

# Investigation of Heteroptera fauna in Yugoslavia

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**ABSTRACT** About 1070 species of Heteroptera is recorded in Yugoslavia up to now. All regions of the country are not explored equally due to unsystematic examinations through the whole territory. The map (Fig. 1, UTM 10 x 10 km) shows that Slovenia, Serbia and Macedonia are the best explored regions. The biogeographical variety of the Heteroptera fauna is illustrated by several distribution maps of characteristic species (Figs. 3 - 9).

**IZVLEČEK** ISTRAŽENOST FAUNE HETEROPTERA U JUGOSLAVIJI U Jugoslaviji je do sada zabeleženo oko 1070 vrsta Heteroptera. Međutim, kako istraživanja nisu bila ravnomerna, a često ni sistematična, pojedini delovi Jugoslavije nisu jednako proučeni, što se vidi i na posebnoj karti (UTM 10 x 10 km), (Fig.1). Najistraženije su Slovenija, Srbija i Makedonija. Biogeografska raznovrsnost faune Heteroptera ilustrovana je na nekoliko karata rasprostranjenja karakterističnih vrsta (Fig. 3 - 9).

So far in Yugoslavia about 1070 species of Heteroptera are registered. However, since the researches were not consistent and often not systematic, some parts in Yugoslavia were not investigated uniformly. This is evident in the special map (UTM 10 x 10 km) (Fig. 1). The best investigated areas are in Slovenia, Serbia and Macedonia. From the map it is also evident that in Croatia the work was predominantly done in Dalmatia. The Adriatic littoral was always attractive for many naturalists and entomologists, and for that reason is relatively well investigated. Petar NOVAK has contributed mostly to the present day knowledge of the Heteroptera fauna in Dalmatia. Unfortunately, during recent decades the research was done only to a small extent in this area.

The registered localities in this map resulted through the references studied [the most important: APFELBECK (1891), GOGALA & GOGALA (1986, 1989), GOELLNER-SCHIEDING (1978), JOSIFOV (1986), NOVAK & WAGNER (1951, 1955), PROTIĆ (1988/89)], as well the survey and listing of collections in the Natural History Museum in Belgrade [the collection of Nicholas KORMILEV (PROTIĆ, 1987) and a new collection being formed in

