



New records of threatened Diptera in Finland

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New records of threatened species of the families Pachyneuridae, Keroplatidae, Xylophagidae, Syrphidae and Clusiidae are given, with discussion of the threatened status of some species.

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New records of threatened Diptera included in the Finnish Red Data List (Rassi et al. 1991) are presented. Data is gained from studying old material and new acquisitions of the collections of the Zoological Museum and of the Department of Agricultural and Forest Zoology, University of Helsinki, and from collecting by traps and sweep netting. The trapping was conducted in 1993 by the first author in the vicinity of Koivusuo Strict Nature Reserve (Kb: Ilomantsi, Pirhunvaara) and near the southern border of Hanhisuo-Ruosmesuo Mire Protection Area (Kb: Ilomantsi, Tapionaho). The habitats in Pirhunvaara form a mosaic of abandoned and afforested cultivated fields and meadows. The Tapionaho site consists of a narrow strip of old growth mixed forest among the mires and patches of fresh clear cuttings on mineral soil. From these trappings with window traps, Polypore traps (Kaila 1993) and Malaise traps, and also by netting, seven threatened dipteran species were found. This material is stored at the Zoological Museum, Helsinki. We give a list of new records of dipteran species included in the Red Data Book. For explanation of the different categories of endangeredness, see Rassi et al. 1993.

Pachyneuroidea, Pachyneuridae

Pachyneura fasciata Zetterstedt - category "V" (= Vulnerable). Since the record from Ks: Kuusamo in 1958 (Valkeila 1959) this species has been found only once in 1989 (Väisänen & Biström 1991). Recent records are known also from Kon: Kivach, Russian Karelia (Yakovlev & Polevoi 1991).

New records: 3 males - Kb: Ilomantsi, Pirhu, 6993:723, 10-17.VI.1993 (Polevoi). Collected with Malaise trap.

Mycetophiloidea, Keroplatidae

Keroplatus tipuloides (Bosc) - category "V". Decline of this species was considered by Väisänen (1982) to be apparent. This species was, however, rediscovered in 1989 in the provinces Sb: Vieremä and Ok: Vuolijoki (Ståhls & Kaila 1990); additional specimens were later found at several sites (Rassi et al. 1991, Nironen & Heinonen 1991, Heinonen & Mäkelä 1993). New findings show that populations of this species are still preserved in many (favourable) localities. However, the habitat requirements suggest this species be kept on the Red List. During investigations over the last three years *K. tipuloides* was found to be quite common in Kon: Kivach and Kl: Puikkola, Russian Karelia.

New records: 2 females - Kb: Ilomantsi, Tapionaho, 698:72, 26.7I.1993 (A. Polevoi), 2 females - same site, 7 - 28.7I.1993, (E. Yakovlev). Collected with Polypore traps set on *Fomes fomentarius* (Fr.) Fr., growing on the dead birch in mixed forest.

Xylophagoidea, Xylophagidae

Xylophagus ater Mg. - category "V". Frey (1911) reported this species from many localities (provinces Al, Ab, N, St, Tb, Sb, Ks, Lk and Lt). Additional records exist from Kl: Sortavala and Ta: Ruovesi, Pirkkala (Tiensuu 1935), N: Linna (Frey 1946), Ob: Pisavaara (Lindberg & Saris

1952). During the years 1990-93 it has been found in Russian Karelia (Kl: Puikkola, Kon: Kivach).

New records: 1 female - Kb: Ilomantsi, Tapionaho, 698:72, 11.7.I.1993 (E. Yakovlev). Collected with a window trap.

Xylophagus junki Szilady - category "V". Old records are known from the provinces Ab, N, Ka, St, Sa, Sb, Ta, Ok, Ob, Ks, Lk and Li (Tiensuu 1935). In Russian Karelia several specimens were found during 1990-93 in Kon: Kivach.

New records: 2 males - Kb: Ilomantsi, Tapionaho, 698:72, 10.VI.1993 (Yakovlev). Collected on the trunk of a dead pine.

Syrphoidea, Syrphidae

Temnostoma vespiforme (Linnaeus) - category "Md" (= in need of monitoring, declining). Since the records of Bonsdorff (1861) this fly is known from the provinces Al, Ab, N, St, Ta, Kl, Tb, Sb, Kb, Ok and Ob. New provinces are Ks and Lkem. Recent records are also known from Kon: Kivach, Russian Karelia (Yakovlev & Polevoi 1991).

