multilocular pores numerous around the genital opening, five-locular pores (sometimes with 6-7 loculi) scattered. A group of 4-7 pores with 5-6 loculi anterior each spiracle. Cruciform pores rare on head and thorax. Tubular ducts of two sizes, same size as in dorsal surface, numerous, scattered on the whole ventral surface. Setae slender, forming a row on each abdominal segment, numerous on head, between the antennae (38-64 µm long).

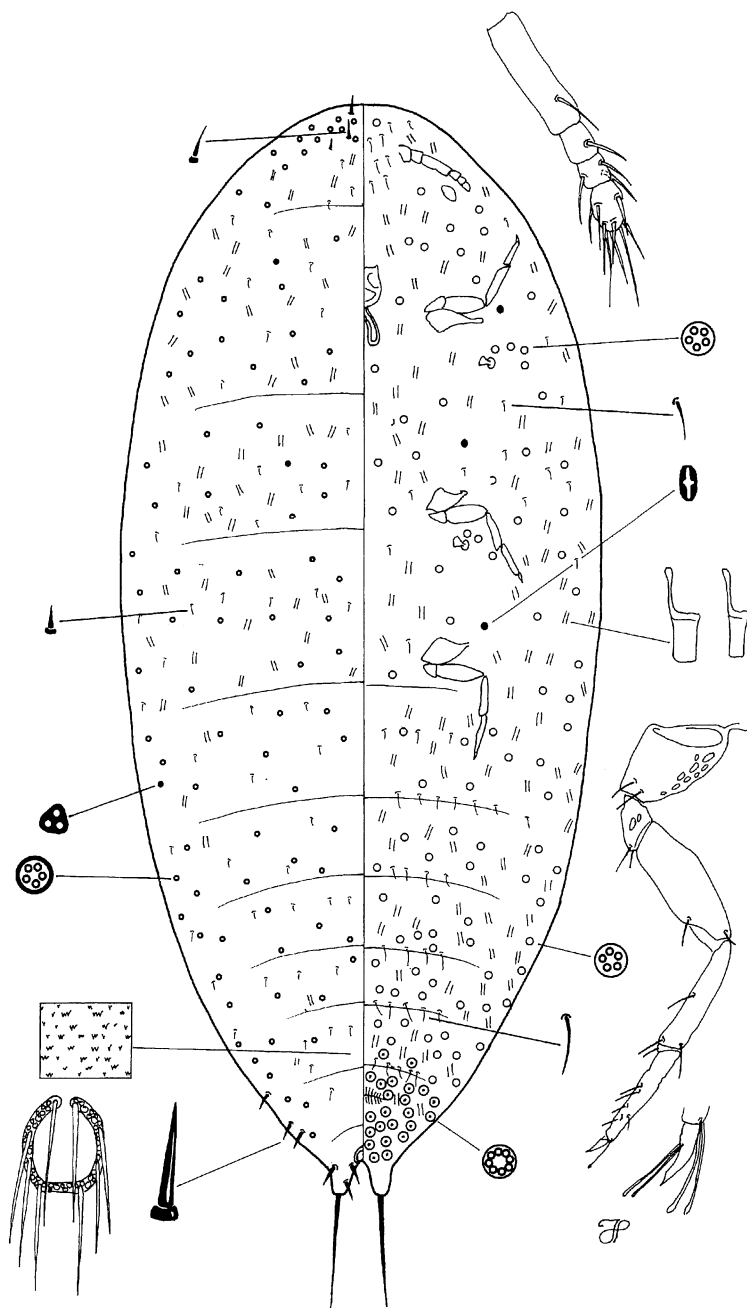


Fig. 1 - *Greenisca alpina* sp. n., female.

COMMENTS: *G. alpina* differs from other species of *Greenisca* in having 2-4 marginal enlarged conical spines on the last abdominal segments. Among the Palearctic Eriococcidae only *Kaweckia glyceriae* Green has marginal enlarged setae in the last abdominal segments, but they are truncate and with parallel sides, while in *G. alpina* they are conical and pointed. Besides the dorsal thick walled fivelocular pores are sparse, but not numerous as f.i. in *Greenisca gouxi* (Balachowsky) or *G. erwini* Kozár. It is near to *G. placida*, but has 3 enlarged conical setae on anal lobes (*G. placida* has 2) (Williams, 1985) and 2-4 enlarged conical setae on the margin of last abdominal segments (*G. placida* has none).

*DERIVATIO NOMINIS*: the epithet "*alpina*" is a Latin adjective meaning "pertaining to the Alps", as the species was collected in the eastern Italian Alps.

