

THE MICROPEZIDAE AND TANYPEZIDAE (DIPTERA) IN ESTONIA

Veljo RUNNEL

Tartu Ülikool, Zooloogia ja Hüdrobioloogia Instituut (Tartu University, Institute of Zoology and Hydrobiology), Vanemuise 46, EE-2400 Tartu, Eesti (Estonia)

Presented by K. Elberg

Received November 19, 1993; accepted November 26, 1993

Abstract. In Estonia the family *Micropezidae* includes six species: *Micropeza corrigiolata* L., *Calobata petronella* L., *Neria cibaria* L., *N. commutata* Czerny, *N. femoralis* Mg., and *N. ephippium* Fabr. Two of them, *N. femoralis* Mg. and *N. commutata* Czerny, have been recorded in Estonia for the first time. *Tanypeza longimana* Fall., the only species of the *Tanypezidae* in the Palaearctic Region, is also new to Estonia.

Key words: *Micropezidae*, *Tanypezidae*, Estonia.

The *Micropezidae* are a family of medium-sized *Acalyptata* flies with a slender body and thin long legs. Their mainly saprophagous larvae are known to live under the bark of tree trunks, in *Polyporus* fungi, and in the root nodules of various leguminous plants. They have been reared from dung, too. In the northern temperate zone there is one generation per annum. The flight period of these flies is at the end of spring and in the first half of summer. The adults are often found on the leaves of bushes and the lower branches of trees bordering mostly on deciduous and mixed forests. Sometimes they can be found near waterbodies.

The family is cosmopolitan, but the majority of the species are distributed in the tropics. About 500 species are known from all over the world (Steyskal, 1987). Some 40 species are recorded in the Catalogue of the Palaearctic Diptera (Soós, 1984). Recently a list of the Fennoscandian species was published with special references to their distribution in Sweden (Andersson, 1989, nine species). A survey of this family in Norway (Greve, Nielsen, 1991, six species) has been issued separately. Hackman (1980) included five species in the list of the Finnish Diptera, and Stackelberg (Штакельберг, 1958) mentioned eight species in the Leningrad Region, Russia.

Earlier, the following four species had been recorded in Estonia: *Calobata petronella* L. (Mühlen, Schneider, 1920; Эльберг, 1971, as *Compso-bata petronella*), *Neria cibaria* L. (Remm, 1956, as *Trepidaria cibaria*; Эльберг, 1971, as *Compso-bata cibaria*), *Neria ephippium* F. (Штакельберг, 1958, as *Paracalobata ephippium*), and *Micropeza corrigiolata* L. (Эльберг, 1969, 1971).

As a result of my recent studies two species, *Neria femoralis* Mg. and *N. commutata* Czerny, have been added to the list of the Estonian *Micropezidae*. The finds of the former are of particular interest. This species is distributed mainly in Central Europe, and occurs in Estonia at the northern border of its distribution area. The collection of the Institute of Zoology and Botany also contains three specimens of this species collected in Lithuania (two from Druskininkai and one from about 15 kilometers south of Pabrade).

This paper also includes some information on *Tanypeza longimana* Fall., the family *Tanypezidae*, closely related to the *Micropezidae*. The *Tanypezidae* are a small family of 20 world species. *T. longimana* is the only species on the Palearctic Region. It is interesting to mention that among the 37 specimens captured in Estonia there were 34 females. On the other hand, only two females were found among the 13 specimens of *Neria femoralis*.