New records: 1 male - Al: Eckerö, Skag 670:07, 22.7.1985 (L. Kaila); 1 female - Ta: Padasjoki, 25.7.1993 (G. Ståhls); 1 male - Kb: Ilomantsi, Pirhu, 6993:723, 2-6.7.1993 (A. Polevoi), collected with a Malaise trap; 1 male - Ks: Kuusamo, Oulanka, 736:60, 2.7.1988 (A. Barkalov); 2 males - LKem: Kittilä, Pallasjärvi, 755:38, 4-13.7.1988 (A. Barkalov);

Temnostoma apiforme (Fabricius) - category "Md". This species is known from Al, Ab, N, Ka, St, Ta, Sa, Tb, Sb, Kb, Ok, Ob, Ks and Li. A new province is LKem.

New record: 1 female - N: Sibbo, Stormossen 668:41, 26.7.1987 (A. Albrecht), from a Malaise-trap; 3 males - LKem: Kittilä, Pallasjärvi, 755:38, 4-13.7.1988 (A. Barkalov), collected with a Malaise-trap.

Sphagina sibirica Stack. - category "Mr" (= in need of monitoring, rare). The most recent previously known record is from Kb: Koli (Hackman 1970). In Sweden this species was recorded for the first time in 1985, and since then it has been recorded from several places (Hedström 1991). This species is more common and widespread than earlier assumed. This fly is also known from Russian Karelia (Kon: Kivach).

New records: 1 male - N: Elimäki, 6735:468, 10.7.1981 (M. Koponen); 1 female - Oa: Ilmajoki, 696:27, 22.7.1992 (J. Perkiömäki); 3 males - Kb: Ilomantsi, Pirhu, 6993:723, 12.7.1993 (A. Polevoi), collected by sweep netting among flowering Apiaceae; 1 male - Om: Pyhäjärvi,

704:44, 7.7.1983 (J. Perkiömäki); 1 female - Om: Pyhäjärvi, 7154:367, 28.6.1978 (M. Koponen); 2 males - Ok: Paltamo, 714:54, 30.6.1991 & 3.7.1991 (J. Perkiömäki); 1 female - Ok: Kuhmo, 7107:658, 10.7.1980 (M. Koponen); 6 males, 2 females - Ok: Sotkamo, Korvanniemi, 712:29, 30.6.1988 (A. Barkalov); 1 male - Ks: Kuusamo, Liikasenvaara, 736:61, 3.7.1988 (A. Barkalov); 2 males, 2 females - LKem: Kittilä, Pallasjärvi, 755:38, 30.7.1988 (A. Barkalov); 1 male - Le: Kilpisjärvi, 767:25, 7.7.1988 (A. Barkalov); 1 male - Kb: Niirala, 690:68, 10.6.1994 (A. Polevoi).

Sphagina elegans Schummel (= *S. kimakowicz* auctt. nec Strobl, Thompson & Torp 1986:251) - category "Mr". *Sphagina elegans* is to be added to the Finnish list of Diptera, and *S. kimakowicz* is to be deleted from it. In Finnish collections only two specimens of *S. elegans* are found from N: Helsinki ymp. (L. Tiensuu) and Ta: Pälkäne (W. Hellén); both are old records. This species is widespread in Europe and only known from a few records from Fennoscandia (Thompson & Torp 1986). No new records of this species exist.

Sphagina montana Becker (= *S. violovitshi* auctt. nec Stackelberg, Thompson & Torp 1986:254) - category "Mr". Old records: N: Helsing (R. Frey); Ta: Lammi, 16.6.1940 (J. Kangas). Altogether only four specimens are known from Finland. The species has a boreo-montane distribution, and is not known from other Nordic countries.

New records: Ta: Pälkäne, 680:35, 18.6.1976 (Y. Ranta); Sa: Mikkelin mlk, 6830:501, 10.6.1978 (M. Koponen).

Sphagina sphagina Zetterstedt - category "Mr". Earlier records proved to be misidentifications. The existence of this species in Finland is still to be verified. In Sweden it is known from the provinces Jmt, Älpm, Lylpm (Hedström 1990).