*Greenisca hellenica* Kozár, sp. n. (Fig. 2)

MATERIAL EXAMINED: holotype, female, Ialissos, Greece, 20. 10. 1996, Leg. Dr. B. Nagy (Kozár's collection No. 4704). Deposited at the Plant Protection Institute, Hungarian Academy of Sciences, Budapest.

DESCRIPTION OF THE ADULT FEMALE: mounted specimen 3.2 mm long and 1.5 mm wide.

DORSAL SURFACE: with 1-6 marginal spines with truncate apex, on each abdominal segments (18-32  $\mu\text{m}$  long). Cruciform pores in high number on the dorsal segments of thorax. Tubular ducts of two sizes (14-18  $\mu\text{m}$  long), numerous, scattered on dorsal and ventral surfaces. Microtubular ducts (5  $\mu\text{m}$  long) in high number on the dorsum and venter. Thick-walled five or seven-locular pores (diameter 7-8  $\mu\text{m}$ ) numerous, not arranged in groups. Small setae, 14  $\mu\text{m}$  long, scattered. Anal lobes well developed, with 2 inner spines and three outer spines (23  $\mu\text{m}$  long). Apical setae 173  $\mu\text{m}$  long. Anal ring (41  $\mu\text{m}$  wide) with an incomplete double row of round pores and with 6 setae, 8,55  $\mu\text{m}$  long.

VENTRAL SURFACE: eyes circular. Labium 62  $\mu\text{m}$ . Antennae 7 segmented, the lengths of the segments in microns ( $\mu\text{m}$ ): 60, 38, 58, 46, 17, 26, 36. Stylet loop three times longer than labium. Legs well developed. Hind coxa 84  $\mu\text{m}$  long, hind femur 135  $\mu\text{m}$  long, hind tibia 144  $\mu\text{m}$  long, hind tarsus 147  $\mu\text{m}$  long. Hind coxa with translucent pores on outer half, trochanter with 2 pores, tibia with 4 setae; claw slender, 33  $\mu\text{m}$  long, with a minute denticle near the apex; claws digitules slender and longer than the claw; tarsal digitules longer (43  $\mu\text{m}$ ) than the claw. Long slender setae, 46-103  $\mu\text{m}$  long, on venter. The diameter of anterior spiracles is 43  $\mu\text{m}$ . Ventral body margin with rare cruciform pores. Venter of thorax with scattered five-locular pores (diameter 7  $\mu\text{m}$ ), venter of abdomen with multilocular pores with 5-10 loculi (diameter 7-8  $\mu\text{m}$ ). Ten-locular pores numerous around the genital opening.