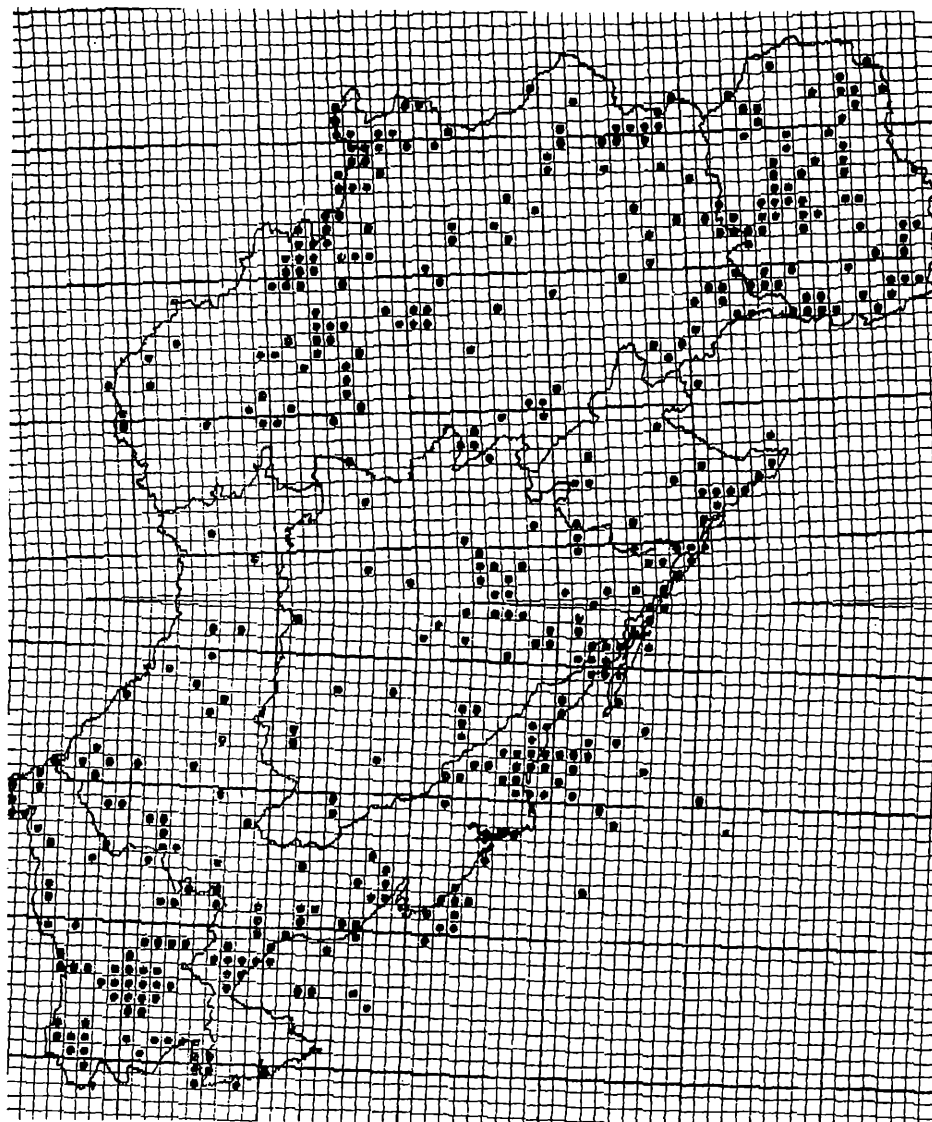


Fig. 1. The level of exploration of the Heteroptera fauna in Yugoslavia (UTM 10 x 10 km).

the last decade], then the collection in the Land Museum of Bosnia and Herzegovina in Sarajevo [for the most part the specimens were collected by Victor APFELBECK], as well smaller collections in the Institute for Biological Research (PROTIĆ, 1986) and the Institute for Plant Protection (PROTIĆ, 1986a) - both in Belgrade. All together, 430 localities are dealt with.

The biogeographical variety of the Heteroptera fauna in Yugoslavia is illustrated by several distribution maps of characteristic species (Fig. 3 - 9).

All maps and the graph were drawn by Milan ŽIVKOVIĆ, a technician in the Natural History Museum in Belgrade.

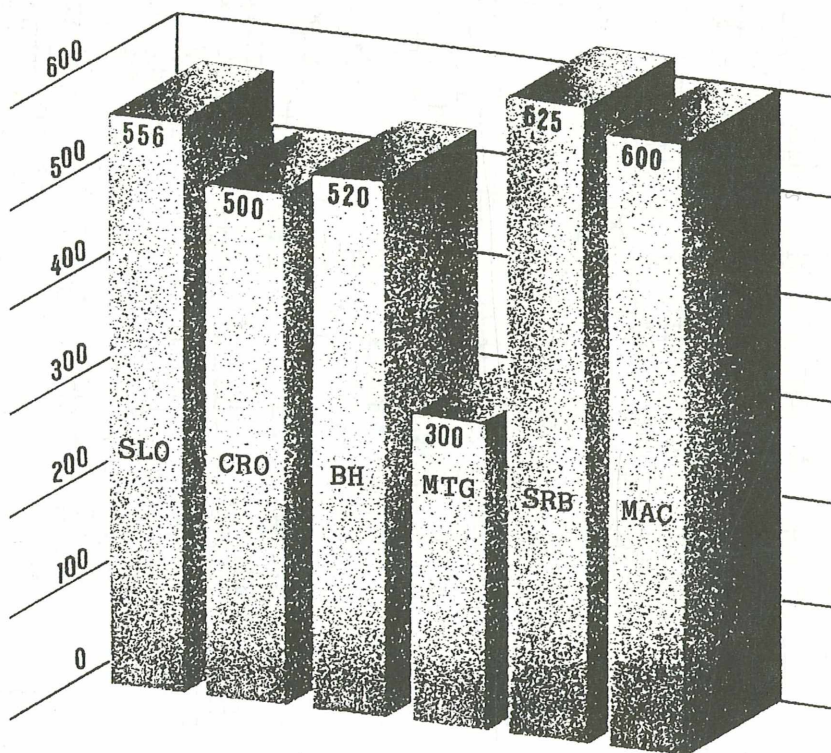


Fig. 2. - The number of studied species, plotted for each republic.

