

## Further contribution to the earwig and termite (Insecta: Dermaptera et Isoptera) fauna of Albania and Macedonia

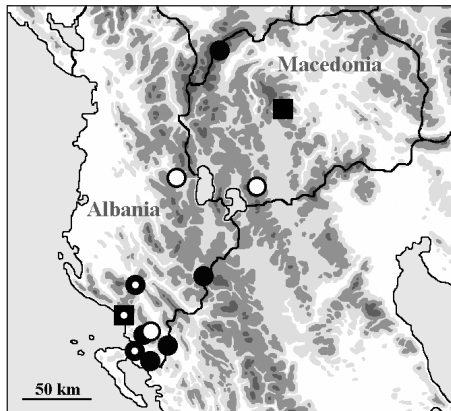
DÁVID MURÁNYI

**ABSTRACT:** During two tours to Albania and Macedonia in October of 2013, five species of Dermaptera and one species of Isoptera were collected. *Forficula decipiens* Gené, 1832 and *Kaloterms flavicollis* (Fabricius, 1793) are new to the fauna of Albania. Besides enumeration of the faunistical data, notes on the Balkan distribution and ecology of the six species are also given.

### Introduction

Very recently, material of Embiidina, Dermaptera, and Isoptera, collected during the last ten year’s Balkan research by the Hungarian Natural History Museum and the Hungarian Academy of Sciences, were enumerated (MURÁNYI 2013). In the discussion of that work, I concluded that our knowledge on the Balkan distribution of earwigs and termites is rather poor. This statement has been verified during two collecting tours taken this October to Albania and Macedonia: additional new country records and rare species were found despite that we were searching primarily for Trichoptera and Plecoptera.

In this second paper I report these new autumnal data, with some notes on the distribution and ecology of the six species found. The localities are shown on a map of the Central-West Balkans (Fig. 1).



**Fig. 1.** Collecting sites in Albania and Macedonia – square with central dot = *G. obtusangula*, *F. auricularia*, *F. decipiens* and *K. flavicollis*; full square = *A. media*; circle with central dot = *L. minor*; open circle = *G. obtusangula*; full circle = *F. auricularia*

## Material and methods

Specimens were collected by singling, with beating sheet or sweeping net. They are stored in 70% ethanol and deposited in the Collection of Lesser Insect Orders, Department of Zoology, Hungarian Natural History Museum (HNHM).

Distributional data were discussed after MURÁNYI (2013), that based on BRINDLE & FRIESE (1964), HARZ & KALTENBACH (1976), HELLER (2004, 2009), STEINMANN (1989, 1990, 1993), and US & MATVEJEV (1967). Nomenclature follows STEINMANN (1989, 1990, 1993) and HARZ & KALTENBACH (1976); full list of synonymy can be found in those works.

**Abbreviations:** PJ = Péter Juhász, TK = Tibor Kovács, DM = Dávid Murányi, GP = Gellért Puskás.

## Results

### DERMAPTERA

*Labia minor* (Linnaeus, 1758) – **Albania**, Sarandë district, Ksamil, rocky seashore N of the village, N39°47.543', E20°00.168', 0 m, 12.10.2013 (/40), PJ-TK-DM-GP: 1♀; Tepelenë district, Tepelenë, garden of Hotel Tepelenë in the downtown, N40°17.649', E20°01.256', 205 m, 14.10.2013 (/47), PJ-TK-DM-GP: 1♂.

Remarks: This cosmopolitan species is known from all Balkan countries with the exception of Kosovo and Macedonia. The new Albanian localities are warm and low elevation habitats.

*Apterygida media* (Hagenbach, 1822) – **Macedonia**, Vardar region, Jakupica Mts, Nežilovo, alder gallery of Babuna Stream S of the village, N41°38.238', E21°27.368', 630 m, 03.10.2013 (/15), TK-DM: 3♂.

Remarks: This widespread European species is known from most Balkan countries, but from Macedonia just currently reported (MURÁNYI 2013). The new locality is a similar habitat to other recent Balkan sites, and specimens belong to the macrolabic form.

*Guanchia obtusangula* (Krauss, 1904) – **Albania**, Librazhd district, Qukës Shkumbin, shore bush at a sidespring outlet of Shkumbin River at the quarry, N41°05.786', E20°26.551', 380 m, 11.10.2013 (/32), PJ-TK-DM-GP: 1♀; Sarandë district, Borsh, plane trees and streamshore bush along Ixuur Spring and its outlet stream in the village, N40°03.686', E19°51.462', 105 m, 12.10.2013 (/34), PJ-TK-DM-GP: 3♂; Delvinë district, Gjerë Mts, Muzinë, Syri i Kaltër, streamside plane tree gallery SW of the village, N39°55.286', E20°11.330', 155 m, 13.10.2013 (/42), PJ-TK-DM-GP: 1♂1♀. – **Macedonia**, Pelagonia region, Pelister Mts, Nižepole, brookshore alder trees at the ski station, N40°58.787', E21°15.218', 1375 m, 02.10.2013 (/8), TK-DM: 1♂ (escaped during photographing).

Remarks: This Central and East Mediterranean species was known from Slovenia, Croatia, Montenegro, and Albania in the Balkans, and just currently reported from Macedonia (MURÁNYI 2013). Contrary to a single specimen found during our last ten year's survey, this October we caught it relatively frequently. Its new habitats are quite diverse: Albanian ones are of low elevation Mediterranean sites while the Macedonian is a high montane, cold brookshore. All males are macrolabic (Fig. 2), contrary to the brachylabic specimen from Macedonia (MURÁNYI 2013: Figs 29, 31).



