

## Endemits, relicts and vicariant Thysanoptera species from Romania (Insecta: Thysanoptera)

Liliana VASILIU-OROMULU

### Abstract

Tisanoptere (Insecta: Thysanoptera) endemice, specii relictate și vicariante din fauna României

Pe baza datelor proprii și a celor din literatura de specialitate, autorul menționează 5 taxoni endemici pentru România, cât și centrele lor endemogene. O singură specie de tisanoptere este considerată relict glaciatic, iar alte două prezintă fenomenul de vicariere parțială în țara noastră.

Keywords: Thysanoptera, endemits, relicts, vicariant species

### Endemits

The endemic species represent the most aboriginal faunistic element of a territory, geographical characterized by a limited area. Romanian endemits that have their living territory between our country borders are considered chorological endemits.

All Thysanoptera endemics species in Romania have been recently constituted on small areas and they belong to the neoendemits, who appeared on isolated areas as the result of glacial and postglacial climatic changes that determined their evolution into new taxa. Thus we can mention the following species for the Romanian Thysanoptera fauna (fig. 1):

*Aeolothrips verbasci* KNECHTEL 1955, *Ereikethrips calcaratus* KNECHTEL 1960, *Haplothrips scythicus* KNECHTEL 1961, *Haplothrips titschacki* PELIKÁN 1965, *Hoplothrips absimilis* KNECHTEL 1954

An important endemogen centre is represented by the Bucegi Mountains for *Aeolothrips verbasci* and *Hoplothrips absimilis* species.

Dobrudgea, another endemogen centre represents a real faunal treasure both by his palaeogeographical evolution and by its special climate (resulted from the interference of steppic continental climate with mediterranean one).

Among dobrudgian endemits, we mention *Haplothrips scythicus* that was described in Babadag; and *Ereikethrips calcaratus*, which had been considered endemic species for Dobrudgea by Prof. KNECHTEL, was found four years later in Southern Muntenia (by L. VASILIU-OROMULU, quoted in KNECHTEL 1963).

*Haplothrips titschacki* was identified by PELIKÁN on the MAMAIA dunes

All Romanian endemits occupy small areas, characterized by specific conditions.

### Glacial relicts

A single Thysanoptera species of the Romanian fauna is considered glacial relict, *Apterothrips secticornis* (TRYBOM 1896) that has remained after the glacial retiring.

The cold climate during the glacial period allowed the migration, from the North, of the tundra and boreal forest fauna, which was similar to the present North European and Siberian one.

In Romania, *Apterothrips secticornis* was found in the high areas of the Bucegi Massif (2200 m) but also at lower altitudes, in isolated cases, at 1500 m, in the Gârbova Massif; also in Austria, in the Alps, it has been found at 2550 m (PELIKÁN 1996) and in Island, at 100m (KOBRO 1996)

So, this Romanian glacial relict fits the general characteristics of these relicts, present in the alpine and subalpine shaded area of the Carpathians. It has a boreo-mountain spreading.

### Vicariant species

In the Romanian fauna we may mention the phenomenon of partial vicariation for two species of the *Limothrips* genus: *L. denticornis* (HALIDAY 1836) and *L. cerealium* HALIDAY 1836.

*Limothrips denticornis* is a wide spread species in Romania, causing important damage to cereals.

In 1995 we have identified the *Limothrips cerealium* species in Northwest Romania, in the Răstolița area, inhabiting the Poaceae species from the local wild flora.

This latter species has a mass breeding on the cereals in Northern Europe (England, Sweden), and has an obvious migration from the North of Europe to the South, the overlapping area with *L. denticornis* being round Germany. Romania is the arealogical Southeast limit for this northern species. *Limothrips cerealium* presents disjoint areals in Western Europe (Spain) (fig. 2).

### Conclusions

We consider that in the Romanian fauna there are 5 endemits: *Aeolothrips verbasci* KN. 1955, *Ereikethrips calcaratus* KN. 1960, *Haplothrips scythicus* KN. 1961, *Haplothrips titschacki* PEL. 1965, *Hoplothrips absimilis* KN. 1954; only one species *Apterothrips secticornis* (TRYB. 1896) as glacial-relict and *Limothrips cerealium* HAL. 1836 and *L. denticornis* (HAL. 1836) as partial vicariant species.

### REFERENCES

- KNECHTEL W. K. 1932. *Oxythrips eucinus* sp. n. für Rumänien, Publ. Soc. Nat. Rom., nr.10: 92.  
KNECHTEL W. K. 1939. *Kakothrips dentatus*, Comt. Rend. Sean. de l'Inst. Roum., 3: 322.  
KNECHTEL W. K. 1951. Thysanoptera Fauna R.P.R. Insecta, Edit. Acad. Rom., 8(1).