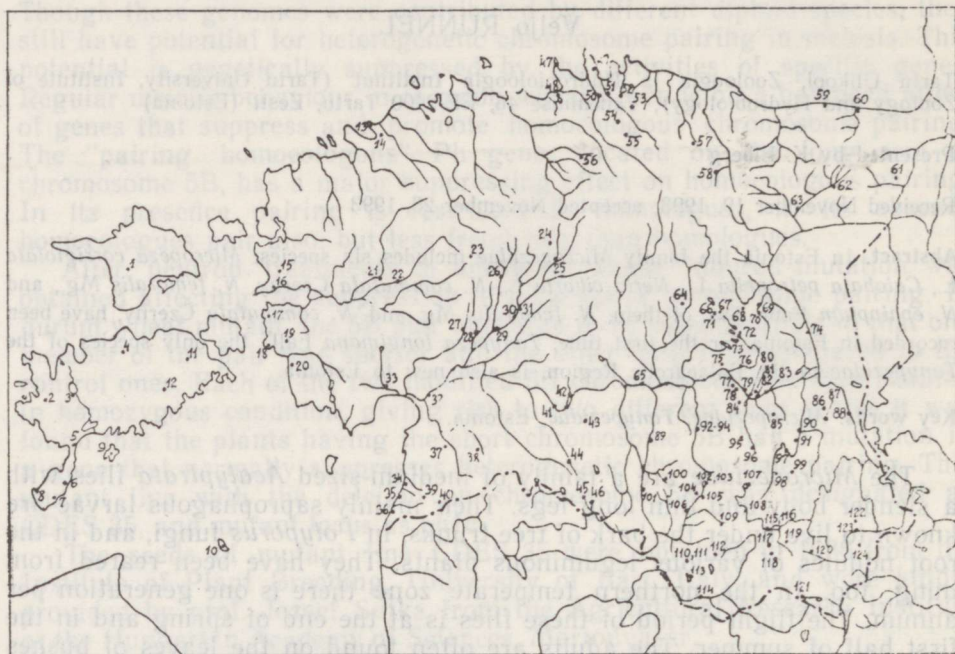


Fig. 1. Collecting localities of the Estonian *Micropezidae* and *Tanypezidae*: 1 — Lake Tihu, 2 — Viidumäe SNR, 3 — Lake Karujärv, 4 — Linnuse, 5 — Salme, 6 — Mässa, 7 — Mäebe, 8 — Türju, 9 — Island Abruka, 10 — Island Ruhnu, 11 — Lake Koigi, 12 — Vana-Lõve, 13 — Lohusalu, 14 — Laulasmaa, 15 — Käpla, 16 — Kiideva, 17 — Mõisaküla, 18 — Puhtu, 19 — Vatla, 20 — Varbla, 21 — Selja, 22 — Konovere, 23 — Lelle, 24 — Väätsa, 25 — Paide, 26 — Kärü, 27 — Viluvere, 28 — Vaki, 29 — Oriküla, 30 — Lüüste, 31 — Samliku, 32 — Sindi, 33 — Audru, 34 — Jaagupi, 35 — Kabli, 36 — Orajõe, 37 — Ristiküla, 38 — Kilingi-Nõmme, 39 — Massiaru, 40 — Nigula SNR, 41 — Heimtali, 42 — Viljandi, 43 — Holstre, 44 — Karksi, 45 — Taagepera, 46 — Holdre, 47 — Tammistu, 48 — Muuksi, 49 — Kasispea, 50 — Nõmmeveski, 51 — Joaveski, 52 — Palmse, 53 — Viitna, 54 — Metsküla, 55 — Vohnja, 56 — Aegviidu, 57 — Vinni, 58 — Võhu, 59 — Valaste, 60 — Toila, 61 — Jõuga, 62 — Poruni, 63 — Roostoja, 64 — Siimusti, 65 — Vaibla, 66 — Prossa, 67 — Luua, 68 — Voore, 69 — Saare, 70 — Kaiu, 71 — Kaarepere, 72 — Kaiavere, 73 — Elistvere, 74 — Lahepera, 75 — Kärkna, 76 — Vasula, 77 — Ropka, 78 — Tähtvere, 79 — Tartu, 80 — Lohkva, 81 — Metsküla, 82 — Kabina, 83 — Luunja, 84 — Ropka, 85 — Lake Kriimani, 86 — Saki, 87 — Järvelja, 88 — Jõepera, 89 — Rannaküla, 90 — Ahja, 91 — Akste, 92 — Vapramäe, 93 — Elva, 94 — Peedu, 95 — Kambja, 96 — Prangli, 97 — Kiidjärve, 98 — Kioma, 99 — Põlva, 100 — Puka, 101 — Soontaga, 102 — Otepää, 103 — Pühajärve, 104 — Kääriku, 105 — Märdi, 106 — Sangaste, 107 — Piigandi, 108 — Sulbi, 109 — Vaabina, 110 — Lüllemäe, 111 — Lake Kõstre, 112 — Kaika, 113 — Lake Aheru, 114 — Hargla, 115 — Sõmerpalu, 116 — Järvere, 117 — Nursi, 118 — Rõuge, 119 — Kasaritsa, 120 — Lake Kavadi, 121 — Murati, 122 — Hanikase, 123 — Tuderna, 124 — Obinitsa.



Fig. 2. *Micropeza corrigiolata*.



Fig. 3. *Calobata petronella*.



Fig. 4. *Neria cibaria*.



Fig. 5. *Neria commutata*.



Fig. 6. *Neria femoralis*.



Fig. 7. *Neria ephippium*.



Fig. 8. *Tanypeza longimana*.

All in all 365 investigated specimens of *Micropezidae* are contained in the collections of the Institute of Zoology and Botany, Estonian Academy of Sciences, and of the Institute of Zoology and Hydrobiology, Tartu University.

