

The occurrence of Cixiidae (Homoptera) in Belgium

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Summary

10 species of the genera *Cixius*, *Tachycixius*, *Reptalus* and *Pentastiridius* are recognized and *Cixius distinguendus* is firstly reported from Belgium.

Introduction

LETHIERRY (1878) was the first to deal with the Belgian species of the family Cixiidae; he listed three species, namely *Cixius pilosus*, *C. nervosus* and *C. cunicularius*, and he characterized their distribution as "partout". In two subsequent papers (LETHIERRY 1882 and 1884) *Cixius stigmaticus* and *C. pinicola* were added to this list. A first compilation was given by SYNAVE (1951) who recognized 11 species, three of which cited without locality. Finally *Cixius dubius* and *Cixius simplex* were recently added to the list of the Belgian fauna by Dr SYNAVE and myself (VAN STALLE, 1979; SYNAVE & VAN STALLE, 1980).

The taxonomy of Cixiidae has made much progress and changes since LETHIERRY (op. cit.) published his first list. HAUPT (1936) elaborated a key to the central European fauna, mainly based on colour characters and WAGNER (1939) was the first to give a revision of most western palearctic species, mainly based on the structure of the male genitalia. He also provided a first subgeneric division for the group. Species recognition was based on the structure of the aedeagus, more particularly the number, implantation and shape of the spines. External characters such as coloration and color patterns are proved to be unreliable for species identification in this group. The fact that most of the identifications compiled in SYNAVE (1951) were based on external characters has caused many faulty records. For this reason the present list is based on museum specimens only and records from literature are omitted.

There is no scientific work which covers the entire Belgian fauna. Identification of the specimens and the list given below is based on CHINA (1942), LE QUESNE (1960) and OSSIANNILSSON (1978). The following taxa are excluded from the list of Belgian species: the record of *Cixius pinicola* was based on a wrong identification; moreover, it is considered now as a synonym of *Tachycixius venustus* (GERMAR, 1830) which is a southern European species. *Cixius vitripennis* KIRSCHBAUM, 1868 is considered as a synonym of *Cixius simplex* (see NAST, 1972). *Oliarus cuspidatus* FIEBER, 1872 and *Myndus musivus* (GERMAR, 1825) are listed without locality in SYNAVE (1951) and since no records have been made since it is appropriate to exclude them from the list of Belgian

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species. *Oliarus pallens* is also excluded: we have not found the specimen listed from "Bergh" by SYNAVE (1951) and recent records are lacking.

At present 10 species referred to four genera have been recorded in Belgium. Most records have been made anterior to 1950, while recent data are very scarce; this is not due to their limited occurrence but rather to the absence of recent collecting. Three species are very common: *Cixius nervosus*, *C. cunicularius* and *Tachycixius pilosus*. *Cixius stigmaticus* is probably not uncommon in the southern part of the country. The other species can be considered as uncommon to rare: 2 species have been recorded only once: *Cixius dubius* and *Reptalus panzeri*. Their presence or absence in Belgium might be connected with fluctuations in mean temperature and/or rainfall during the summer period. It is not known if these populations can maintain themselves in Belgium permanently.

For the three commonest species a map with UTM 10 km squares is given. For the remaining species the material studied is listed; it is deposited in the collections of the Koninklijk Belgisch Instituut voor Natuurwetenschappen.

List of species

Cixius simplex (HERRICH-SCHÄFER, 1835)

Material: 1 ♂, Olloy-sur-Viroin, 21.IX.1970, H. Synave; 1 ♂, Tintigny, 17.VII.1977; 1 ♂, Ursel, 4.II.1979.

A rare species which has not been found in older collections. The species has been reported from West and Central Europe (NAST, 1972). In Great Britain the species has been captured on ash, sea-buckthorn and oak. It is considered as rare by HAUPT (1936), CHINA (1942) and LE QUESNE (1960).

Cixius similis KIRSCHBAUM, 1864

Material: 1 ♂, Hockai (anc. Frontière), 1.VI.1949, A. Collart; 1 ♂, Hautes Fagnes, Fraineux, 20.VI.1949; 1 ♂, Vecquée, 2.VI.1949; 1 ♂, Hautes Fagnes, Baraque Michel, 30.VI.1938; 1 ♂, Fagne de Duzos-Moûpa, 28.V.1937; 2 ♂, Ethe, 2.VI.1981; 1 ♂, Postel, 22.IV.1922.

