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# Two lepidoptera, *Orthonama obstipata* (Fabricius, 1794) (Geo.) and *Ipimorpha contusa* (Freyer, 1849) (Noc.) new to Norway, and faunistical comments on two rare noctuids.

GEIR E.E. SØLI

Søli, G.E.E. 1988. Two lepidoptera, *Orthonama obstipata* (Fabricius, 1794) (Geo.) and *Ipimorpha contusa* (Freyer, 1849) (Noc.) new to Norway, and faunistical comments on two rare noctuids. *Fauna norv. Ser. B. 35,* 49—52.

One female of the migrating *Orthonama obstipata* (Fabricius, 1794) was recorded from Gravastranda, Porsgrunn. According to the weather situation in the North Atlantic at the time the specimen was caught, it is stated that the specimen most probably has reached Norway from The British Isles. One male and one female of *Ipimorpha contusa* (Freyer, 1849) were recorded from Dammane, Porsgrunn. The species has a very restricted distribution; in Fennoscandia previously only known from the southernmost parts of Finland. Both species were taken in 1983, and recorded for the first time in Norway.

Specimens of *Cryphia domestica* (Hufnagel, 1766) have been recorded from several localities in the surroundings of Porsgrunn. In Norway the species has not been recorded outside this area, where it seems to have a stable population. *Apamea scolopacina* (Esper, 1788) is recorded from Porsgrunn. The species has previously only been taken once in Norway.

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## INTRODUCTION

During 1983 Lepidoptera were collected in light traps at two forest localities at the Eidanger peninsula, Porsgrunn, SE Telemark (See Ellefsen 1984). The localities were: Gravstranda (UTM: 32VNL371500; EIS 18) and Dammane (UTM: 32VNL391469; EIS 11) (Fig. 1). — The former thermophilous deciduous forest, the latter basiphilous pine forest. Dammane is situated within a temporarily protected nature reserve.

Two species, previously not recorded from Norway, *Orthonama obstipata* (Fabricius, 1794) (Geometridae) and *Ipimorpha contusa* (Freyer, 1849) (Noctuidae) together with two other rare noctuids, *Cryphia domestica* (Hufnagel, 1766) and *Apamea scolopacina* (Esper, 1788) were caught.

### *Orthonama obstipata* (Fabricius, 1794)

One male of *O. obstipata* was caught at Gravastranda during the period from 11—16 August.

*O. obstipata* is distributed in most parts of the world: North and South America, Africa, from Japan throughout Asia to Europe (Skou 1984). In Europe the species is native in the Mediterranean area only, where it has several generations during the season (Hoffmeyer 1966) and feeds on a variety of herbaceous plants (Vilhelmsen 1980). *O. obstipata* is, however, a well known immigrant in most parts of Europe, including the southernmost parts of the Fennoscandia and Denmark. Seven specimens have been recorded from Sweden (Skåne and Öland) and about 20 specimens from southern Finland (Skou 1984). In Denmark more than 80 specimens have been recorded, and the species is taken in all provinces (Schnack 1985). In North Europe most specimens arrive in the autumn, but specimens have also been caught in May, July and August (Skou 1984).

In the southern parts of England and Ireland, where the species generally arrive in the period from April to November, it can produce several generations in favourable sum-