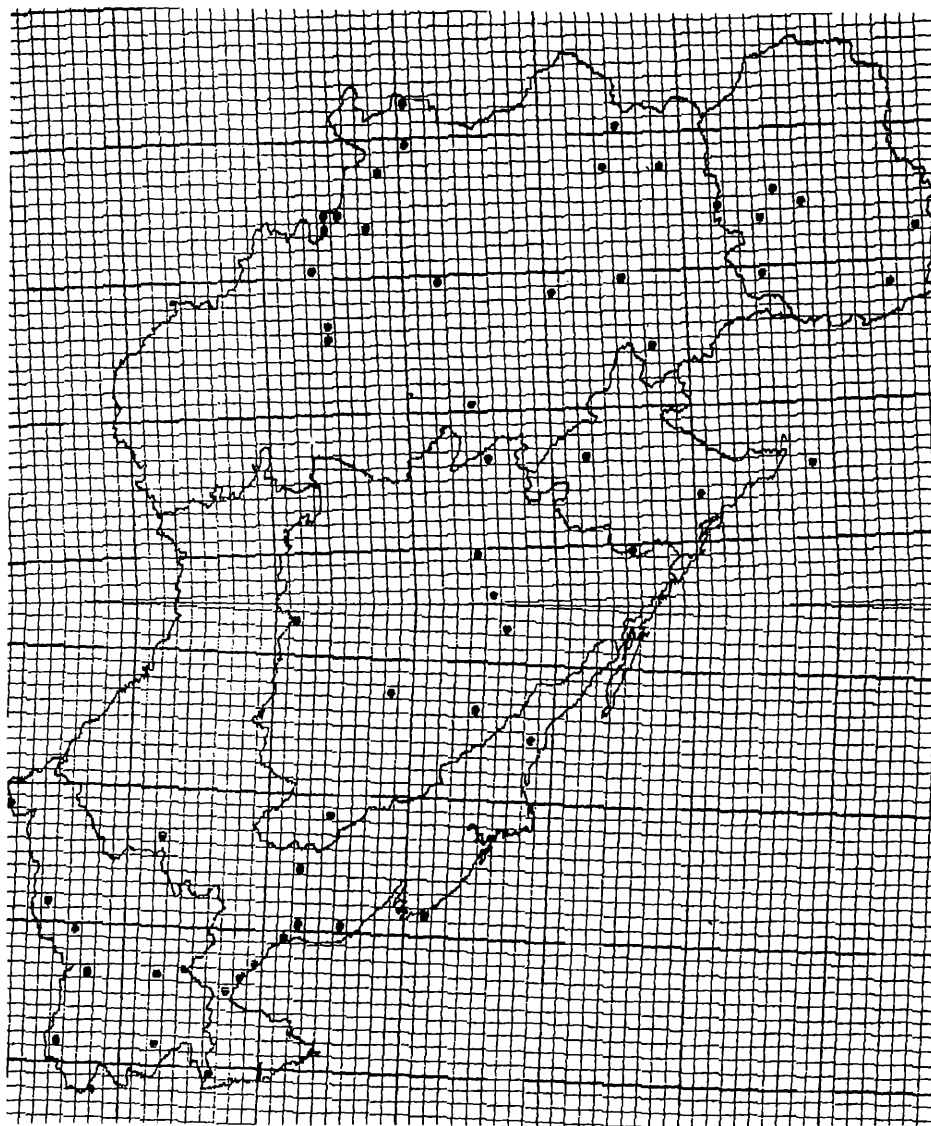


Fig. 3. Distribution of *Palomena prasina* Palearctic species.

