

CONTRIBUTIONS TO THE KNOWLEDGE REGARDING THE DISTRIBUTION OF CLERIDS (INSECTA: COLEOPTERA) IN ROMANIA

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Key words: *Distribution, chorology, clerids, Coleoptera, Romania*

INTRODUCTION

Although there are few *in extenso* articles in Romania on the distribution of beetles and only 2 catalogues [4, 10, 11], based on this and on the studied material a preliminary distribution can be traced.

By the compilation of these recordings with the ones quoted in the literature it can be done an valid corellation with the western palaeartic chorotypes. By the interpretation of the obtained data we can establish the corotyp types and the faunal influences for every of the investigated species.

The chorotype classification were taken from Taglianti *et al.*, 1992 [14]. By the interpretation of the recording data in accord to this autor, it has became obviously that the romanian clerid fauna is formed mostly by western-palaeartic elements, the other types being less represented. An interesting presence is the species *Allonyx quadrimaculatus* Schaller, 1783, which has been recently recorded for the first time in our country [5]. From these data, we can conclude that its areal is not an discontinuous one, as believed until lately.

The areal representation were done by dotted line, in these case, the authors having the same opinion with the conceotion of Bănărescu [2] and of Bănărescu & Boșcaiu [3], in accord with the quoted authors which affirm that the areal boundaries are not fixe and unsurpassable barriers.

Chorology: Even if the majority of the taxons of the studied group presents areals restricted to the western-palaeartic zone, it exist an important minority of cosmopolitan species (the members of the subfamilies *Korynetinae* Laporte de Castelnau 1836, *Tarsosteninae*

Jacquelin du Val 1860 și *Enopliinae* Gistel, 1856.)

In the case of these species, the distribution depends on the food resources, and as they are sinantropic ones, it is easily to deduce that in theyr spreading the human activities played a very important role. The most typical case is represented by the species *Thaneroclerus buqueti* Lefebvre, 1835 (*Insecta: Coleoptera Thanerocleridae* Kolibač, 1992), which, even of indo-australian origin were dispersed in the same time with the transport of the grain and plants infested with stages of harmful insects in tobacco, spice, tea, rice and medicine, *e.g.*: *Araecerus sp.*, *Lasioderma sp.* and *Tribolium sp.* which he feeds on, as today it has spread on the whole western-palaeartic.

Besides, the distribution is done also according to the feed sources availability and medium factors, which can favorize or limit the spreading of the species. So, on the romanian territory has been quoted untill now 22 clerid species, distributed to the following chorotypes:

- 9 western palaeartic (WPA / 1.03),
- 4 european (EUR / 2.01),
- 3 sud-european (SEU / 2.04),
- 2 europeo-mediterranean (EUM / 1.12),
- 2 central-european (CEU / 2.03),
- 1 turanico-europeo-mediterranean (TEM / 1.09) and
- 1 western-mediterranean (WME / 3.02).

In Romania, the well-represented are the western-palaeartic elements, followed by the european ones, the other types being less represented (Fig. 1)

Ecologically, they are [repartizate] to 5 major ecotypes (*acc. to*. Gerstemeier, 1998) the romanian clerid species are [impartite astfel] (Fig.2):

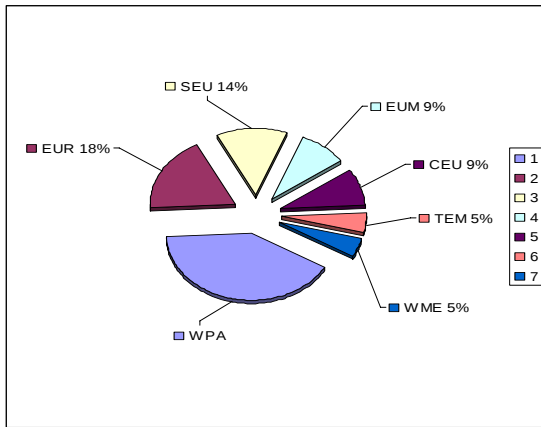
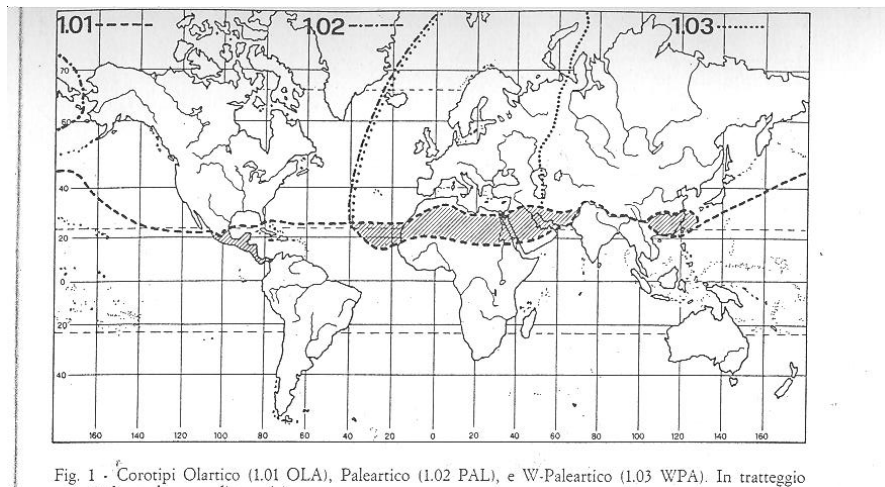