The new material as well as the data about the material collected in the 19th century by F. Sintenis are presented in the list below for each species separately. The localities where Sintenis had collected his materials and that he had not marked on the labels but which were later found in his articles, are given in square brackets. In the doubtful cases as concerns the correctness of the locality names a question-mark has been added. In the list the numbers in parentheses indicate the corresponding collection localities in the Estonian map (Fig. 1). Only three rare species are provided with detailed faunistic data.

In the present paper the status of the genus *Neria* Robineau-Desvoidy, 1830 is treated on the basis of a recent article by Ozerov (Озеров, 1991).

MICROPEZIDAE

1. *Micropeza corrigiolata* (Linnaeus, 1767) (Fig. 2)

Old material: [Audru] (33), [Tartu] (79), [Kasaritsa?] (119); 14. vi—25. vii; 1883—1887; 8 ♂♂ 14 ♀♀ (Sintenis).

New material: 44 localities (2, 6, 10, 11, 12, 14, 17, 25, 26, 31, 32, 42-44, 49, 52-55, 65, 69, 70, 72, 74, 76, 78, 80, 81, 84, 93, 94, 95, 100, 105, 106, 109, 110, 111, 113, 115, 117, 120, 122, 123); 21. v—30. vii; 46 ♂♂ 39 ♀♀.

Distribution: widespread in Europe, also in Turkey.

2. *Calobata petronella* (Linnaeus, 1761) (Fig. 3)

Old material: Tartu (79), [Kasaritsa] (119); v—2. viii; 1882—1883; 12 ♂♂ 11 ♀♀ (Sintenis).

New material: 21 localities (19, 20, 22, 24, 25, 27, 39, 40, 45, 51, 56, 71, 79, 84, 87, 96, 97, 103, 104, 114, 122); 21. v—30. vii; 12 ♂♂ 20 ♀♀.

Distribution: Europe, except for Mediterranean area.

3. *Neria cibaria* (Linnaeus, 1761) (Fig. 4)

Old material: Tartu (79), [Kasaritsa] (119); v—12. viii; 1882—1883; 3 ♂♂ 7 ♀♀ (Sintenis).

New material: 41 localities (2-4, 8, 9, 12, 13, 18, 21, 25, 27-30, 34, 35, 38, 42, 46, 47, 52, 56, 59, 60, 62, 63, 67, 71, 78, 79, 82, 89, 93, 97, 101, 104, 107, 112, 115-117); 5. v—22. vii; 36 ♂♂ 34 ♀♀.

Distribution: Europe, except for Mediterranean area.

4. *Neria commutata* (Czerny, 1930) (Fig. 5)

Old material: Tartu (79), [Kasaritsa] (119); v—8. vii; 1882—1883; 1 ♂ 3 ♀♀ (Sintenis).

New material: 41 localities (1, 5, 7, 15, 16, 23, 25, 34, 41, 48, 50, 53, 55, 56, 58, 61, 64, 66-68, 71, 73, 75, 81-83, 86, 90-92, 97-101, 103-105, 108, 110, 118); 24. v—16. vii; 51 ♂♂ 38 ♀♀.

Distribution: North- and Central-Europe, East-Siberia.

5. *Neria femoralis* (Meigen, 1826) (Fig. 6)

Old material: [Tartu?] (79); 8. vi 1883; 1 ♂ (Sintenis).

New material: Paide (25); 14. vi 1992, 1 ♂ (Runnel); Orajõe (36), 8. vi 1974, 3 ♂♂ (Elberg); Vohnja (55), 22. vi 1973, 1 ♂ (E. Remm); Valaste (59), 20. vi 1973, 1 ♂ (E. Remm); Lake Kriimani (85), 23. v 1982, 4 ♂♂ 2 ♀♀ (Elberg); Obinitsa (124), 29. vii 1980, 1 ♂ (E. Remm).

Distribution: Central-Europe, North-Western Russia (Leningrad Region).

6. *Neria ephippium* (Fabricius, 1794) (Fig. 7)
Old material: [Audru?] (33), 6. vii 1980, 1 ♀ (Sintenis).
New material: Puhtu (18), 20. vii 1987, 1 ♂ (E. Remm); Kärü (26), 14. vi 1979, 1 ♂ 1 ♀ (E. Remm); Ristiküla (37), 28. vi 1960, 1 ♀ (H. Remm); Peedu (94), 9 viii 1951, 1 ♀ (Stackelberg); Otepää (102), 30. vi 1963, 3 ♂ 1 ♀ (Elberg).
Distribution: widespread in Europe, also North-Africa (Algeria).