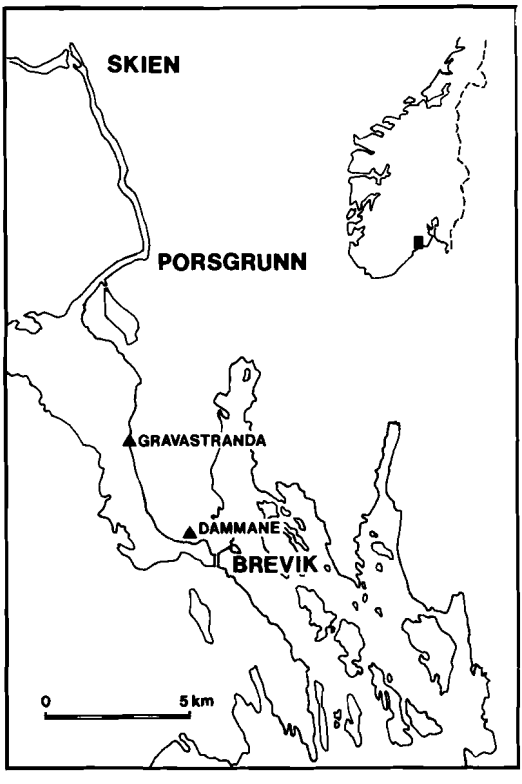


Fig. 1. Map of the Eidanger peninsula showing the position of the two light trap localities.

mers (Ford 1972). Under optimal condition the development from egg to imago, takes only one month (Edelsten & Fletcher 1961).

A study of the weather situation in the North Atlantic for the period 8—16 August 1983 (Deutsche Wetterdienst 1983), shows a high pressure area (1030 mbar) moving slowly towards NE from the central parts of the North Atlantic, reaching The British Isles on 13 August, at 00 GMT. The center of this high pressure area moves towards the British Channel, continues ESE, and is situated over the Carpathians on 16 August. In the same period a low pressure area SE of Greenland, developes and moves ENE towards Iceland. On 15 August, at 12 GMT, this low pressure area (980 mbar) has its center between Iceland and the coast of northern Norway. This weather situation is setting up strong southwestern winds (10—15 m/s) from the British Isles towards the southern parts of Norway. In an altitude of about 1500 m, the velocity was 20—25 m/s.

It seems thus reasonable that the norwegian specimen of *O. obstipata* arrived from The British Isles. In The British Isles no less than 56 specimens of *O. obstipata* were recorded during 1983, that means the species was more frequent than most years (Bretherton, pers.com.). The british specimens were recorded from 4 June to 13 November, and some of those taken in October and November may, according to R.F. Bretherton (pers. com.), have been bred in England from early arrivals.

*Ipimorpha contusa* (Freyer, 1849)

One male and one female were caught at Dammane during the period 26—31 July.

*I. contusa* has a highly disjunct distribution: In Asia it is recorded from the Chentejn-mountains in Mongolia, and from the Amur and Ussuri area in the USSR; In Europe it is recorded in the surroundings of Thüringen and Sachsen, in East Prussia and in the southeastern parts of Finland (Hanski & Kaisila 1971).

In Finland the first specimen of *I. contusa,* a male, was taken in Vehkalahti, Etelä-Häme on 23 August 1965. However, this specimen was not identified until a second specimen, a female, was caught in a light trap in Virolahti, Etelä-Karjala on 28 July 1971 (Hanski & Kaisila 1971). During the 1970's several specimens were caught (in 1974 more than 10 specimens), but so far only 5 specimens have been taken in the 1980's (K. Mikkola, pers. com.). Up to now *I. contusa* has been recorded from 5 bigeographical provinces in southeastern Finland (U, EK, EH, ES and LK) (K. Mikkola, pers. com.).

The climate in the region of Finland where the species is known to occur, has great resemblance to the climate in the coastal regions of Grenland (Nordiska Ministerrådet 1984). In Finland *I. contusa* has been recorded in the period from 3 July to 9 August (Mikkola & Jalas, 1979), which corresponds well with the capture of the norwegian specimens. The larvae is feeding on *Populus* which is frequent at Dammane. It seems thus reasonable to conclude that *I. contusa* is a native species in the investigated area.

*Cryphia domestica* (Hufnagel, 1766)

Two males were caught at Dammane in the period 15—26 July, and one female at Gravastranda in the period 20—26 July.

The norwegian distribution of *C. domestica* seems to be restricted to the Eidanger peninsula and its nearest surroundings. The species was recorded as new to Norway from Brevik (Grønlien 1940). Later the species has been taken regularly from at least 2 localities in addition to those here mentioned (Ellefsen & Hansen 1978). This indicates that. *C. domestica* has a stable population in the investigated area.