Fig. 1. Chorotype proportions

No.	Ecological type	Taxons	Observations
1	Antophylous	<i>Trichodes sp.</i> <i>Tilloidea unifasciata</i>	Hunts antophylous insects and /or polinivore (acc. To some authors)
2	Dendrophylous	<i>Denops albofasciatus</i> <i>Tillus sp.</i> <i>Opilo sp.</i> <i>Thanasimus sp</i>	Lives on bark or foliage; Hunts xylophagous insects in theyr galleries situated under bark.
3	Hymenopterophylous	<i>Trichodes sp.</i>	Hunts preimaginal stadies of various hymenopterans; acc. to MOORE (1973), in the larval stage can attack also termites.
4	Necrobiophylous	<i>Necrobia sp.</i>	Feeds probably on larvae of othe carrion visitors; <i>N. rufipes</i> were repeatedly found in the egyptian mummies.
5	Synanthrope (mostly cosmopolitan)	<i>Opilo domesticus</i> <i>Opilo mollis</i> <i>Korynetes sp.</i> <i>Necrobia sp.</i>	Feeds frequently on anobiids, <i>Dermestes sp.</i> , other insects and / or alimentary residues.

Fig. 2. Ecotypes (after Gerstmeier)
Chorotypes (from Taglianti *et al.*)



Western-palaearctic



Fig. 11 - Corotipo Europeo (2.01 EUR). Con linee punteggiate sono indicate le estensioni alla Macaron



Fig. 14 - Corotipo S-Europeo (2.04 SEU).

European

Southern european

Fig. 9 - Corotipo Turanico-Mediterraneo (1.11 TEM).



Fig. 10 - Corotipo Europeo-Mediterraneo (1.12 EUM).



Fig. 13 - Corotipo Centroeuropeo (2.03 CEU).

Europeo-mediterranean

Central-european

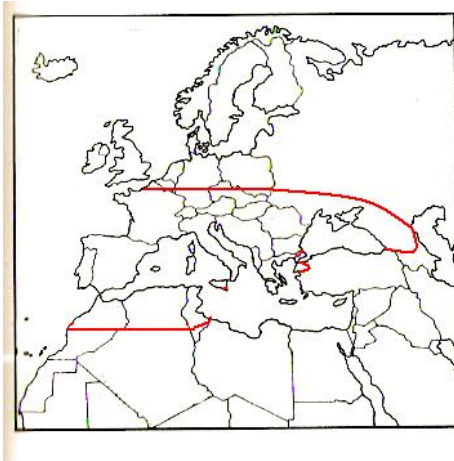


Fig. 7 - Corotipo Turanico-Europeo-Mediterraneo (1.09 TEM).

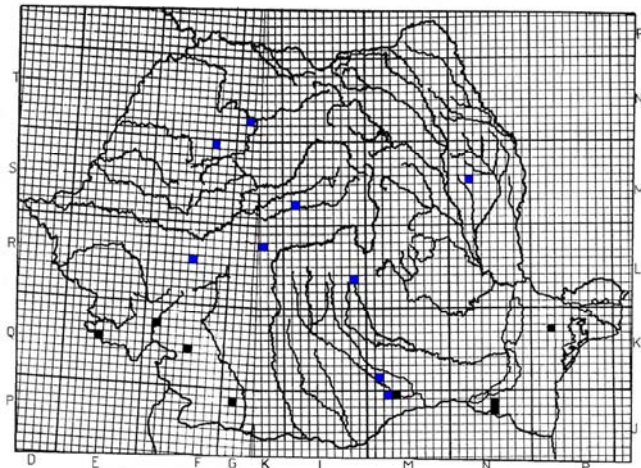


Fig. 17 - Corotipi W-Mediterraneo (3.02 WME) e E-Mediterraneo (3.03 EME).