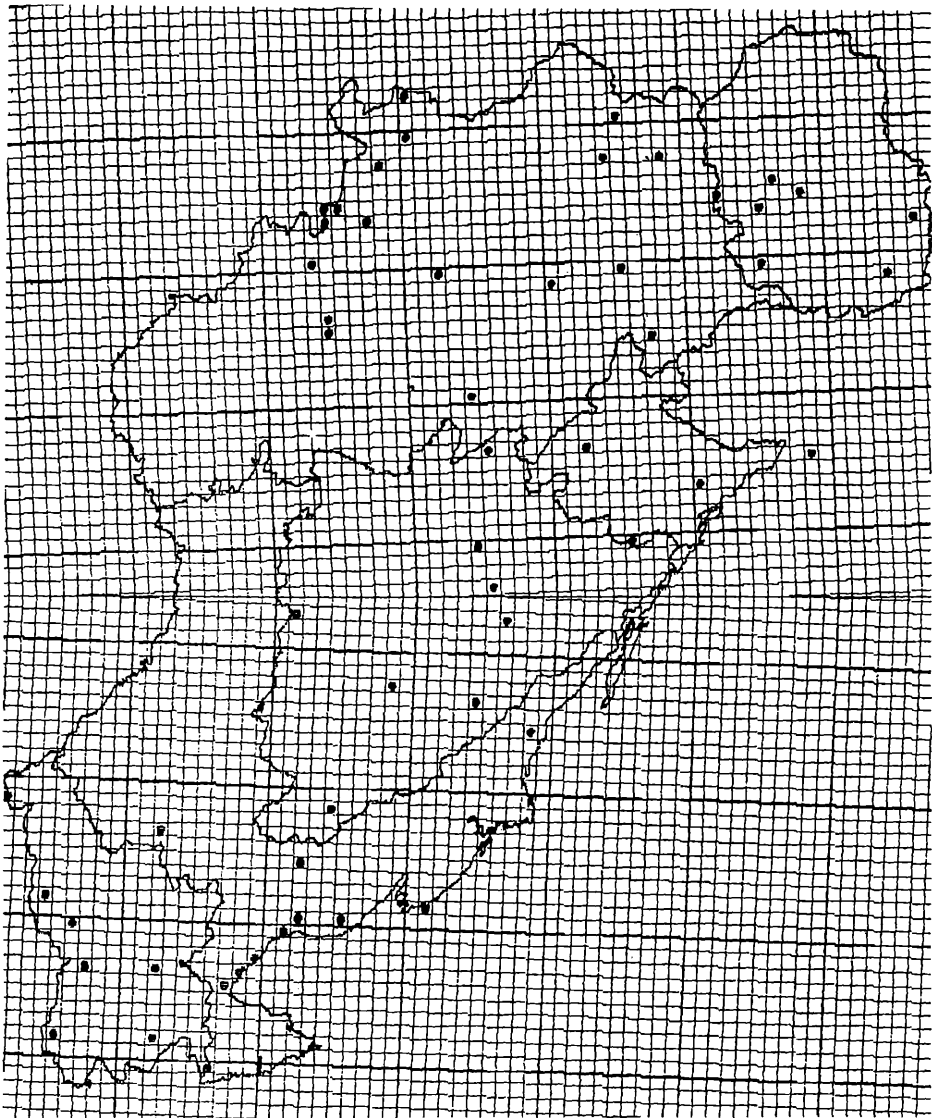


Fig. 4. Distribution of *Pentatoma rufipes* Euro-Siberian Mediterranean species.