*C. domestica* has its main distribution area in Central Europe and the western parts of the Mediterranean area (Spuler 1908), but is also recorded from Corsica and northern Africa (Draudt 1931). In Denmark the species is widely distributed (Schnack 1985); it is recorded from several localities in the coastal areas of southern Sweden (Nordström et al. 1969), but not from Finland. The larvae lives on lichens (*Xanthoria parietina, Lecidea confluenc* etc.) growing on rocks, walls etc. (Skinner 1984).

*Apamea scolopacina* (Esper, 1788)

Seven males and two females were caught at Gravastranda in the period from 20 July to 20 August, and one male at Dammane in the period 5—11 August.

*A. scolopacina* has previously only been recorded from Stangenes, Kristiansand, Southern Norway (Opheim 1979). The species is widely distributed in Europe. It is known from all provinces of Denmark (Schnack 1985), and from the southernmost parts of Sweden (Nordström et al., 1969) and Finland (Mikkola & Jalas, 1979). The larvae is living on grasses and sedges (*Briza media* and *Scirpus* spp.) (Vilhelmsen 1980).

ACKNOWLEDGEMENT

I am indebted to Dr. K. Mikkola (Finland) and to Mr. R.F. Bretherton (England) for willingly have informed me on the distribution and abundance of *I. contusa* and *O. obstipata,* respectively. I am also indebted to Arild Fjeldså for usefull information and to Trond Andersen and Torstein Solhøy for comments on the manuscript.

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Received 11 Aug. 1987

# The Norwegian Siricoidea (Hymenoptera)

FRED MIDTGAARD

Midtgaard, F. 1988. The Norwegian Siricoidea (Hymenoptera). *Fauna norv. Ser. B 35,* 53—60.

The Norwegian material of Siricoidea is revised, and 2 taxa appear to be new to the fauna: *Konowia megapolitana* Brauns, 1884 and *Sirex juvencus atricornis* Kjellander, 1945. Two introduced specimens of *Sirex juvencus cyaneus* Fabricius, 1781 have been found in Bergen.

Specimens of *Urocerus flavicornis* (Fabricius, 1781) have been found in great numbers on a ship unloading timber from Canada.

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## INTRODUCTION

The distribution of the Norwegian Siricoidea is comparatively well known because of the rather recent revision by Bakke (1960).

Nevertheless new information on taxonomic characters useful in distinguishing between the species of Siricidae, and the very large material of Siricoidea collected since 1960, made a revision of all Norwegian material necessary.

## MATERIAL AND METHODS

The collections of the Zoological Museums of Oslo (ZMOS), the Zoological Museum of Bergen (ZMBE), the Zoological Museum of Trondheim (ZMTH), the Zoological Museum of Tromsø (ZMTR), Rana Museum (RM), the Norwegian Forest Research Institute (NFRI) and my own collection (FM) were examined. The faunal divisions are the revised Strand system (Økland 1981). The faunal regions used by Bakke (1960) cannot be directly compared with the region used here. Records new to a region are therefore not indicated.

## RESULTS AND DISCUSSION

The distribution of all Norwegian Xiphydriidae and Siricidae are listed in Tab. 1 and EIS-maps are shown in Figs. 1—7. It is important to remember that some of these species are very easily transported with timber to places where there by no means could be a local population. This is obviously the case with many records of *Urocerus gigas* from the non-forested coastal areas in northern Norway.