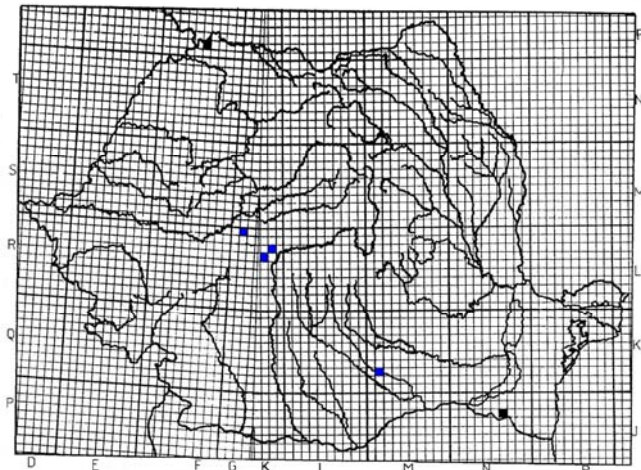
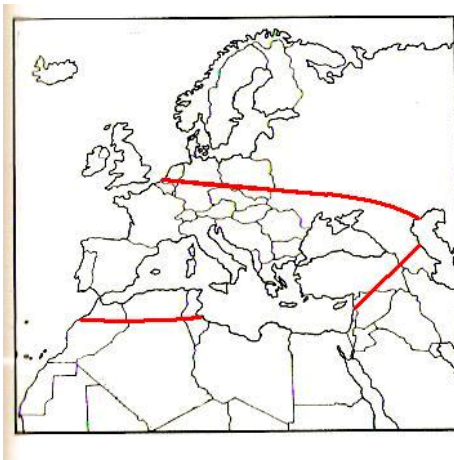
Turanico-europeo-mediterranean
Chorotypes
 (after Gerstmeier)



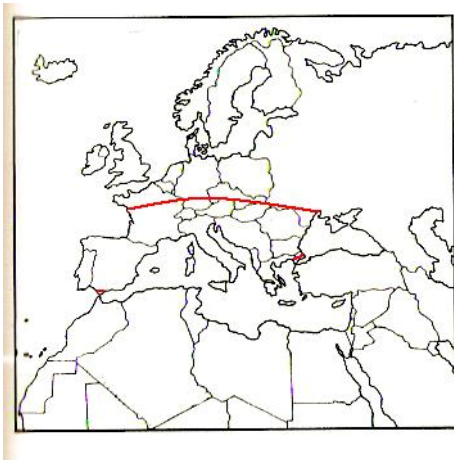
Western-mediterranean
Romanian distribution
 (black – Collections; blue – Litterature citations)