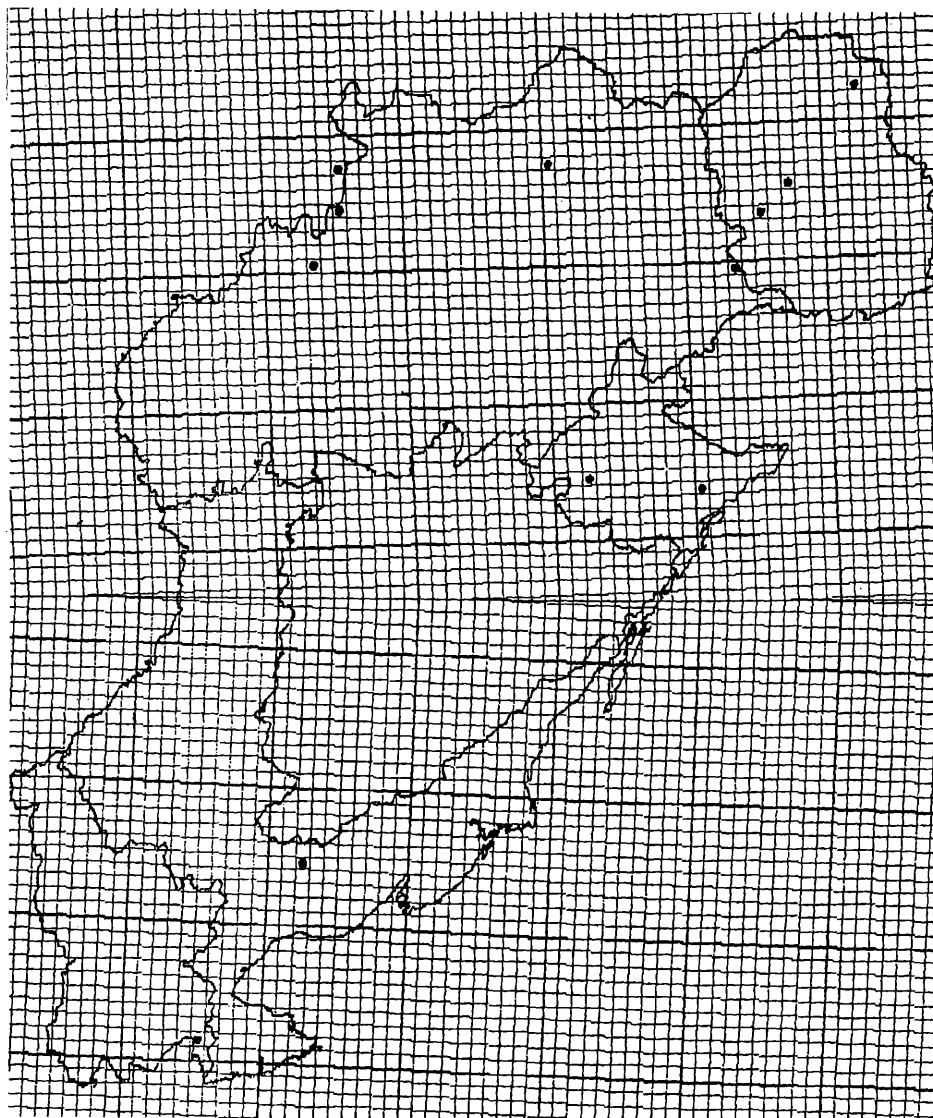


Fig. 5. Distribution of *Copium clavicorne* - Southern European species. Most widely distributed in Serbia.