Fig. 2. Macrolabic male of *Guanchia obtusangula* (Krauss, 1904), Pelister Mts, Macedonia

***Forficula auricularia*** Linnaeus, 1758 – **Albania**, Sarandë district, Borsh, plane trees and streamshore bush along Ixuur Spring and its outlet stream in the village, N40°03.686', E19°51.462', 105 m, 12.10.2013 (/34), PJ-TK-DM-GP: 2♂; Sarandë district, Shkallë, shore vegetation of Pavillë River NW of the village, N39°41.607', E20°06.992', 20 m, 12.10.2013 (/38), PJ-TK-DM-GP: 1♂; Delvinë district, Gjerë Mts, Bistricë, karst forest at a spring E of the village, N39°55.125', E20°08.799', 105 m, 13.10.2013 (/41), PJ-TK-DM-GP: 1♀; Gjirokastër district, Tsamantas Mts, Sotirë, streamside plane tree gallery in the village, N39°49.150', E20°21.612', 500 m, 13.10.2013 (/44), PJ-TK-DM-GP: 1♂; Kolonjë district, Grammos Mts, Rehovë, forest edge E of the village, N40°20.111', E20°43.467', 1445 m, 15.10.2013 (/58), PJ-TK-DM-GP: 1♀. –**Macedonia**, Polog region, Šar Planina, Vešala (Veshallë), streamside bush at the village, N42°03.865', E20°50.866', 1290 m, 01.10.2013 (/2), TK-DM: 1♂; Polog region, Šar Planina, Bozovce, woody pasture W (above) of the village, N42°03.125', E20°49.377', 1350 m, 01.10.2013 (/3), TK-DM: 1♂1♀.

Remarks: This cosmopolitan species is known from all Balkan countries. The Macedonian, high montane specimens are brachylabic, while the Albanian, lowland ones have rather large macrolabic forceps.

***Forficula decipiens*** Gené, 1832 – **Albania**, Sarandë district, Borsh, plane trees and streamshore bush along Ixuur Spring and its outlet stream in the village, N40°03.686', E19°51.462', 105 m, 12.10.2013 (/34), PJ-TK-DM-GP: 2♂1♀.

Remarks: This Holomediterranean species was known from Croatia, Romania, Montenegro, and Greece in the Balkans; it is new to the fauna of Albania. Both our earlier sites (MURÁNYI 2013) and the present locality are bushy habitats close to the seashore. The Albanian habitat was the single collecting site where we found together more than one earwig species: it co-occurred with *G. obtusangula* and *F. auricularia*.

## ISOPTERA

*Kalotermes flavicollis* (Fabricius, 1793) – **Albania**, Sarandë district, Borsh, garden along the outlet stream of Ixuur Spring in the village, N40°03.686', E19°51.462', 105 m, 11.10.2013 (/34A), PJ-TK-DM-GP: 1♂.

Remarks: This Holomediterranean species was known from Croatia and Greece in the Balkans; it is new to the fauna of Albania. The male specimen was caught at a lamp on house wall during a warm night before storm. The surrounding areas are dry, seaside Mediterranean karst mountains.

**Acknowledgements:** Thanks are due to my friends who collected most of the present specimens during our tours: Péter JUHÁSZ (BioAqua Pro Ltd, Debrecen), Tibor KOVÁCS (HNHM Mátra Museum), and Gellért PUSKÁS (Hungarian Natural History Museum, Budapest). The tours were supported by János OLÁH (Sakertour, Debrecen), who should receive special thanks.

### References

- BRINDLE, A. & FRIESE, G. (1964): Ergebnisse der Albanien-Expedition 1961 des Deutschen Entomologischen Institutes. 18. Beitrag. Dermaptera. – Beiträge zur Entomologie, 14(3–4): 233–238.
- HARZ, K. & KALTENBACH, A. (1976): Die Orthopteren Europas III. The Orthoptera of Europe III. – Dr. W. Junk B.V., The Hague, 434 pp.
- HELLER, K.-G. (2004): Orthopteroid orders. – Fauna Europea version 1.0, <http://www.faunaeur.org>
- HELLER, K.-G. (2009): Orthopteroid orders. – Fauna Europea version 2.0, <http://www.faunaeur.org>
- MURÁNYI, D. (2013): Data to three insect orders (Embiidina, Dermaptera, Isoptera) from the Balkans. – Opuscula Zoologica, Budapest, 44(Supplementum 1): 167–186.
- STEINMANN, H. (1989): Dermaptera. Catadermaptera II. – Das Tierreich, 105: 1–504.
- STEINMANN, H. (1990): Dermaptera. Eudermaptera I. – Das Tierreich, 106: 1–558.
- STEINMANN, H. (1993): Dermaptera. Eudermaptera II. – Das Tierreich, 108: 1–711.
- US, P. & MATVEJEV, S. (1967): Orthopteroidea. – Catalogus Faunae Jugoslaviae, 3(6): 1–45.

Dávid MURÁNYI  
Hungarian Natural History Museum  
H-1088 BUDAPEST, Hungary  
Baross u. 13.  
E-mail: [muranyi@zool.nhmus.hu](mailto:muranyi@zool.nhmus.hu)