### Xiphydriidae

*Xiphydria camelus* (L., 1758): Common and widely distributed in the whole country: AK, Vestby, Tannum, EIS 28, 11 Mar. 1960, e.l., leg. A. Bakke, NFRI: 7 ♂♂, 15 ♀♀; AK, Ås: Ås, EIS 28, 26 Nov. 1962, reared, leg. T. Sæther, NFRI: ; AK, Ås: EIS 28, 26 Nov. 1962, reared, leg. T. Sæther, NFRI: 2 ♀♀; AK, Ås: Ås, EIS 28, 14 May 1962, reared, leg. T. Sæther, NFRI: 2 ♀♀; ON, Dovre: Hjerkin, EIS 71, Jul 1861, leg. Siebke, ZMOS: 2 ♀♀; BØ, Røyken: Røyken, EIS 28, leg. Siebke, ZMOS: ♀; BØ, Ringerike: Hønefoss, EIS 36, leg. Siebke, ZMOS: ♂; BØ, Hurum: Filtvet, EIS 28, 3 Jul. 1982, leg. FM, FM: ♀; BØ, Hurum: Filtvet, EIS 28, 9 Jul. 1982, leg. FM, FM: ♀; BV, Rollag: Toreshov, EIS 27, 19 Jun. 1978, leg. B. Sagvolden, FM: ♀; VE, Lardal: Bergandammen, EIS 18, 3 Jun. 1980, leg. T. Kvamme, NFRI: ♀; VE, Tjøme: Tjøme, EIS 19, Jul. 1962, leg. T. Holmsen, NFRI: ♀; VE, Brunlanes: Pauler, EIS 19, 9 Jun. 1984, leg. O. Hanssen, FM: 3 ♀♀; VAY, Songdalen: Greipstad, EIS 2, 1 Oct. 1959, e.l. in *Alnus incana,* leg. A. Bakke, NFRI: 4 ♂♂, 2 ♀♀; VAY, Kristiansand: Stangenes, EIS 2, 11 Jul. 1977, leg. S. Svendsen, FM: ♂, ♀; RY, Finnøy: Kyrkjøy, EIS 14, 5 Jul. 1986, leg. T. Jonassen, FM: 2 ♂♂; HOI, Voss: Voss, EIS 41, 9 Jun. 1980, leg. T.

Tab. 1. The distribution of the Norwegian Xiphydriidae and Siricidae.

| Species : \ Faunal divisions : | Ø | AK | HES HEN | OS ON | BØ BV | VE | TEY TEI | AAY AAI | VAY VAI | RY RI | HOY HOI | SFY SFI | MRY MRI | STY STI | NTY NTI | NSY NSI NNØ NNV | TRY TRI | FV FI FN FØ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SIRICOIDEA | | | | | | | | | | | | | | | | | | |
| XIPHYDRIIDAE | | | | | | | | | | | | | | | | | | |
| Xiphydria Latreille, 1802 | | | | | | | | | | | | | | | | | | |
| camelus (Linnaeus, 1758) | | ● | | ● | ● | ● | | | ● | ● | ● | | | ● | ● | ● | ● | ● |
| Konowia Brauns, 1884 | | | | | | | | | | | | | | | | | | |
| megapolitana Brauns, 1884 | | | | ● | | | | | | | | | | | | | | |
| SIRICIDAE | | | | | | | | | | | | | | | | | | |
| Urocerus Geoffroy in Fourcroy, 1785 | | | | | | | | | | | | | | | | | | |
| gigas (Linnaeus, 1758) | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | ● | ● | ● | ● | ● |
| Sirex Linnaeus, 1761 | | | | | | | | | | | | | | | | | | |
| juvencus (Linnaeus, 1758) | ● | ● | ● | ● | ● | ● | ● | ● | | ● | ● | | | ● | ● | | | |
| atricornis Kjellander, 1945 | | | ● | | | | | | | | | | | | | ● | | ● |
| noctilio Fabricius, 1773 | ● | ● | | ● | | | ● | | ● | ● | ● | | ● | | | | | |
| Xeris A. Costa, 1894 | | | | | | | | | | | | | | | | | | |
| spectrum (Linnaeus, 1758) | | ● | ● | ● | | | ● | ● | | | | | | | | | | |

