New Scale Insects (Homoptera: Coccoidea) in the Greek Entomofauna

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ABSTRACT

Collection of scale insects in Greece in 1990 - 1991 provided 71 species. Among them, 31 species were new for the Greek fauna. The total number of known species is 143 in Greece. Host plant’s levels of infestation and phenological data are also presented. The results show that scale insect fauna of this country needs further intensive studies.

Introduction

The scale insect fauna of Greece is poorly known. According to Lindinger (1912), Koroneos (1934), Borchsenius (1966), Paloukis (1979), Argyriou (1983), Kozar (1985), Santas (1989) and Isaakidis (1936), 112 species have been identified. Certain species, cited in applied literature, however, require further study for confirmation. The present study aimed at investigating further the scale insect fauna in Greece.

Material and Methods

Two collection surveys were made during 1990-1991 in the areas of Central Macedonia, Attica, Voiotia, Phokis and the islands of Crete, Rhodes, Hydra and Aegina. The dry material and the microscopic slides have been deposited in the Collection of the Plant Protection Institute in Budapest, Hungary. During collection, data such as stage of insect development, sex, plant host and incidence of infestation (F), rated in a scale ranging 1-5 (Kozar and Victorin, 1978), were recorded. Most of the species were collected by the senior author. S.S. Paloukis and N. Papadopoulos participated in the collection of scale insects in the Macedonia region.

Results and Discussion

LIST OF SPECIES

ORTHEZIIDAE

Orthezia urticae (Linnæus), Naoussa, 24.10.1990, Mentha sp., and unidentified plant, female, larva, F = 4. It was reported earlier by Lindinger (1912).

MARGARODIDAE


PSEUDOCOCCIDAE

Balanococcus mediterraneus Kozar, Athens Ly-
cabetus, 17.10.1990, Gramineae sp., in the leaf sheath, female (pink color), male, larva, F = 3. It was reported earlier from Voula (Kozar, 1985).

* Balanococcus orientalis Danzig and Ivanova, Thessaloniki, 9.3.1991, Gramineae sp., *Alopeurus sp.*, in the leaf sheath, female, F = 1. It is a new species to the European fauna.


* Chorizococcus victorina* Kozar, Agios Prodrinos (Galatista), 25.10.1992, *Chrysopogon gryllus*, female (pink colour), larva, eggs, F = 1. It was reported earlier from Karavomilos (Kozar, 1985).

* Miroccopsis elongatus* Borchsenius, Athens (Lycaebitus), 17.10.1990. *Hyppopheria hirta*, in the leaf sheath, female, F = 1. It is a new species to the Greek fauna.


* Peliococcus sp.* Athens (Lycaebitus), 17.10.1990, *Piptatherum miliaceum*, on the leaves, female, larva, F = 1. Supposedly it is a new species to science.

* Phenacoccus bicerarius* Borchsenius, Heraklio, 19.10.1990, *Elymus (Pycnanthus) furcatus*, in the leaf sheath, female (pink colour), F = 2. It is a new species to the Greek fauna.


* Pseudococcus calculelaiae* (Maskell), Athens (Lycaebitus), 17.10.1990, *Morus sp.*, on the leaves, female, F = 1. It is a new species to the Greek fauna.


* Puto superbus* Leonardi, Thessaloniki, 9.3.1991, *Compositae sp.*, on the stem, second instar larvae, F = 1. Unidentified bush, female, F = 1. It was reported earlier by Argyriou (1983).


**ERIOCOCCIDAE**

* Acanthococcus greeni* (Newstead), Agios Prodrinos (Galatista), 25.10.1990, *Chrysopogon gryllus*, dead female, F = 1. It is a new species to the Greek fauna.


* Eriococcus buxi* (Fonscolome), Naoussa, 24.10.1990, *Buxus sp.*, female, F = 2. It is a new species to the Greek fauna.

* Gossyparia spuria* (Moreau), Naoussa, 24.10.1990, *Ulmus minor*, dead female, F = 1. It is a new species to the Greek fauna.


* Rhizococcus herbaceus* Danzig, Athens (Lycaebitus), 17.10.1990, *Piptatherum milaeceum*, in
the leaf sheath, female, $F = 1$. It was reported earlier in Voula (Kozar, 1985).

KERMESIDAE
Kermes ilicis (Linnaeus), Delphi, 21.10.1990, Quercus ilex, female, $F = 1$. It was reported earlier by Argyriou (1983).
* Kermes quercus (Linnaeus), Agios Prodromos (Galatista), 25.10.1990, Quercus sp., dead female, $F = 1$. It is a new species to the Greek fauna. Kermes vermilto (Planchon), Agios Prodromos (Galatista), 25.10.1990, Quercus cocciifera, dead female, $F = 1$. It was reported earlier by Argyriou (1983).

CEROCOCCIDAE
Pollinia pollini (Costa), Crete, 24.10.1990, Olea sp., female, $F = 1$. It was reported earlier by Argyriou (1983).

COCCIDAE (LECANIIDAE)
* Eulecanium citatum (Douglas), Agios Prodromos (Galatista), 25.10.1990, Quercus sp., dead female, $F = 1$. It is a new species to the Greek fauna.

