Hoverflies (Diptera, Syrphidae) from Malaise traps in Ångermanland, coastal northern Sweden

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Hoverflies were collected with Malaise traps in 1979–1982 at Ängerån on the Bothnian coast of the northern Swedish Ångermanland province. In total, 1 282 specimens of 85 species were identified. The four species *Platycheirus perpallidus* Verrall, 1901, *Parasyrphus malinellus* (Collin, 1952), *Cheilosia rufimana* Becker, 1894, and *Eoseristalis picea* (Fallén, 1817) are reported from Sweden for the first time. An additional 11 species were not previously known from this region. Females dominated in the material. Flight periods are given for the ten most abundant species.

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During the summers of 1979, 1980 and 1982, insects were collected in bilateral Malaise traps by Em. Prof. K. Müller in NE Ångermanland on the Swedish Bothnian coast. A part of the material of Syrphidae Eristalini and some other flies with chiefly aquatic larvae were reported on by Wagner (1981). I will here present a list of the rest, i.e. the main part of the collected material of Syrphidae. As species distributions in Sweden are poorly known for this family, such a list provides many new records for the region and even for the country.

Material and methods

Four Malaise traps were used close to the coastal stream Ängerån (63°35′ N, 19°50′ E), about 30 km S of Umeå in the province Ångermanland. In 1979, one trap was placed across the stream near the outlet in the Bothnian Sea, and in 1980 this trap was supplemented by one a bit north of the outlet, and one on an isle near the outlet. In 1982, a single trap was used at Ängerfjärden, a small densely vegetated lake that the stream passes about 2 km from the outlet. A brief chemical and physical characterization of the stream and the outlet bay was provided by Müller & Müller-Haeckel (1978) and Müller & Mendl (1980). The vegetation of the outlet area was described by Dahlberg (1982).

The flies were collected in 50 % glycol, transferred to 70 % ethanol for preservation and later pinned and dried before examination. The identification followed mainly van der Goot (1981, 1986), and the nomenclature is from Soós & Papp (1988). The identification of the following genera benefitted from the cited works: *Anasimyia* (Claussen & Torp 1980), *Brachyopa* (Thompson 1980), *Chrysogaster* (Speight 1980), *Melangyna* (Nielsen 1971, 1980), *Metasyrphus* (Dušek & Láska 1976), *Neoascia* (Barkemeyer & Claussen 1986), *Platycheirus* (Nielsen 1971, 1974, 1981, van der Linden 1986), *Rhingia* (Barkemeyer 1986), *Sphaerophoria* (Torp 1984), Syrphini (Hippa 1968) *Syrphus* (Barendregt 1983), and *Xylota* (Andersson 1988).

The species identification was made problematic by the earlier conservation of the material in alcohol, and many specialists provided valuable help. A small proportion of the specimens could only be identified to genera.

List of species

For each species is given the total number of individuals of each sex collected in the four traps during the three years. Species not previously reported from Sweden are denoted with an S, and those in which the range within Sweden is considerably expanded with an Å.