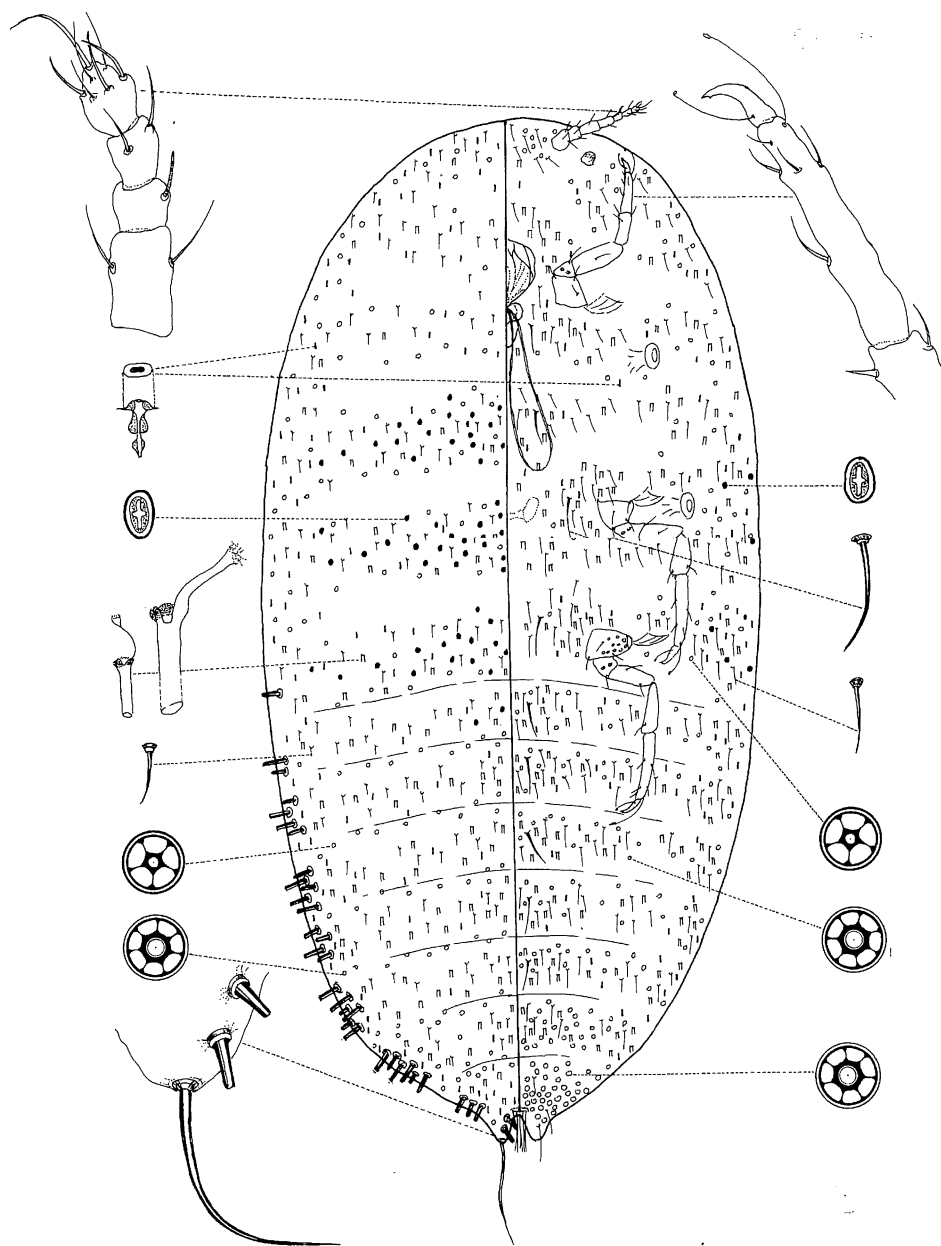


Fig. 2 - *Greenisca hellenica* sp. n., female.

COMMENTS: *G. hellenica* is similar to *K. glyceriae*, but has higher number of truncate marginal seta on each segment of the abdomen and numerous ten-ocular pores on the last abdominal segments of venter. This new species recalls the attention to the need for more intensive survey of the Eriococcidae fauna in Mediterranean Region.

*DERIVATIO NOMINIS*: the epithet "*hellenica*" is a Latin adjective meaning "pertaining to the Hellenic Region", as the species was collected in Greece.

#### ACKNOWLEDGMENTS

The Authors would like to thank the Hungarian Found for Research (OTKA No. T022005) for the financial support of this project. Many thank to Dr. B. Nagy providing us the insects collected in Greece, and to Z. Konczné Benedicty and P. Fontana for the drawings.

#### REFERENCES

- BORCHSENIUS N. S., 1949 - Pseudococcidae. Fauna USSR, v. VII. N.S. No 38. - Akad. Nauk, Moskow-Leningrad: 382 pp.
- DANZIG E. M. (1980) Coccoids of the Far East USSR. Nauka, Leningrad, 367 pp.
- KOSZTARAB M., KOZÁR F., 1988 - Scale Insects of Central Europe. - Akadémiai Kiadó, Budapest: 456 pp.
- KOTEJA J., ZAK-OGAZA B., 1981 - *Kaweckia* gen. n. in the Eriococcidae (Homoptera, Coccoidea) and notes on related genera. - Acta Zool. Cracov. 25: 501-518.
- KOZÁR F., 1983 - New and little known scale-insect species from Yugoslavia (Homoptera: Coccoidea). - Acta Zool. Acad. Sci. Hung. 29:139-149.
- MILLER D.R., GIMPEL M.E., 1996 - Nomenclatural changes in the Eriococcidae (Homoptera: Coccoidea). - Proc. Entom. Soc. Wash. 98:597-606.
- MILLER D.R., MILLER G.L., 1992 - Systematic analysis of *Acanthococcus* (Homoptera: Coccoidea: Eriococcidae) in the Western United States. - Trans. Amer. Entom. Soc. 11:1-106.
- MILLER D.R., MILLER G.L., 1993 - Eriococcidae of the Eastern United States (Homoptera). - Contrib. Amer. Ent. Inst. 27: 1-91.
- WILLIAMS D.J., 1985 - The British and some other European Eriococcidae (Homoptera: Coccoidea). - Bull. Br. Mus. Nat. Hist. (Ent.) 51: 347-393.

PROF. GIUSEPPINA PELLIZZARI - Istituto di Entomologia agraria, Università di Padova, Agripolis, Via Romea 16, 35020 Legnaro (PD), Italy. E-mail: plldll@agripolis.unipd.it

DR. FERENC KOZÁR - Plant Protection Institute, Hungarian Academy of Sciences, Herman Otto 15, H - 1525 Budapest, Hungary. E-mail: Koz2405@helka.iif.hu