TANYPEZIDAE

1. *Tanypeza longimana* Fallen, 1820 (Fig. 8)

Old material: [Audru] (33), 7. viii 1886, 6. vii 1887, 3 ♀ ♀; [Audru?] (33), 3. vii 1889, 1 ♀; [Audru?] (33), 31. vii 1889, 1 ♀; [Audru?] (33), 20. vii 1890, 1 ♀; [Tartu] (79), 31. vii 1883, 1 ♀; [Tartu?] (79), 18. vi 1887, 1 ♀; [Piigandi] (107), 17., 19. vi 1896, 3 ♀ ♀; [Kasaritsa?] (119), 4. vii 1883, 1 ♂ 1 ♀; 29. vi 1888, 1 ♂; 16., 22. vi 1891, 2 ♀ ♀ (Sintenis).

New material: Island Abruca (19), 15., 16. vii 1973, 1 ♂ 7 ♀ ♀ (Altin, Elberg); Nigula State Nature Reserve (40), 19. vi 1969, 22. vii 1989, 5 ♀ ♀ (E. Remm, Elberg); Vinni (57), 15. viii 1990, 1 ♀ (Elberg); Luua (67), 18. vii 1969, 1 ♀ (Elberg); Elistvere (73), 16. vii 1982, 1 ♀ (E. Remm); Tartu (79), 3. vii 1985, 10. viii 1991, 30. vi 1992, 3 ♀ ♀ (Elberg); Kabina (82), 13. vi 1973, 1 ♀ (Elberg); Hanikase (122), 11. vii 1985, 1 ♀ (E. Remm).

Distribution: widespread in Europe, also Siberia and the southern part of the Russian Far East.

ACKNOWLEDGEMENT

I have the pleasure of expressing my gratitude to K. Elberg, Cand. Biol., who gave me much assistance in my *Micropezidae* study.

REFERENCES

- Andersson, H. 1989. Taxonomic notes on Fennoscandian *Micropezidae* (Diptera). — Not. Ent., 69, 153—162.
Greve, L., Nielsen, T. R. 1991. A survey of the family *Micropezidae* in Norway. — Fauna norv. Ser. B, 77—87.
Hackmann, W. 1980. A check list of the Finnish Diptera II. *Cyclorhapha*. — Not. Ent., 60, 117—162.
Mühlen, M. zur, Schneider, G. 1920. Der See Wirzjerw in Livland. Biologie und Fischerei. — Arch. Naturk. Ostbalticums, 14, 1, 1—156.
Remm, H. 1956. Selts: kahetiivalised — Diptera. — In: Maavara, V. Noore entomoloogi käsiraamat. Eesti Riiklik Kirjastus, Tallinn, 229—225.
Soós, A. 1984. Family *Micropezidae* (Tylidae). — In: Catalogue of Palaearctic Diptera, vol. 9, *Micropezidae-Agromyzidae*. Budapest, 19—24.
Steyskal, G. C. 1987. *Micropezidae*. — In: McAlpine, J. F. (ed.). Manual of Nearctic Diptera, 2, 56—67.
Озеров А. Л. 1991. К таксономии двукрылых подсемейства *Calobatinae* (Diptera, *Micropezidae*). — Зоол. ж., 70, 11, 63—72.
Штакельберг А. А. 1958. Материалы по фауне двукрылых Ленинградской области. III. Diptera, *Acalyprata*. Ч. I. — Тр. Зоол. ин-та АН СССР, 24, 103—191.

Эльберг К. 1969. О миграциях мух (*Diptera, Brachycera*) на верховых болотах. — Изв. АН ЭССР. Биол., 18, 3, 269—275.

Эльберг К. 1971. Фауна мух *Acalyprata* (*Diptera, Brachycera*) болот Эстонии. — Дис. канд. биол. наук. Тарту (рукоп. хранится в Ин-те зоол. и бот. АН Эстонии).

KÄRBESTE SUGUKONNAD MICROPEZIDAE JA TANYPEZIDAE (DIPTERA) EESTIS

Veljo RUNNEL

Eestist on leitud sugukonna *Micropezidae* kuus liiki, neist kaht, *Neria femoralis* Mg. ja *N. commutata* Czerny, on mainitud siinses artiklis esmakordselt. *Tanypeza longimana* Fall., palearktilise regiooni ainuke liik sugukonnast *Tanypezidae*, on samuti Eestile uus.

СЕМЕЙСТВА ДВУКРЫЛЫХ MICROPEZIDAE И TANYPEZIDAE (DIPTERA) В ЭСТОНИИ

Вельё РУННЕЛ

Семейство *Micropezidae* представлено в Эстонии шестью видами, из них *Neria femoralis* Mg. и *N. commutata* Czerny отмечены для Эстонии впервые. *Tanypeza longimana* Fall. — единственный в Палеарктике вид семейства *Tanypezidae* — также является новым для Эстонии.