According to CHINA (1942) and OSSIANNILSSON (1978) this species is associated with heathland, bogs and marshes. It is probably not rare in the southern and eastern part of our country. It has never been collected in Eastern or Western Flanders where these habitats are almost extinct.

Cixius distinguendus KIRSCHBAUM, 1868 Belg. n. sp.

Material: 1 ♀, Bai-Bonnet, 23.IX.1916; 1 ♂, Overmere, 25.VI.1944; 1 ♂, Heusden (nr Gent), 3.X.1943.

Known from West and Central Europe (NAST, 1972): the species is recorded in Great Britain as "not uncommon in woods" and it probably lives on various trees and shrubs (CHINA, 1942).

Cixius dubius WAGNER, 1939

Material: 1 ♂, Ozo (Izier), 26.V.1970. R. Detry.

The species was firstly recorded from Belgium by Dr SYNAVE and myself in 1980 and no other specimens have been found so far in Belgium. According to NAST (1972) the species has been found in Austria, Czechoslovakia, Germany, north Italy, Poland and Yugoslavia.

Cixius stigmaticus (GERMAR, 1818)

Material: 1 ♂, Winenne, 18.V.1970; 2 ♂ 1 ♀, Dourbes, Roche à l'Homme, 21.V.1972; 2 ♀, Baraque Fraiture, sur bouleaux, 2.VI.1954; 4 ♂ 2 ♀, Château Grimonster (Ferrières), 3.VI.1970; 1 ♂ 1 ♀, Hotton (Lux.), 31.V-03.VI.1986; 1 ♂, Lestery, 14.V.1948; 1 ♂, Rouillon-Annevoie, 1.VI.1936; 1 ♂, Onoz-Spy, 24.V.1950; 1 ♂ 1 ♀, Mirwart, 19.V.1950.

A West and Southern European species which is not uncommon in the southern part of our country besouth the rivers Sambre and Maas.

Cixius cunicularius (LINNÉ, 1767)

(map 1)

A common species which has been recorded all over the country. The adults live on foliiferous trees and bushes (OSSIANNILSSON, 1978).

Cixius nervosus (LINNÉ, 1758)

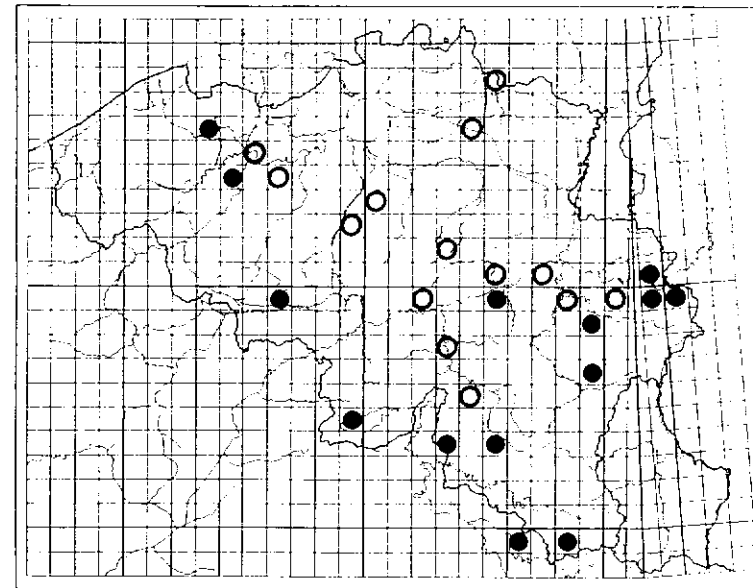
(map 2)

Cixius nervosus is the commonest species of this family in Belgium; it has been recorded all over the country and is associated with various trees, shrubs and bushes.