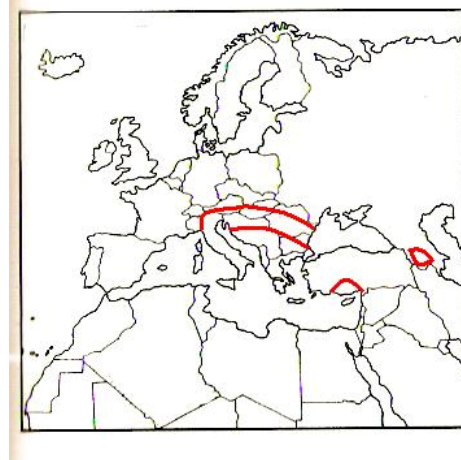
Clerus mutillarius F., 1775



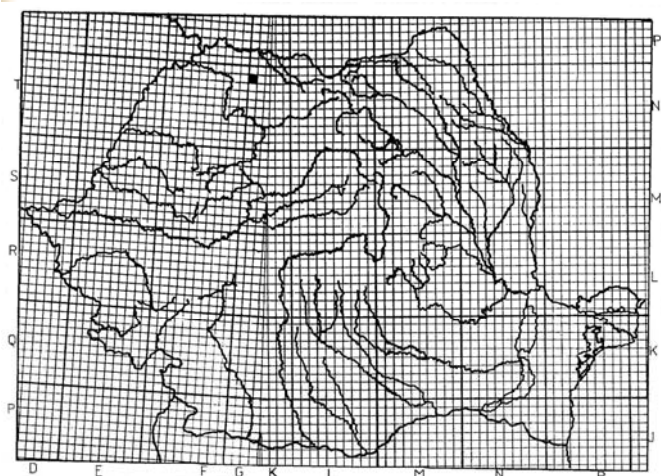
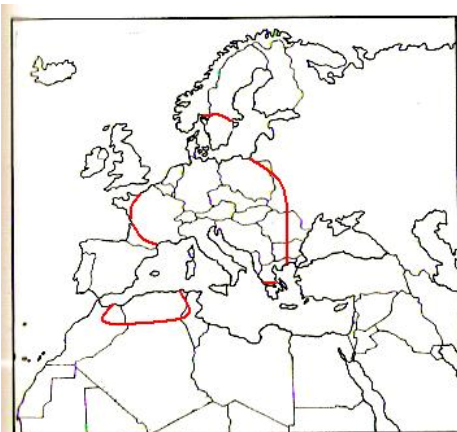
Denops albofasciatus Charpentier, 1825



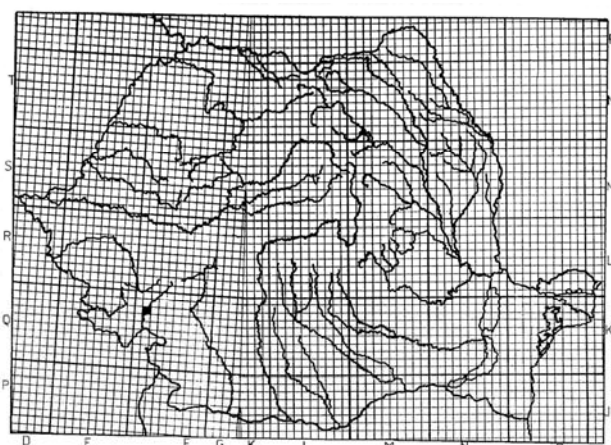
Dermestoides sanguinicollis F., 1782



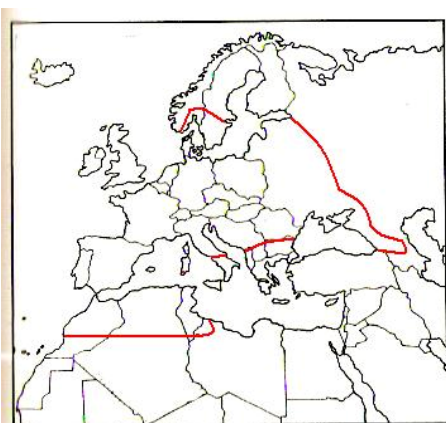
Tillus pallidipenis Bielz, 1850



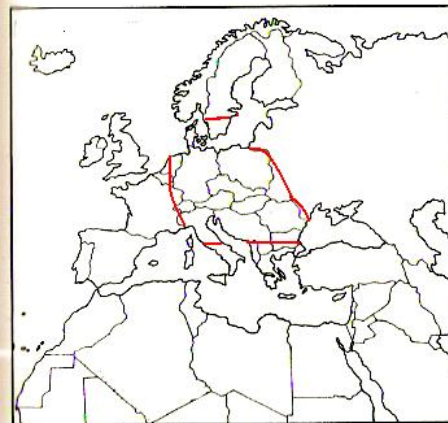
Opilo mollis L. 1758



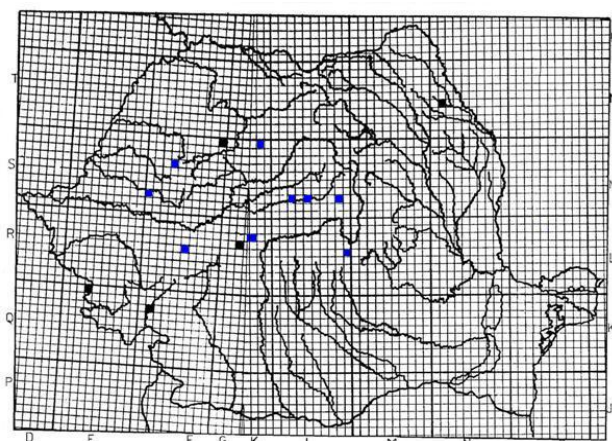
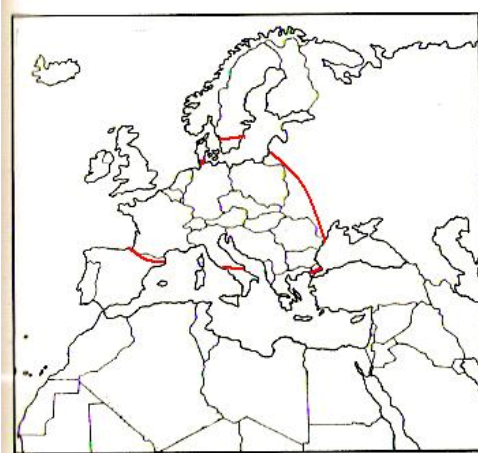
Opilo pallidus Olivier, 1795