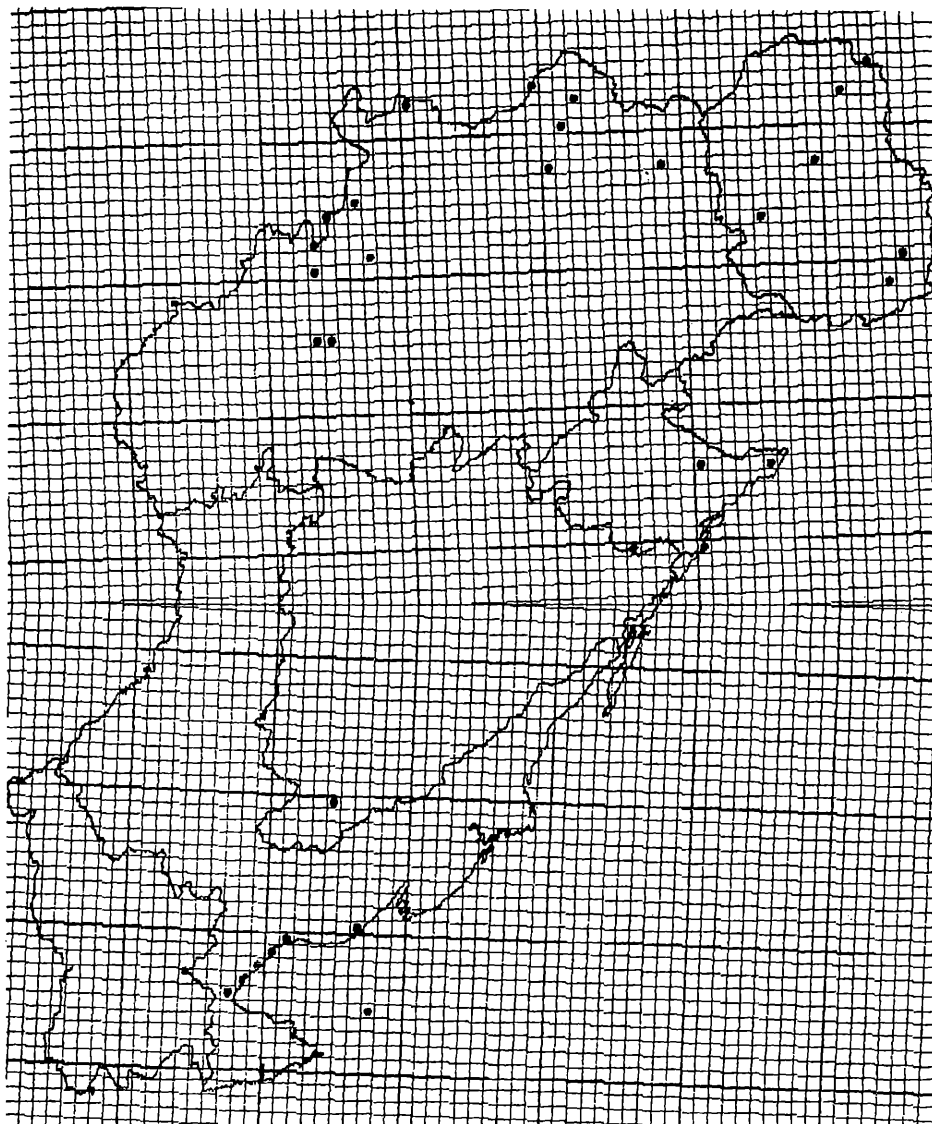


Fig. 6. Distribution of *Ancyrosoma leucogrammes* North Mediterranean Central Asian species. It is found on the Adriatic shore, in Macedonia, as well in warm Mediterranean sites in Serbia.