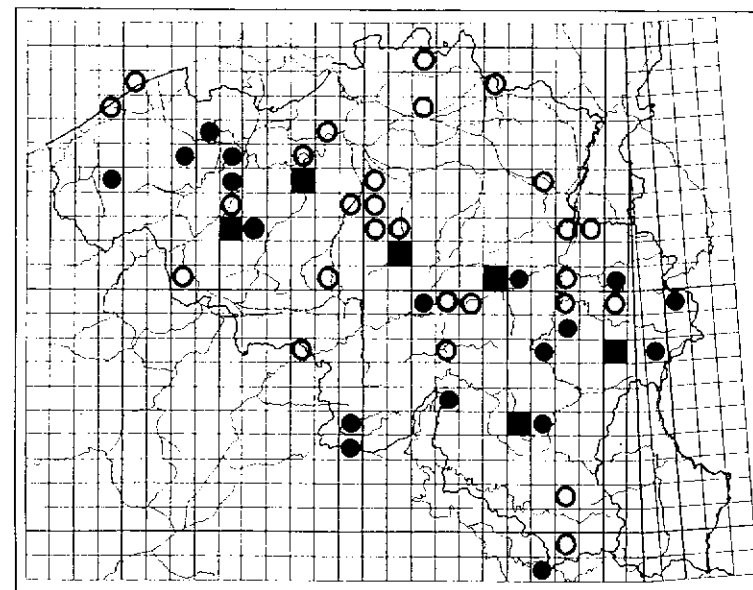
Tachycixius pilosus (OLIVIER, 1791)

(map 3)

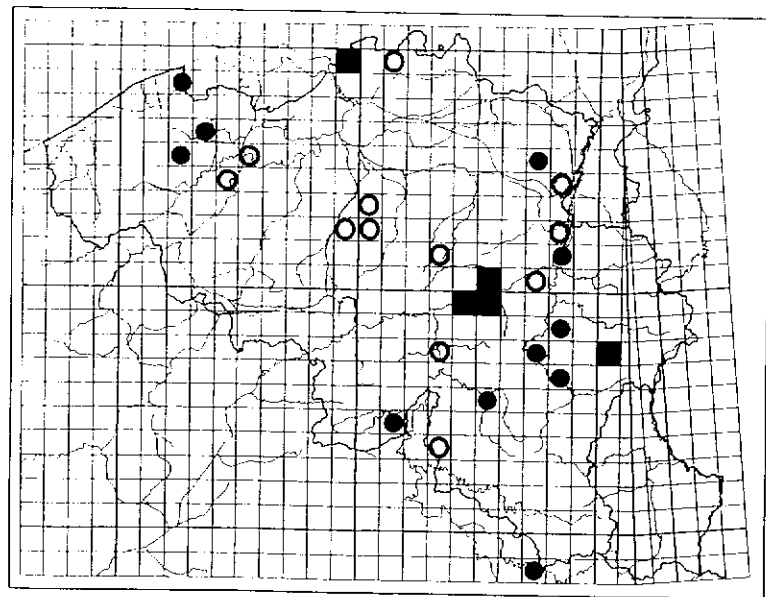
A common species which has been recorded from all over Belgium. Like the species of the genus *Cixius*, to which it is closely related, *Tachycixius pilosus* has been found on various trees and shrubs.



Map 1: distribution in UTM 10 km squares of *Cixius cunicularius*. ○ : records made anterior to 1950. ● : records made after 1950. ■ : records before and after 1950.



Map 2: distribution in UTM 10 km squares of *Cixius nervosus*. ○ : records made anterior to 1950. ● : records made after 1950. ■ : records before and after 1950.



Map 3: distribution in UTM 10 km squares of *Tachycixius pilosus*. ○ : records anterior to 1950. ● : records made after 1950. ■ : records before and after 1950.

Reptalus panzeri (Lôw, 1799)

Material: 1 ♀, Tellin, 10.VII.1974, H. Synave.

This capture is of interest as it is one of the most northern records of this species.

Pentastiridius leporinus (LINNÉ, 1761)

Material: 4 ♂ 2 ♀, Turnhout, 15.VII.1918, 13 and 18.V.1914; 1 ♂, Hoogstraeten, 7.VII.1918.

The presence of several specimens from different captures dates suggests that a population of this species was present around Turnhout and Hoogstraeten at the beginning of this century. Recent data are lacking, which suggests that the species might be extinct in Belgium, although this region has never been seriously sampled on Homoptera after 1950.

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