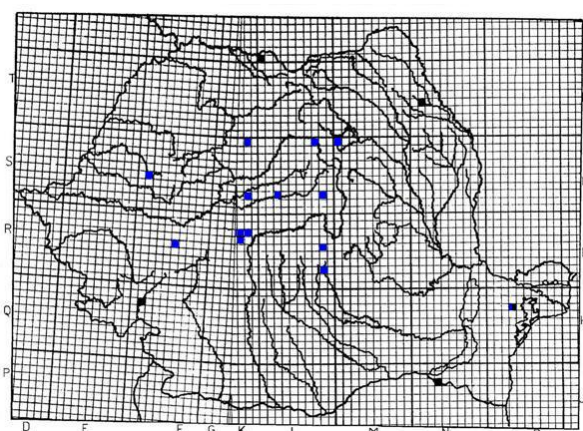
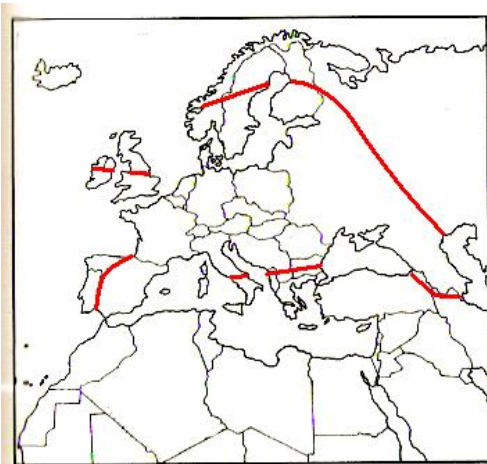
Opilo domesticus Sturm, 1837