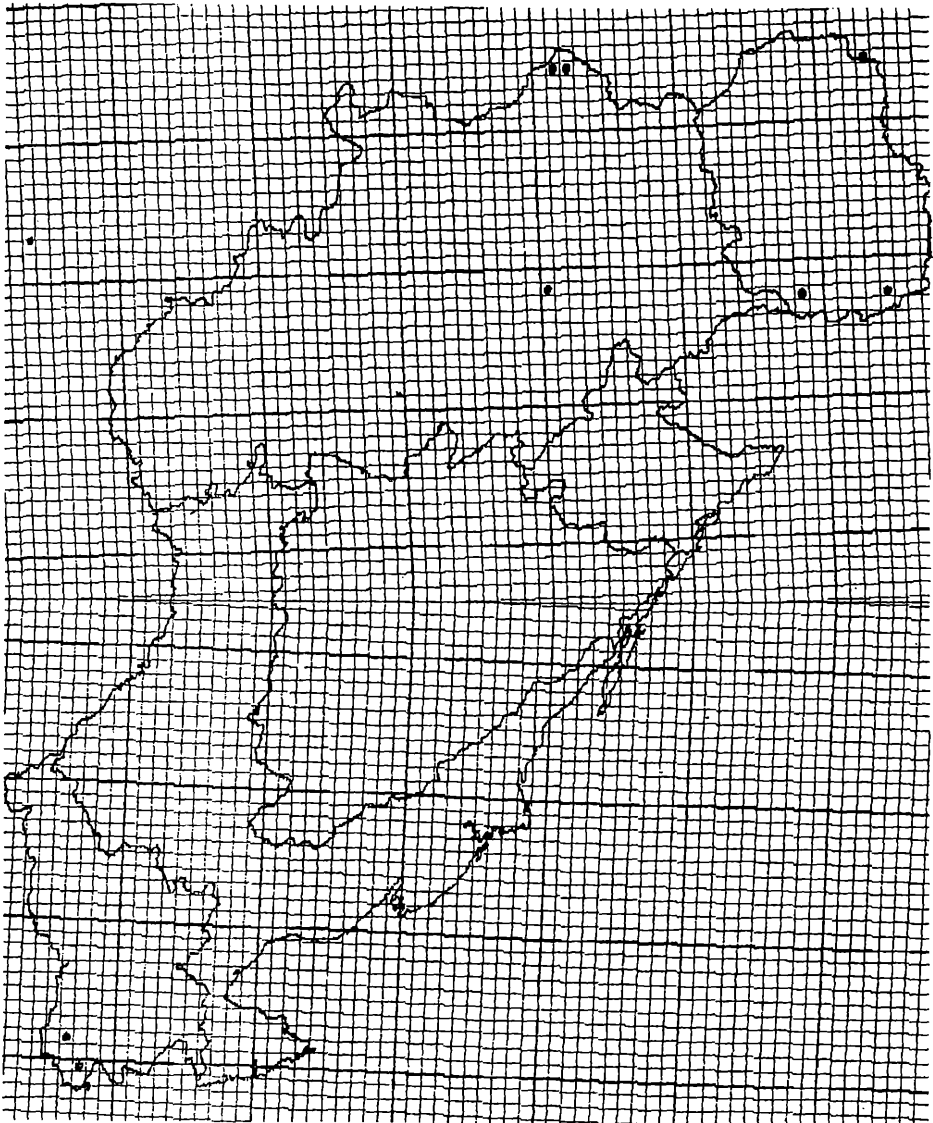


Fig. 7. Distribution of *Alloeonotus egregius* Alpine-Balkan- Anatolian species. Registered in Slovenia, Serbia (Kopaonik Mt), Montenegro (Durmitor Mt) and in south of Macedonia.



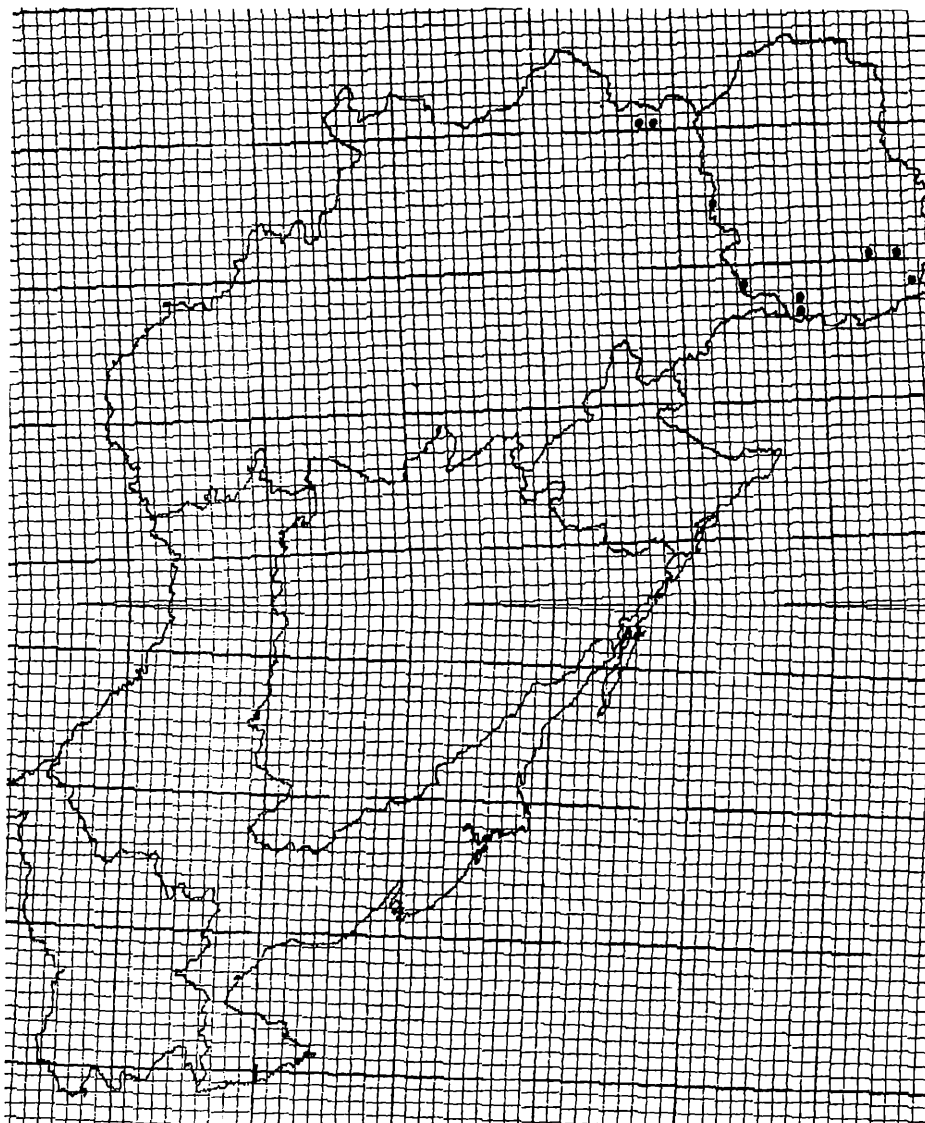


Fig. 8. Distribution of *Adelphophylus balcanicus* Endemic species. Locus typicus is the locality Žvan in Macedonia. The holotype is conserved in the Natural History Museum in Belgrade. So far, this species is found in the south of Serbia only (Vlasina and Besna Kobila Mt) as well as in several Macedonian localities.