- KNECHTEL W. K. 1954. Specii noi de Thysanoptere, Bul. (t. Biol. Agr. Geolog. }i Geogr., 6(4).  
KNECHTEL W. K. 1960. Eine neue Thysanopterenart, Rev. Biol., 5(1-2): 143-144.  
PELIKÁN J. 1996. Vertical distribution of alpine Thysanoptera, Folia Ent. Hung., 57:121-125.  
VASILIU-OROMULU L. 1965. O nouă specie de tisanoptere pentru fauna R.P.R., St. Cerc. Biol. s. Zool., 17(2): 163-164  
VASILIU-OROMULU L. 1967. Specii de tisanoptere noi pentru fauna României, St. Cerc. Biol. s. Zool., 19 (1): 7-9  
VASILIU-OROMULU L. 1975, Thysanoptera, pp.: 78 – 81, in: "FAUNA" Academia R.S.R. Grupul de cercetări complexe "Porțile de Fier", Seria Monografică.  
VASILIU-OROMULU L. & MATACHE I. 1981. La collection des Thysanoptères " W. K. KNECHTEL" du patrimoine du Museum d'Histoire Naturelle "Grigore Antipa", 13: 131-140.

### Thanks

My special thanks to the world authority Dr. R. Z. STRASSEN from Senckenberg Museum, for the helpful discussions and for the checking of some Romanian slides.

My gratitude to Dr. BĂNĂRESCU member of the Romanian Academy, for the useful ideas about partial vicariant species.

Liliana VASILIU-OROMULU  
Institutul de Biologie  
Spl. Independenței 296  
RO - 79651 - București

Primit la redacție / Received: 26.04.1998.  
Acceptat / Accepted: 26.10.1999  
Apărut / Printed: 30.11.1999