SYRPHINAE. **Bacchini:** *Baccha* sp 2♀. – **Melanostomatini:** *Melanostoma mellinum* (L.) 42♂109♀, *M. scalare* (Fabr.) 7♂29♀, *Platycheirus albimanus* (Fabr.) 3♀, *P. angustatus* (Zett.) 3♀, *P. clypeatus* (Meig.) 206♂266♀, *P. immarginatus* (Zett.) 4♂, *P. peltatus* (Meig.) 13♂33♀, *P. perpallidus* Verr. 5♂ S, *P. podagratus* (Zett.) 1♂5♀, *P. scambus* (Staeg.) 16♂45♀, *P. scutatus* (Meig.) 1♂2♀, *Pyrophaena granditarsis* (Forst.) 5♂10♀. – **Chrysotoxini:** *Chrysotoxum arcuatum* (L.) 2♀, *C. bicinctum* (L.) 2♂. – **Syrphini:** *Syrphus ribesii* (L.) 31♀, *S. torvus* Ost.-Sack. 4♂2♀, *S. vitripennis* Meig. 2♀, *Epistrophella euchroma* (Kowarz) 1♀, *Epistrophe grossularie* (Meig.) 1♀, *E. melanostoma* (Zett.) 2♀, *Metasyrphus corollae* (Fabr.) 2♂10♀, *M. latifasciatus* (Macq.) 4♀, *M. lundbecki* (Soot-Ryen) 3♂4♀, *M. luniger* (Meig.) ?1♀, *M. nitens* (Zett.) ?2♀, *Lapposyrphus lapponicus* (Zett.) 1♂1♀, *Scaeva pyrastri* (L.) 2♂, *Dasysyrphus lunulatus* (Meig.) 1♂3♀, *D. tricinctus* (Fall.) 2♀, *D. venustus* (Meig.) 12♀, *Melangyna arctica* (Zett.) 1♂, *M. umbellatarum* (Fabr.) 1♀ Å, *Parasyrphus annulatus* (Zett.) 3♀, *P. lineolus* (Zett.) 3♂16♀, *P. macularis* (Zett.) 6♂10♀, *P. malinellus* (Collin) 2♀ S, *P. tarsatus* (Zett.) 3♀, *P. vittiger* (Zett.) 5♂18♀ Å, *Didea* sp 1♂, *Meliscaeva cinctella* (Zett.) 4♂33♀, *Episyrphus balteatus* (DeG.) 4♀, *Sphaerophoria abbreviata* Zett. 1♂, *S. batava* Goeldlin de Tief. 5♂ Å, *S. menthastri* (L.) 1♂, *S. philanthus* (Meig.) 1♂ Å, *S. scripta* (L.) 4♂.
ERISTALINAE. **Pipizini:** *Pipiza noctiluca* (L.) 1♀, *P. quadrimaculata* (Panz.) 1♂2♀. – **Cheilosini:** *Cheilosia albitarsis* (Meig.) 1♀, *C. longula* (Zett.) 32♂35♀, *C. pagana* (Meig.) 4♀, *C. praecox* (Zett.) 1♀, *C. rufimana* Becker 2♀ S, *C. scutellata* (Fall.) 1♂3♀, *C. vernalis* (Fall.) 2♂2♀, *Rhingia austriaca* Meig. 1♂3♀Å. – **Sericomyiini:** *Sericomyia lappona* (L.) 1♂2♀, *S. silentis* (Harr.) 3♂11♀. – **Brachyopini:** *Neoascia dispar* (Meig.) 1♂1♀, *Neoasciella geniculata* (Meig.) 1♀, *Brachyopa dorsata* Zett. 1♂, *B. testacea* (Fall.) 1♂4♀, *Orthonevra geniculata* (Meig.) 2♀, *Chrysogaster macquarti* Lw. 1♀, *Lejogaster metallina* (Fabr.) 1♂. – **Eristalini:** *Helophilus pendulus* (L.) 13♂9♀, *H. lineatus* (Fabr.) 1♀, *Anasimyia lunulatus* Meig. 1♂1♀, *Eoseristalis intricaria* (L.) 1♀, *E. nemorum* (L.) 1♂, *E. picea* (Fall.) 1♀ S, *Eristalinus sepulchralis* (L.) 1♀. – **Milesini:** *Blera fallax* (L.) 1♀, *Temnostoma apiforme* (Fabr.) 1♂, *T. vespiforme* (L.) 1♂, *Tropidia scita* (Harr.) 1♂ Å, *Syritta pipiens* (L.) 1♂, *Xylota coeruleiventris* Zett. 10♂35♀, *X. florum* (Fabr.) 11♀, *X. meigeniana* Stackelberg 9♂29♀ Å, *X. segnis* (L.) 2♂, *X. tarda* Meig. 1♂, *X. ignava* (Panz.) 1♀, *Xylotina nemorum* (Fabr.) 3♂2♀.

Comments to the species list

The material included 1388 specimens of Syrphidae, of which 1282 specimens were identified to species. In total, 85 species were recognized, and together with Wagner's (1981) records 93 species of Syrphidae are now known from the area. The dominance of females was recorded also by Wagner (1981) for tabanids and empidids.

Four species are here recorded from Sweden for the first time (Bartsch, in litt.). *Platycheirus perpallidus* Verrall, 1901, is considered rare or very rare (Torp 1984, Verlinden & Decleer 1987). It has been observed on sedges especially at margins of lakes, ponds and rivers (Stubbs & Falk 1983). Three males were taken in the trap on the isle in 1980, and two males at Ängerfjärden in 1982.

Parasyrphus malinellus (Collin, 1952) is difficult to separate from a few other species of the genus. It prefers forests, according to personal observations especially spruce forests, also at the margins. Both females were taken near the outlet in 1980.