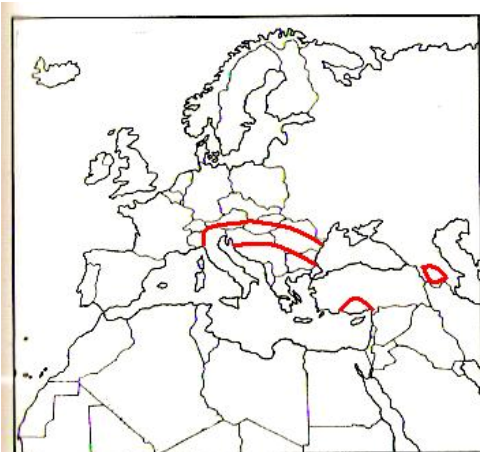
Thanasimus femoralis Zetterstedt, 1828



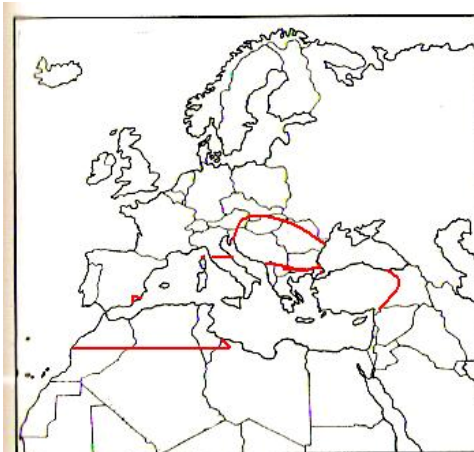
Thanasimus formicarius L., 1758



Tillus elongatus L., 1758



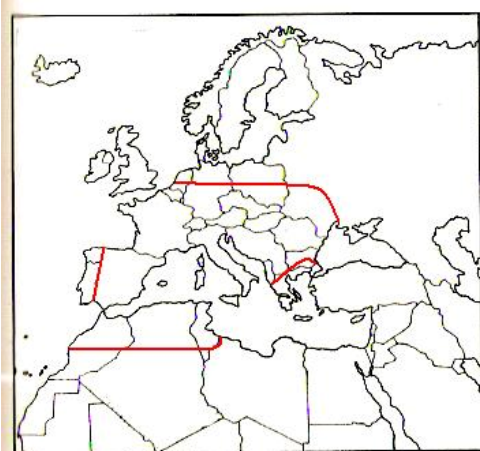
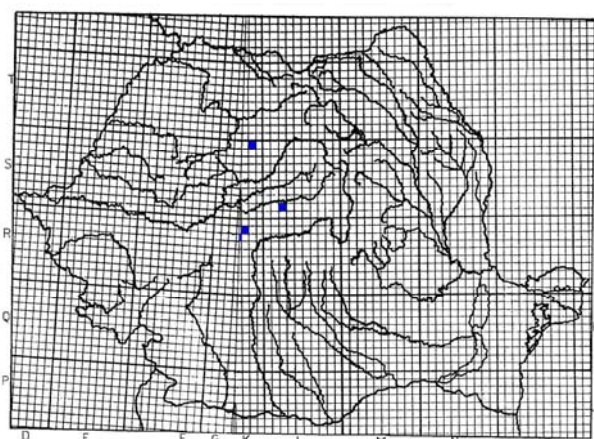
Tillus pallidipennis Bielz, 1850



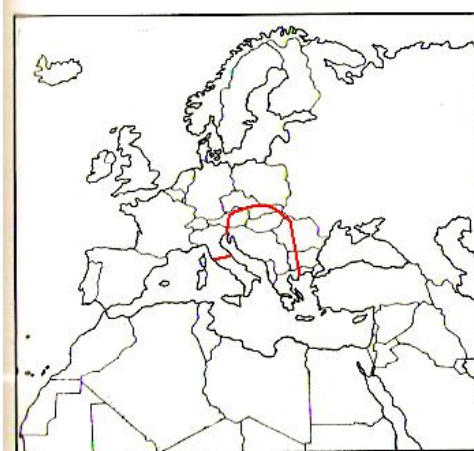
Tilloidea transversalis Charpentier 1825



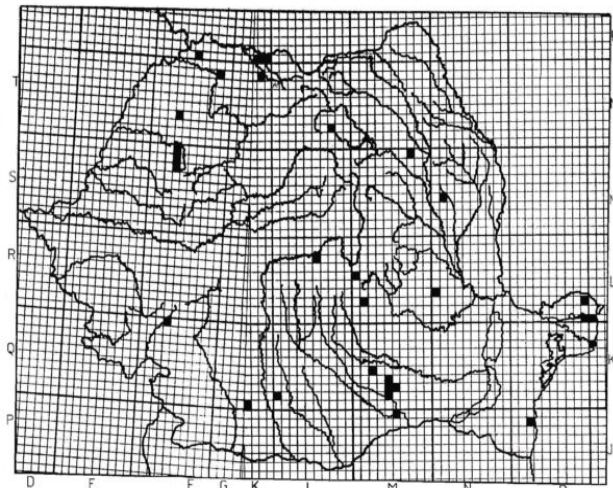
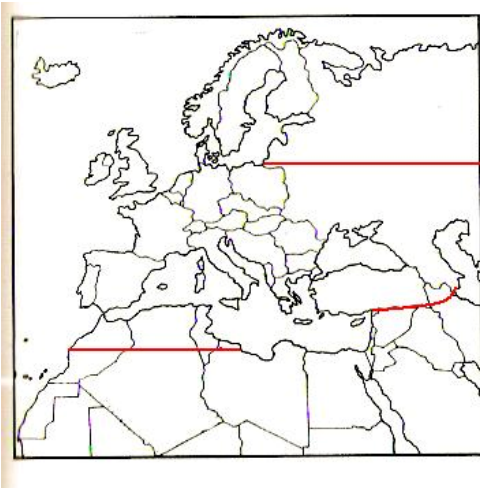
Tilloidea unifasciata F. 1787