* Parthenolecanium rufulum (Cockerell), Agios Prodromos (Galatista), 25.10.1990, Quercus sp., dead female, $F = 1$. It is a new species to the Greek fauna.

Pulvinaria betulae Linnaeus, Naoussa, 24.10.1990, Pyracantha coccinea, dead female, $F = 1$. It was reported earlier by Argyriou (1983).
* Pulvinariella mesembranthemi (Vallot), Heraklio (Ampelokipi), 18.10.1990, Mesembrianthemum sp., female, $F = 1$. It was reported earlier by Argyriou (1983).
* Saissetia oleae (Olivier), Knossos, 18.10.1990, Crataegus monogyna, dead female, $F = 1$. Malva silvestris, on the leaves, female, $F = 2$, Festuca sp., female, eggs, $F = 2$. It is a new species to the Greek fauna.
Sphaerolecanium prunastri (Fonscolombe), Knossos, 18.10.1990, Amygdalus communis, dead female, $F = 3$. It was reported earlier by Argyriou (1983).

DIASPIDIDAE
* Acanthomytillus jablochkowskyi Kozar and Matile - Ferrero, Agios Prodromos (Galatista), 25.10.1990, Chrysopogon gryllus, female (white color), $F = 2$. Thessaloniki (Rentziki), 5.3.1991, Chrysopogon gryllus, on the stem and in the leaf sheath, female, $F = 1$. Thessaloniki, 9.3.1991, Chrysopogon gryllus, female (white color), $F = 2$. It is a new species to the Greek fauna.
* Aonidia maroccana Balachowsky, - Thessalo-
niki, 9.3.1991, *Cyprus sp.*, on the branch, female, second instar larva, F = 3. It is a new species to the Greek fauna.

* Aonidiella citrina* (Coquillet), - Rhodes, 20.10.1990, *Laurus sp.*, female, F = 1. It is a new species to the Greek fauna.


* Aulacaspis rosae* (Bouche), Heraklio, 18.10.1990, *Rosa sp.*, on the branch, female, F = 3. It is a new species to the Greek fauna.

*Carulus sp* juniperi* (Bouche), Thessaloniki, 9.3.1991, *Cyprus sp.*, on the stem female, F = 1. It was reported earlier by Argyriou (1983) as *C. visci*.

*Carulus sp* minima* (Targioni - Tozzetti, Thessaloniki, 9.3.1991, *C. visci* sp., on the stem, female, F = 1. It was reported earlier from Greece by Kozar (1985).

*Disaspis osborni* (Newell and Cockerell), Knossos, 18.10.1990, *Platanus orientalis*, on the leaves and bark, female, F = 3. It is a new species to the Greek fauna.

*Disaspis echinocacti* (Bouche), Athens (Lycabetus), 17.10.1990, *Cactaceae sp.*, female, F = 1. It was reported earlier by Argyriou (1983).


*Dynaspidiotus greeni* Balachowsky, Knossos, 18.10.1990, *Osiris alba*, female, F = 1. It is a new species to the Greek fauna.


*Leucaspis pini* Hartig, Thessaloniki, 9.3.1991, *Pinus sp.*, female, second instar larvae, pupa, F = 1. It was reported earlier by Borchsenius (1966).


*Lineaspis ciliae* Balachowsky, Athens (Lycabetus), 21.10.1990, *Thuja sp.*, female, F = 1. It is a new species to the Greek fauna.

*Melanaspis inopinata* (Leonardi), Athens, 16.10.1990, *Cercis silicquastrum*, female, F = 1. It was reported earlier by Borchsenius (1966).

*Mehelaspis massiliensis* (Goux), Agios Prodomos (Galatista), 25.10.1990, *Vulpia bromoides*, female (orange and yellow color), F = 3. It is a new species to the Greek fauna.


*Quadraspidiotus ceceoni* Leonardi, Athens (Ly-
Nέα Ειδή Κοκκοειδών Εντόμων (Homoptera: Coccoidea) για την Ελληνική Πανίδα

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ΠΕΡΙΛΗΨΗ
Η γνώση της πανίδας των κοκκοειδών εντόμων της Ελλάδος είναι περιορισμένη. Για το λόγο αυτό έγινε προσπάθεια συλλογής και αναγνώρισης τέτοιων εντόμων κατά τη διετία 1990-91.

References

KEY WORDS: Fauna, Homoptera, Coccoidea, Greece, new records.
Κατά τη συλλογή αυτή συλλέχθησαν 71 είδη, που ανήκουν σε οκτώ οικογένειες, συγκεκριμένα στις Ortheziidae, Margarodidae, Pseudococcidae, Eriococcidae, Kermesidae, Cerococcidae, Coc-cidae και Diaspididae. Τα 31 ήταν νέα για την ελληνική πανίδα. Καταγράφηκαν επίσης το επίπε- 
δο προσβολής, τα φυτά ξενιστές, καθώς επίσης και φαινολογικά δεδομένα. Τα αποτελέσματα 
δείχνουν ότι η πανίδα των κοκκοειδών εντόμων στη χώρα μας χρειάζεται επιπλέον μελέτη.