Agromyzoidea, Clusiidae

Hendelia beckeri Czerny - category "Md". Previously it has been reported from Ab: Lojo, Kaikuma (Frey 1928), N: Helsinki and Espoo (Tuomikoski 1933) as well as from the present territory of Russian Karelia - Kl: Salmi, Hüsjärvi, Suistamo, Loimola and Leppäyrjä (Tuomikoski 1936). Since 1990 this species has been collected in Kon: Kivach, Russian Karelia (Yakovlev & Polevoi 1991).

New records: 1 female - Kb: Ilomantsi, Pirhu, 6993:723, 2-6.7.1993 (A. Polevoi), collected with a Malaise trap.

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References

- Bonsdorf, E.J. 1861: Finlands tvåvingade insekter (Diptera), förtecknade och i korthet beskrifne. — Helsingfors 306 p.
- Frey, R. 1911: Zur Kenntnis der Dipterenfauna Finlands. Stratiomyidae, Xylophagidae, Leptidae, Tabanidae, Cyrtidae, Asilidae, Bombyliidae, Therevidae, Scenopinidae. — Acta Soc. Fauna Flora Fennica 34(6):1–58.
- 1928: Förteckning över Finlands Clusiider (Dipt. Haplost.). — Notulae Entomol. 8:108–109.
- 1946: Redogörelse för tillväxten av Helsingfors Universitets Entomologiska museums samlingar under verksamhetsåret 1945–1946. — Mem. Soc. Fauna Flora Fennica 22:264–269.
- 1947: Anteckningar om dipterfaunan på Karlö (Hailuoto) sommaren 1947. — Mem. Soc. Fauna Flora Fennica 24:69–80
- Hackman, W. 1970: [Mötet den 19 September 1969]. - Notulae Entomol. 50(4):133
- Hedström, L. 1990. Svenska insektynd - rapport 6. - Ent. Tidskr. 111:133-147.
- 1991: Svenska insektynd - rapport 7. - Ent. Tidskr. 112:133–146.
- Heinonen, M. & Mäkelä, K. 1993: Luontein yleiskaava-alueen eteläisen osan ranta- ja saaristoluonto. - Anttolan kunta, Mikkelin seudun ympäristökeskus.
- Kaila, L. 1993: A new method for collecting quantitative samples of insects associated with decaying wood or woodfungi. — Entomol. Fennica 4: 21–23.
- Lindberg, H. & Saris, N. E. 1952: Insektafaunan i Pisavaara Naturpark. — Acta Soc. Fauna Flora Fennica 62(2):1–82.
- Nironen, M. & M. Heinonen 1991: Stensbölen kartanon alueen luontoselvitys. — Porvoon mlk. Ympäristönsuojelulautakunta.
- Rassi, P. et al. (eds.) 1991: Uhanalaisten eläinten ja kasvien seuranta-toimikunnan mietintö. — Komiteanmietintö 30. 328 p.
- Ståhls, G. & Kaila, L. 1990: Keroplatus tipuloides Bosc rediscovered in Finland (Diptera: Nematocera: Keroplatidae). — Notulae Entomol. 69:203–206.
- Thompson, F.C. & Torp, E. 1986: Synopsis of the European species of Sphegina Meigen (Diptera, Syrphidae). — Ent. scand. 17:235–269.
- Tiensuu, L. 1935: The Erinia-species of Finland (Dipt. Eriniidae). — Ann. Entomol. Fennici 1(3):106–107.
- Tuomikoski, R. 1933: Notizen über die Clusiiden Finnlands. — Not. Entomol. 13:15–19.
- Tuomikoski, R. 1936: Bemerkungen über die Clusiiden (Dipt.) Finnlands. — Ann. Entomol. Fennici 2(4):182–186.
- Valkeila, E. 1959: Suomen Hyönteistieteellisen Seuran kesäretki Kuusamoon v. 1958. — Ann. Entomol. Fennici 25:47–49.
- Väisänen, R. 1982: Vanishing and vulnerable Diptera of Finland. — Not. Entomol. 62:111–121.
- Väisänen, R. & Biström, O. 1991: Pahyneura fasciata Zetterstedt found at Saarijärvi, Central Finland (Diptera, Pachyneuridae). — Ent. Fennica 2(1):4.
- Yakovlev, E.B. & Polevoi, A.V. 1991: Diptera from Malaise traps in pine and aspen forests. In: Yakovlev E.B. & Mozolevskaya E.G. (eds.) Entomological researches in Kivach Nature Reserve. — Acad. Sci. USSR, Petrozavodsk p. 5–30.