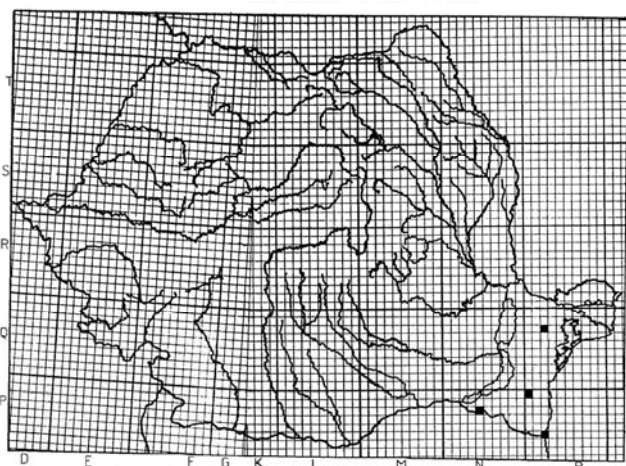
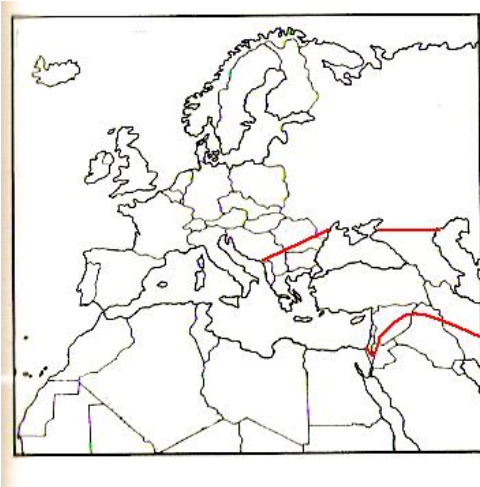
Trichodes alvearius F., 1792



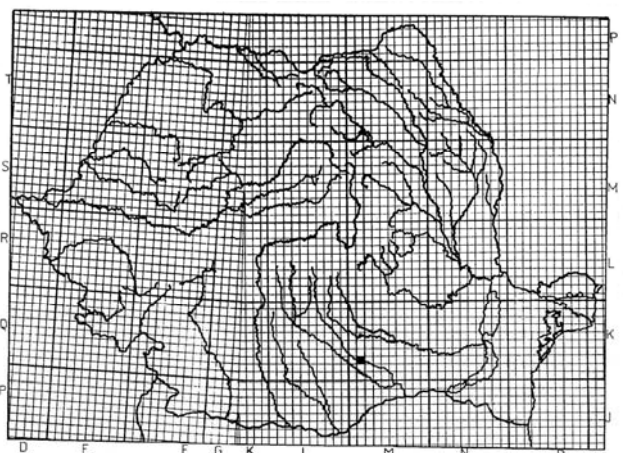
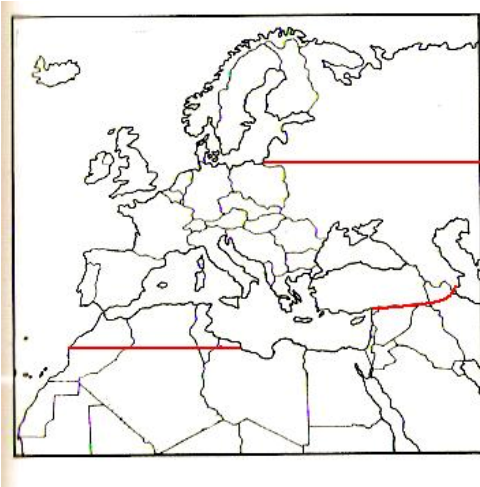
Trichodes favarius Illiger, 1802



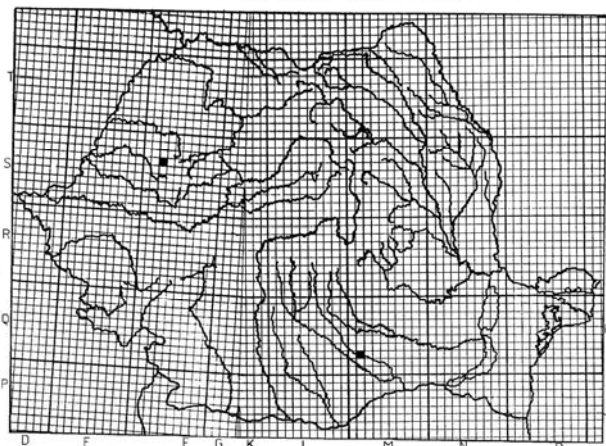
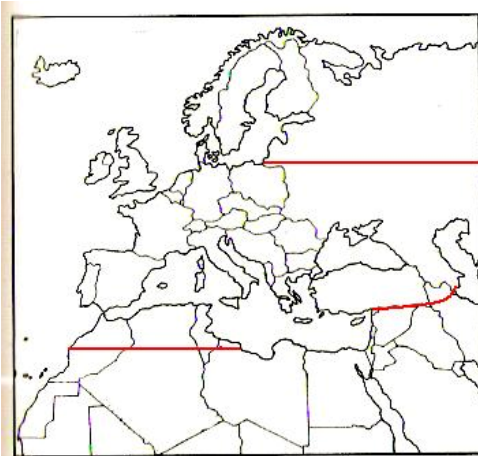
Trichodes apiarius L., 1758