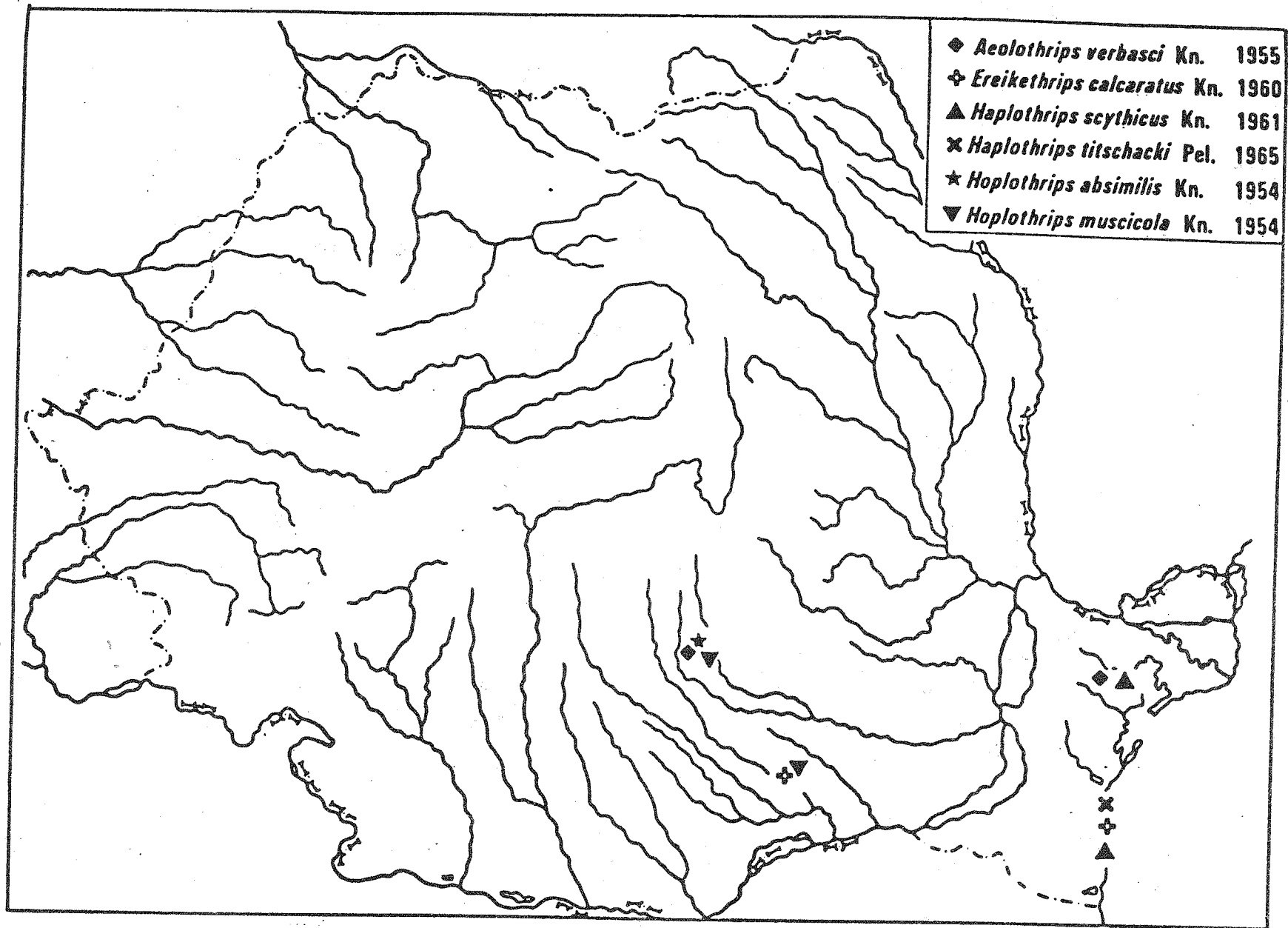


Fig. 1. The distribution of endemic species from Romania

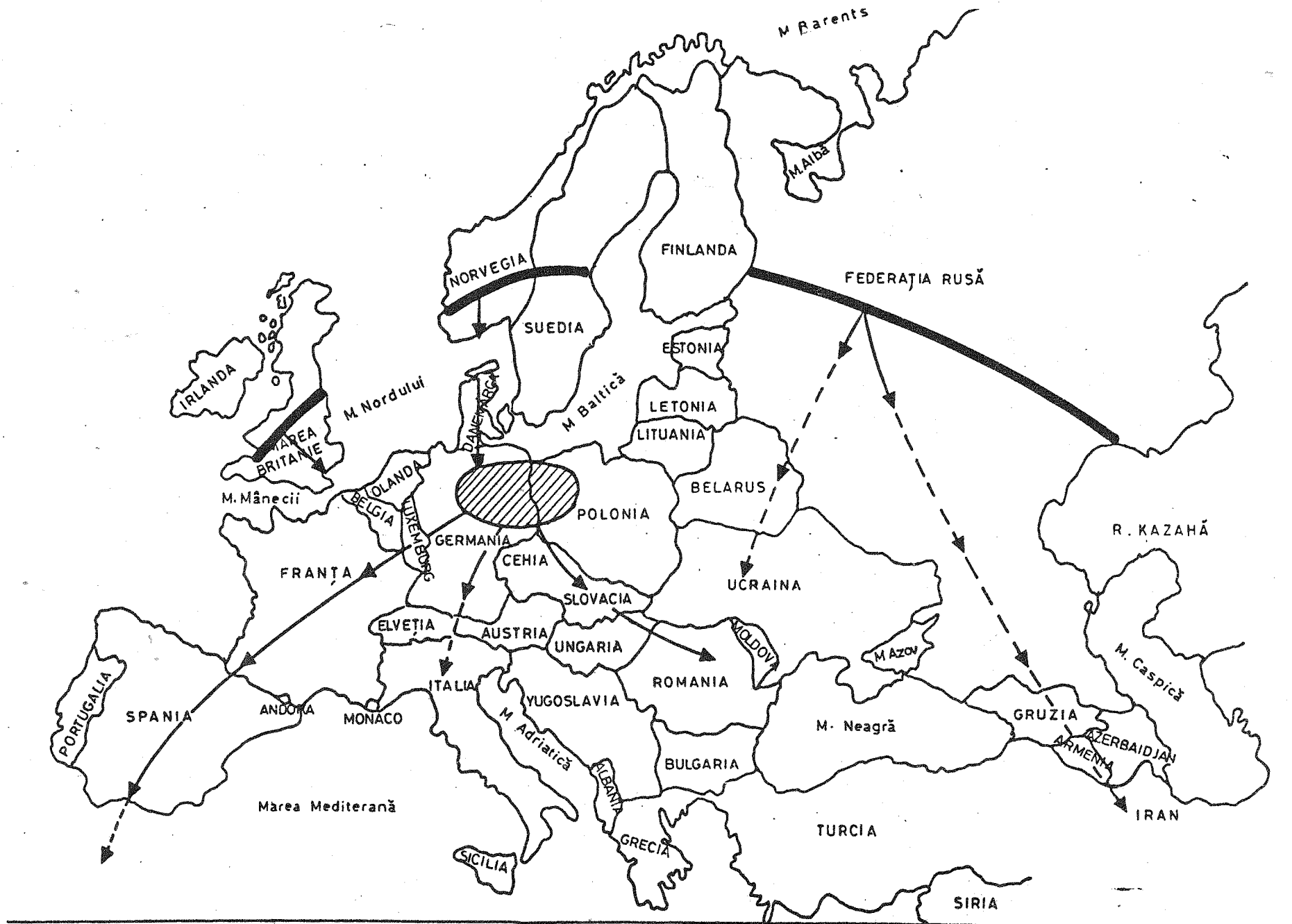


Fig. 2. The areal and the South-European expansion limit of *Limothrips cerealium* HAL.