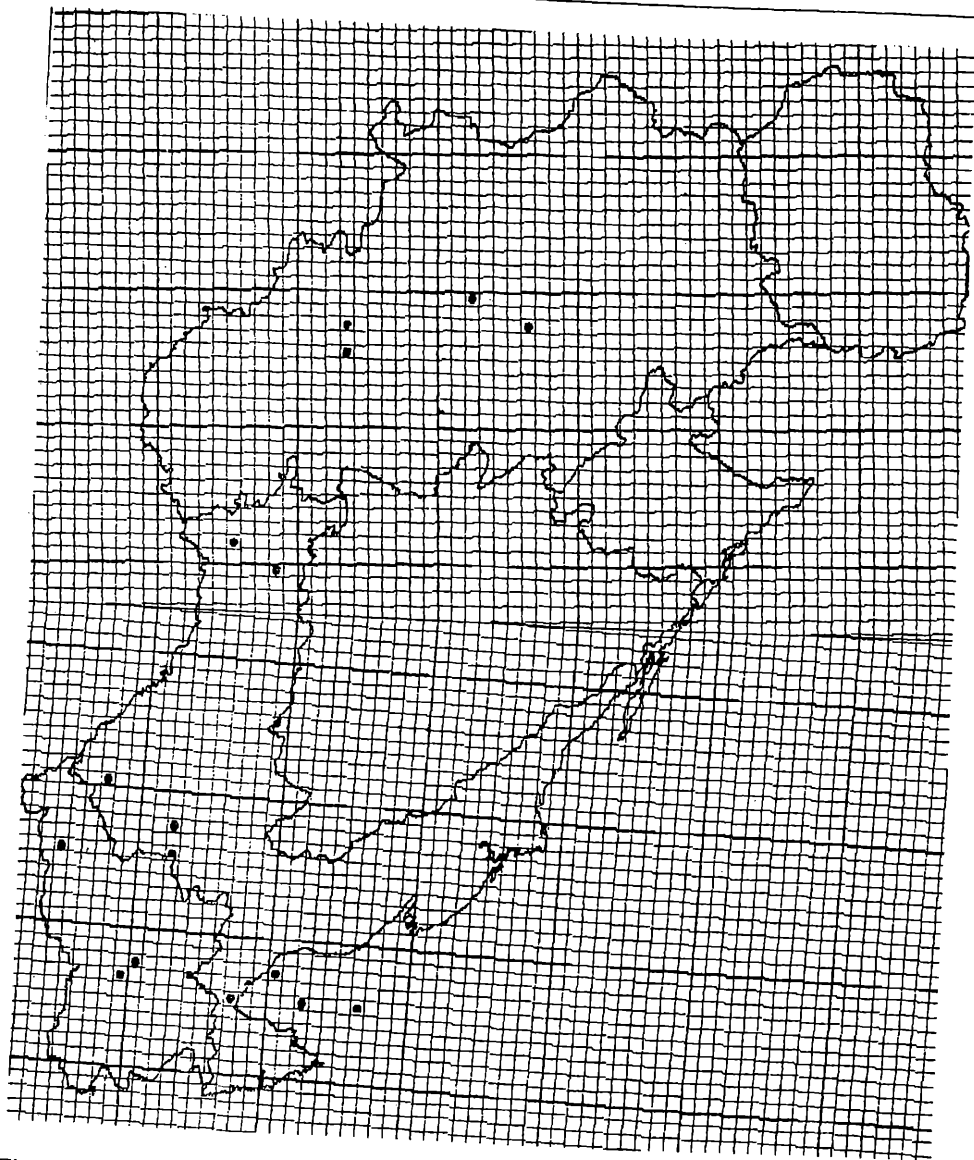


Fig. 9. Distribution of *Corythuca ciliata* Nearctic species. In the Yugoslavia fauna it is known since 1973. At first it was found in Zagreb and surroundings and later in Slovenia, on the Kvarner Islands, in Serbia in the surroundings of Belgrade, Kraljevo and Kragujevac. For the time being, these are the southernmost localities of its natural range.

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