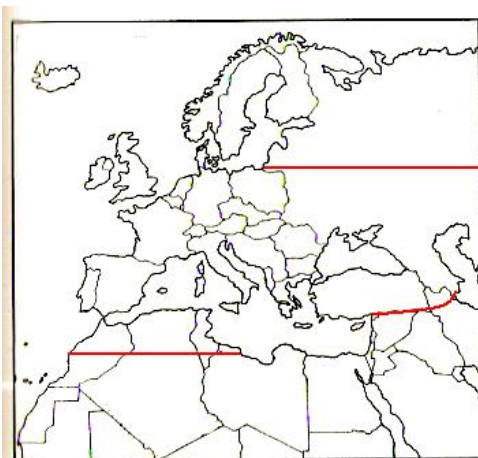
Trichodes quadriguttatus Adams, 1817



Necrobia ruficollis F., 1775



Necrobia violacea L., 1758



Necrobia rufipes DeGeer, 1775
Korynetes caeruleus De Geer, 1775

ABSTRACT

Based on the existing literature and the museum collections studied a preliminary distribution of the group in Romania will be presented. Chorology of the recorded species is investigated and relationship between their west-palaearctic distribution and their distribution in Romania.

CONCLUSIONS

Due to the fact than on the territory of our country exist 4 biogeographical regions (Stepic, alpine, mediteranean and the Black Sea one), whom only two presents the optimal conditions for the development of the checkered

beetles, we can justify the lower [abundanta] of the taxons 9 only 12 genera with 22 species quoted till today).

From a chorological point of view, most of the species belong to the western-palaearctic type (1.03 / WPA), the other chorotypes being less represented.

They are 22 species quoted until today in Romania, from those only 13 being observed in the studied collections (marked in red):

Familia: **Cleridae** Latreille, 1802

Subfamilia: **Tillinae** Leach, 1815

Genus: **Denops** Fischer de Waldheim, 1829

Species : **D. albofasciatus** Charpentier, 1825

Genus: **Tillus** Olivier, 1790

Species : **T. elongatus** L., 1758

Species : **T. pallidipennis** Bielz, 1850

Genus : **Tilloidea** Castelnau, 1832

Species : **T. unifasciata** F. 1787

Species : **T. transversalis** Charpentier 1825

Subfamilia : **Clerinae** Latreille, 1802

Genus : **Allonyx** Du Val, 1861

Species : **A. quadrimaculatus** Schaller, 1783

Genus : **Opilo** Latreille, 1802

Species : **O. pallidus** Olivier, 1795

Species : **O. mollis** L. 1758

Species: **O. domesticus** Sturm, 1837

Genus : **Trichodes** Herbst, 1792

Species : **T. quadriguttatus** Adams, 1817

Species : **T. apiarius** L., 1758

Subspecies : **T. apiarius apiarius**

Aberratio : **T. apiarius** ab. **apicida** Klug.

Aberratio: **T. apiarius** ab. **subtrifasciatus**

Klug.

Species : **T. alvearius** F., 1792

Species : **T. favarius** Illiger, 1802

Genus : **Thanasimus** Latreille, 1806

Species: *T. femoralis* Zetterstedt, 1828
 Species: *T. formicarius* L., 1758
 Genus: *Clerus* Geoffroy, 1762
 Species: *C. mutillarius* F., 1775
 Subfamilia : **Enopliinae** Gistel, 1856
 Genus : *Dermestoides* Schaeffer, 1771
 Species : *D. sanguinicollis* F., 1782
 Subfamilia : **Tarsosteninae** Jacquelin du Val, 1860
 Genus : *Tarsostenus* Spinola, 1844
 Species : *T. univittatus* Rossi, 1792
 Subfamilia : **Korynetinae** Laporte de Castelnau, 1836
 Genus : *Korynetes* Herbst, 1792
 Species : *K. caeruleus* De Geer, 1775
 Genus : *Necrobia* Olivier, 1795
 Species : *N. rufipes* DeGeer, 1775
 Species : *N. ruficollis* F., 1775
 Species : *N. violacea* L., 1758

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