Cheilosia rufimana Becker, 1894, occurs in spring in moist forests. Torp (1984) observed it on flowers of *Anthriscus sylvestris* and *Caltha palustris*. Both females were taken in the stream trap in 1980.

Eoseristalis picea (Fallén, 1817) was identified by Claussen after Kanervo's (1938) revision. It was not previously recorded from Sweden. *E. picea* is sometimes listed as conspecific with *E. rupium* (Fabr.), but the distinct differences in genital shape have convinced me of its specific status. The single female was taken in the stream trap in 1979.

Many species are here reported from the Ångermanland province for the first time. However, only the 11 species for which the present records result in marked range expansions in Sweden (Bartsch, in litt.) were denoted with an Å.

The record of *Xylota meigeniana* is especially interesting as this species was recently mentioned from Sweden for the first time (Andersson 1988). As these records were from South Sweden, the record from Ängerfjärden was unexpected. *X. meigeniana* is normally very rare (Torp 1984) and easily mixed up with *X. florum* (Verlinden & Decleer 1987). A qualitative analysis of the gut contents of a few individuals revealed pollens of grasses, *Pinus* and *Epilobium*.

More than half of all individuals belonged to the Melanostomatini, of which especially *Melanostoma mellinum* and *Platycheirus clypeatus* were very abundant. The flight periods of the ten most abundant species (Tab. 1), except *X. meigeniana*, largely agree with the information presented by Wahlgren (1909) (Bartsch, in litt.).

Most species of the Melanostomatini have wide habitat preferences and occur in most biotopes. *Platycheirus scambus* is, however, restricted to shores, and the larvae are aphidophagous. The two *Xylota* species and *Cheilosia longula* occur in for-

Tab. 1. Flight periods of the ten most abundant species of Syrphidae in the traps in the Ängerån area. N gives the total number of individuals collected in all four traps during the three years. Presence in trap is given for ten day intervals.

Flygperioden för de tio vanligaste blomflugearterna i Malaisefällorna vid Ängerån. N anger det totala individantalet, och förekomst i fällorna anges för tiodagarsintervall.

		Month/Månad											
		June			July			Aug			Sept		
Species	N	1	2	3	1	2	3	1	2	3	1	2	3
Platycheirus clypeatus	472		•	•	•	•	•	•	•	•			
Melanostoma mellinum	151	•	•	•	•	•	•	•	•	•			
Cheilosia longula	67					•	•	•	•	•	•		
Platycheirus scambus	61		•	•	•	•	•	•	•	•			
P. peltatus	46	•	•	•	•	•	•	•	•				
Xylota coeruleiventris	45			•	•	•	•	•	•				
X. meigeniana	38	•	•	•	•	•	•	•					
Meliscaeva cinctella	37		•	•	•	•	•	•	•				
Melanostoma scalare	36	•	•	•	•	•	•	•	•	•			
Syrphus ribesii	31		•	•	•	•	•	•	•	•	•		

est and at forest-margins. The *Xylota* larvae are terrestrial-saprophagous, wheras those of *C. longula* are fungivorous.

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Sammanfattning

Blomflugor insamlade med Malaisefällor 1979–1982 i anslutning till Ängerån vid norra Ångermanlandskusten redovisas. Totalt identifierades 1 282 individer av 85 arter. *Platycheirus perpallidus* Verrall, 1901, *Parasyrphus malinellus* (Collin, 1952), *Cheilosia rufimana* Becker, 1894, och *Eoseristalis picea* (Fallén, 1817) rapporteras här för första gången från Sverige. Ytterligare 11 arter är nya för regionen. Honor dominerade i materialet. Flygperioder anges för de tio vanligaste arterna.

Försäljning av entomologisk litteratur

Nedanstående häften och böcker säljes till högstbjudande. Skriftliga anbud skall för att beaktas ha inkommit senast två månader efter det tryckdatum som anges på pärmens baksida. Anbud skickas till: *Tor-Erik Leiler, Sörgården 135, 186 31 Vallentuna.* Fraktkostnad tillkommer.

1. **Polskie Pismo Ent.** 1963, häfte 2. Fischer, M. Die *Opius*-Arten der neotropischen Region (**Hym., Braconidae**). 156 s med många nybeskrivningar, bestämningstabeller och teckningar.

2. Ibid 1964, häfte 2. Fischer, M. Die Opiinae der nearktischen Region (**Hym., Braconidae**). I. 335 s som ovan.

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