

Contribution to the knowledge on the Auchenorrhyncha fauna of the Tuscanian-Emilian Apennines

Adalgisa GUGLIELMINO¹, Christoph BÜCKLE²

¹Department of Plant Protection, University of Tuscia, Viterbo, Italy

²Tübingen, Germany

Abstract

The results of several research trips in the Tuscanian-Emilian Apennines, covering a variety of biotopes from 250 up to 2000 m of altitude are presented: 184 taxa were found, including 2 new species for Italy, 3 new for northern Italy and 7 new for peninsular Italy.

Key words: biogeography, faunistics, taxonomy, ecology, vertical distribution.

Introduction

During our research trips 1998-2003 in Central Italy (Guglielmino *et al.*, 2005) one focal point lay on the mountain pastures of the high Apennine massives in Lazio and Abruzzo. In those ecologically quite clearly defined areas we found an association of Auchenorrhyncha taxa that was equally rather constant and characteristic. It was not surprising that many of these taxa are distributed in the Italian Alps as well. In addition however, we discovered some new taxa, which up to now seem to be endemic in the upper regions of Central Italy: *Rhopalopyx cigigas* Guglielmino, *Kelisia italica* Guglielmino et Remane and *Euscelis venitala* Remane, Bückle et Guglielmino - the last mentioned species distributed at medium altitude (about 1200 m).

For further investigation on the distribution of Auchenorrhyncha in Italian mountain areas, subsequently we chose an area in the Tuscanian-Emilian Apennines presenting equally quite high elevations (Monte Cimone, 2165 m; Monte Cavalbianco, 1853 m; Alpe di Succiso, 2017 m) and therefore similar ecological conditions as the high mountain ridges in Central Italy. This interesting area is situated approximately half-way between Maritime Alps and Central Apennines, and separated from both by sections of rather moderately high mountains in southeastern Emilia-Romagna, southern Toscana and northern Marche and Umbria on the one and in Liguria on the other side. Thus, in biogeographical respect a comparison between its Auchenorrhyncha fauna and that of the high mountain areas in Lazio/Abruzzo and in the Maritime Alps, respectively, should be particularly interesting.

Since there are only few data published on the Auchenorrhyncha of the Tuscanian-Emilian Apennines [except for some papers by Vidano (1965a; 1965b; 1982) concerning, however, only Typhlocybinæ], we extended our collection area ecologically beyond the high mountain pastures to meadows, forests and riverbeds at medium and low altitude and geographically in eastern direction up to Passo di Raticosa.

Materials and methods

The insects were collected in Toscana and Emilia-Romagna (provinces of Firenze, Lucca, Massa, Reggio Emilia, Modena, Bologna). The collection sites range between 250 and 2000 m, comprising mountain pastures, meadows, mixed deciduous forests, spring fens and river-bed-biotopes.

The samplings were carried out in 4 collecting trips (2002, 2005 and 2006) in June (24-29), August (9-17) and September (5) with a total of 30 localities (a few of them sampled 2 or 3 times).

We applied two collection methods: a) by entomological net and aspirator, b) directly by sight of single specimens by means of the aspirator.

Results and discussion

On 30 localities on the whole were found 184 taxa, but for some of them it was impossible to attain to a safe specific attribution. Among the collected taxa, 2 [*Aphrodes diminuta* Ribaut and *Rhopalopyx adumbrata* (C. Sahlberg)] are new for the fauna of Italy, 3 for northern Italy [*Tachycixius cf. remanei* D'Urso, *Kybos strigilifer* (Ossiannilsson), *Zygina ordinaria* (Ribaut)] and 7 for peninsular Italy [*Trigonocranus emmeae* Fieber, *Ditropsis flavipes* (Signoret), *Macropsis remanei* Nickel, *Erythria cf. alpina* (Vidano), *Ossiannilssonola callosa* (Then), *Eupteryx immaculatifrons* (Kirschbaum), *Hauptidia distinguenda* (Kirschbaum)]. We follow the formal division of continental Italy in a northern and a southern (peninsular) part applied by D'Urso (1995), even if just in the region investigated here such a division makes little sense with often a few-kilometer-distance deciding if a locality is to be defined as "south" (all localities in Tuscany) or "north" (localities in Emilia).

Typical elements of the mountain pasture fauna were *Kelisia monoceros* Ribaut, *Dicranotropis divergens* (Kirschbaum), *Neophilaenus gr. albipennis* (F.), *Emelyanoviana mollicula* (Boheman), *Rh. adumbrata*, *Arocephalus longiceps* (Kirschbaum), *Psammotettix gr. helvolus* (Kirschbaum), *Doratura stylata* (Boheman),

Adarrus exornatus Ribaut, *Diplocolenus bohemani* (Zetterstedt). From these taxa only *Rh. adumbrata* seems to be absent in Central Italy. On the other hand many typical taxa of the mountains of Central Italy [for instance *Peltonotellus quadrivittatus* (Fieber), *Anaceratagallia venosa* (Fourcroy), *Nanosius chloroticus* (Melichar), *Euscelis distinguendus* (Kirschbaum), *Diplocolenus frauenfeldi* (Fieber), *Verdanus monticola* (Linnavuori)] were lacking in our material, perhaps, however, only due to insufficient research intensity.

In the medium high and low situated localities were collected some species which there may have their southern distribution limit as *Kelisia vittipennis* (J. Sahlberg), *Javesella discolor* (Boheman), *E. cf. alpina*, *Zyginidia pullula* (Boheman).

Rh. cigigas, *K. italica* and *E. venitala*, species described from the Central Apennines and perhaps endemic there, could not be found in the collecting area.

Acknowledgements

We thank Prof. R. Remane for generous help in the identification of the collected material and a lot of valuable advice. This study was supported by a grant of the University of Tuscia: 60%.

References

- D'URSO V., 1995.- Homoptera Auchenorrhyncha. In: *Checklist delle specie della fauna Italiana*, 42 (MINELLI A., RUFFO S., LA POSTA S., Eds).- Calderini, Bologna, Italy.
- GUGLIELMINO A., BÜCKLE C., REMANE R., 2005 - Contribution to the knowledge of the Auchenorrhyncha fauna of Central Italy (Homoptera, Fulgoromorpha et Cicadomorpha).- *Marburger Entomologische Publikationen*, 3 (3): 13-98.
- VIDANO C., 1965a.- Sulle Forcipata transalpine e cisalpine con descrizione di specie nuove (Homoptera, Typhlocybinae).- *Bollettino di zoologia agraria e Bachicoltura*, 6: 37-60.
- VIDANO C., 1965b.- A contribution to the Chorological and Oecological knowledge of the European Dikraneurini (Homoptera Auchenorrhyncha).- *Zoologische Beiträge*, 11: 343-367.
- VIDANO C., 1982.- Contributo alla conoscenza delle Zyginidia d'Italia (Homoptera, Auchenorrhyncha, Typhlocybinae).- *Memorie della Società entomologica Italiana*, 60: 343-355.

Corresponding author: Adalgisa GUGLIELMINO (e-mail: guglielm@unitus.it), Department of Plant Protection, University of Tuscia, via S. Camillo de Lellis, I-01100 Viterbo, Italy.