

Observations on the Heteroptera and Homoptera Auchenorrhyncha of Sicily

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For some years the authors have been working respectively and on Auchenorrhyncha on terrestrial Heteroptera from Sicily, especially from well delimited areas of the Island: 1) the Iblei mountains (South-eastern Sicily), 2) the Etna volcano (Eastern Sicily), 3) the Peloritani mountains (North-Eastern Sicily) and the Nebrodi mountains (northern ranges). On the Etna, Peloritani and Nebrodi mountains we have made, for some years, both qualitative and quantitative observations in some chestnut, oak and beech woods in some grasslands; on the Iblei mountains we have made only qualitative observations in some characteristic habitats (as *Myrto-Lentischetum*, *Platano-Salicetum pedicellatae*, *Ammophiletum-Arundinaceae* etc.).

The data till now assembled (some already published, other in press and others in course of study) have increased the number of species known from Sicily; some of these were unknown also for Italy and others were new for science such as the Auchenorrhyncha *Jassargus lagrecai* D'Urso and *Doratura iblea* D'Urso and the subspecies *Arocephalus punctum siculus* D'Urso and *Rhytistylus proceps lavicus* D'Urso.

Actually the Sicilian Auchenorrhyncha count about 300 species and the terrestrial Heteroptera about 650 species but we think that these numbers will increase.

Our future research program consists of some observations in western Sicily, on the Madonie mountains, and in the small islands around Sicily, in order to obtain a more complete picture of the Rhynchota fauna from Sicily; this picture seems to be very interesting because Sicily has a peculiar paleogeographical history: this island was indeed at the boundary of the area more directly interested from the quaternary glacial periods and this fact has allowed some elements of cool climate, come to Sicily

through the apenninic ridgeline during the glacial period, to survive, as prof. La Greca has emphasized in his papers many times. The existence of an important prepliocenic thermophile component within the Sicilian fauna (paleomediterranean and paleotyrrenian elements), the climatic events of the Quaternary Age and the high number of characteristic habitats of Sicily, have permitted the establishment of a very differentiated fauna. The most significant elements of it are: 1) species that we must consider as real relics of the Tertiary Age (as the Auchenorrhyncha *Hecalus storai* (Lindb.) and *Melillia matsumuri* (Metc.) or the Heteroptera *Ectomocoris melanogaster* (Fieb.); 2) species of cool climate, more numerous on the northern Sicilian mountains (as *Acanthosoma haemorrhoidale* (L.)) and on the Etna mountain (as the species of the genus *Oncopsis* (*O. flavicollis* (L), *tristis* (Zett.) and *subangulata* (J. Shll)), living on *Betula aetnensis*, and *Atractotomus marcoi* Carapezza, on *Pinus laricio*), and very reduced on the Iblei mountains (only *Geocoris ater* (F.)); 3) we must remark, at last, the presence of neoendemic species (as *Jassargus lagrecai* D'Urso and *Liviopsallus tamaninii* Carapezza) and of several subspecies and races (*Rhytistylus proceps lavicus* D'Urso, *Arocephalus punctum siculus* D'Urso, *Copium clavicorne siculum* Tam.; neoendemisms and subspecies are the result of the final isolation of Sicily attained in the rather recent time, after the penultimate glaciation.

It is remarkable the high number of true endemic species (neo and paleoendemisms) of Auchenorrhyncha (about 6% of Italian species) (as the Delphacidae *Agriscula ankristofer* Asche and *Euryrsa forsicula* (Rem. / Asche); that is the result of the historical, paleogeographical and ecological conditions of Sicily.

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Computerized database of Heteroptera in Slovenia

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Faunistic data about the Heteroptera in Slovenia were only partially published in some older papers, the most recent one in a year 1960. On the other hand there are some collections with the material from this area in a Museum of Natural History in Ljubljana and some newer private collections. In order to register these faunistic data and similar data of other animal groups, to get better idea about the unexplored areas and to motivate collectors to search in such areas and to report on new findings we adapted the international EIS (European Invertebrate Survey) system and organized a computerized database for faunistic survey in Slovenia. There were prepared the geographic map of Slovenia (1:400.000) with the UTM grid printed in, species cards for files to fill in faunistic data manually and a special compu-

ter program, based on a system 1022. For this purpose we use the DEC-10 computer of the University of Ljubljana. The program is very versatile, the interactive mode of communication with the computer makes the use of this program easy even for nonspecialized users. From the database one can get a great variety of different printouts from a complete list of faunistic data for each selected group (e.g. Heteroptera) to the simple list of species, faunistic data for some selected region (UTM quadrant), data about references, collectors or even a simplified map of Slovenia with numbers of species found in a single UTM quadrant. There are 540 species of Heteroptera, now registered in this database from the region of Slovenia, but many parts of this region are still only little or even unexplored.

Distribution of scales in Greece

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Ninety species of scales have been recorded so far in Greece belonging to the families Diaspididae, Coccidae, Pseudococcidae, Kermesidae, Margorodidae, Asterolecaniidae and Lecanodiaspididae. Fifty five of them have been clearly identified. No systematic country - wide survey of these insects has ever been conducted. The scale pests on

different crop plants have been studied in the last two decades (1962-1982). Thus the scale pests of citrus, olive and deciduous trees have been identified. Also the distribution and biology of the economically most important scales have been studied.

The south part of the country is characterized by the scales of olive and citrus trees