Andersen, FM: ♀ ; HOY, Bergen: Kaland, Fana, EIS 31, 22 Jul. 1970, leg. A. Fjeldså, ZMBE: ♀ ; HOY, Os: Nordstrøno, Os, EIS 30, 27 Jun. 1960, leg. J. Gullaksen, ZMBE: ♀ ; HOI, Granvin: Eide, EIS 41, 24 Jun. 1935, leg. Soot-Ryen, ZMTR: ♀ ; MRI, Sunndal: Fagerhaug, EIS 78, 1974, leg. O. Hanssen, FM: ♀ ; STI, Oppdal: Kongsvoll, EIS 79, 21 Jul. 1981, leg. J.O. Solem, FM: ♀ ; NTI, Steinkjer: Stod, EIS 101, 7 May 1962, e.l., leg. A. Bakke, NFRI: 2 ♂♂ , 2 ♀♀ ; NTI, Steinkjer: Stod, EIS 101, 7 May 1962, e.l., NSI, Saltdal: Storjord, EIS 127, 19 Jun. 1898, leg. Sp. Schneider, ZMTR: ♀ ; NSI,

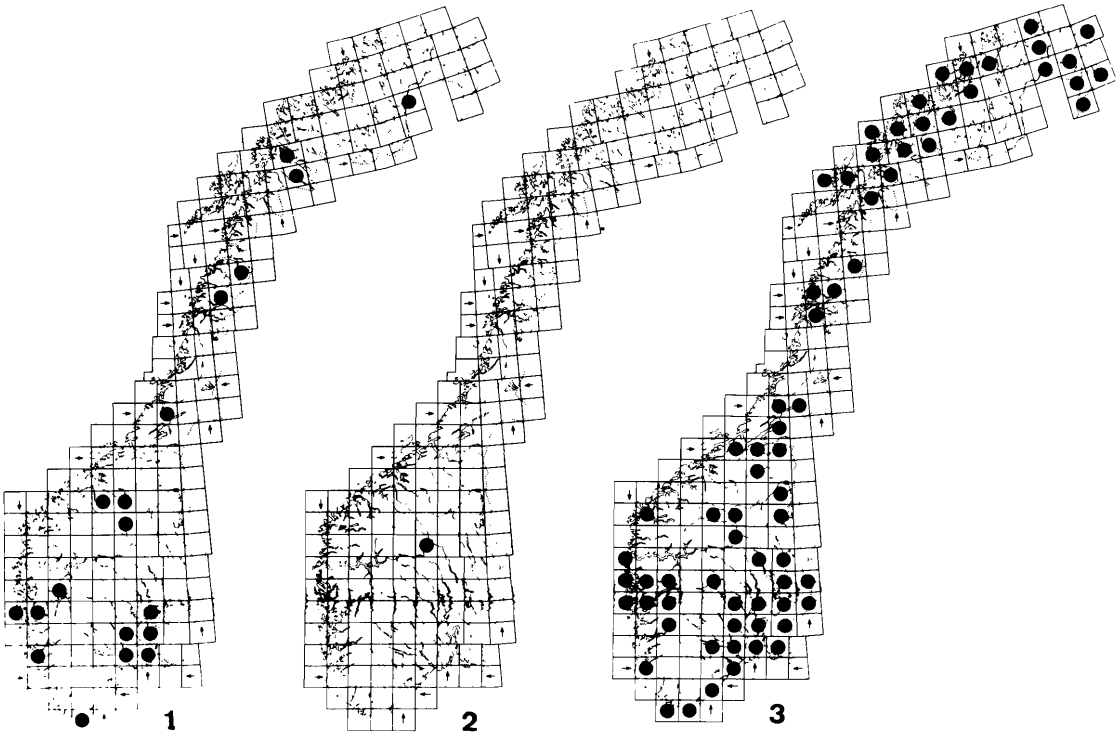


Fig. 1—7. EIS-maps showing the distribution of the following species:

Fig. 1. *Xiphydria camelus*

Fig. 2. *Konowia megapolitana*

Fig. 3. *Urocerus gigas*

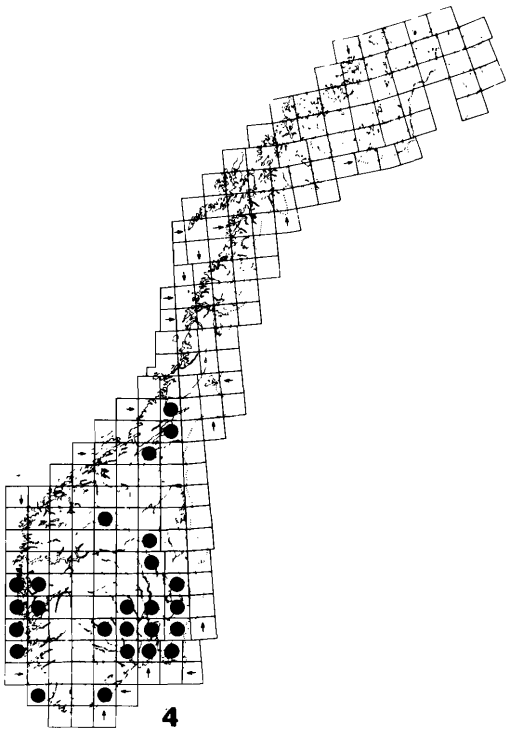


Fig. 4. *Sirex juvencus*

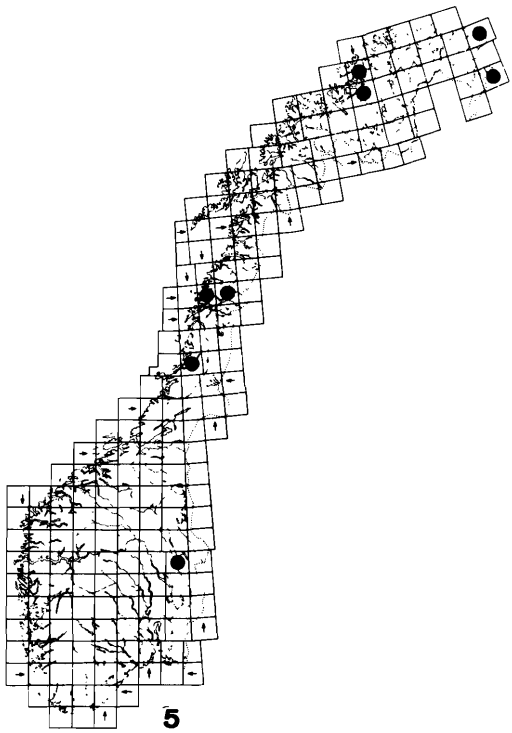


Fig. 5. *S. juvencus atricornis*

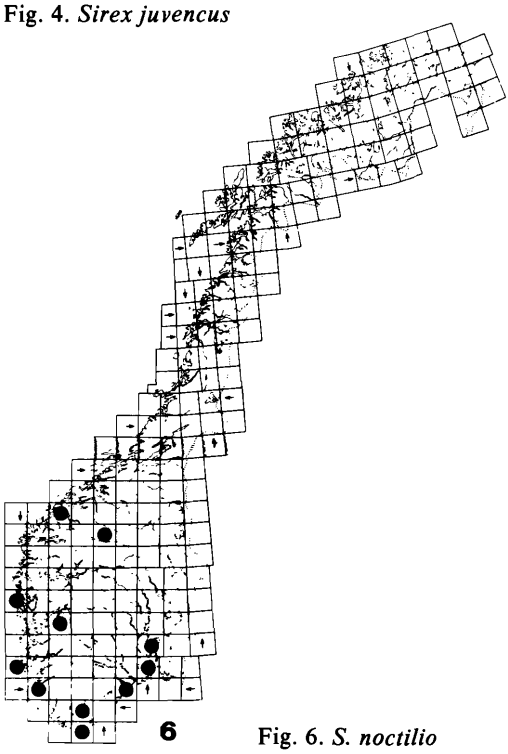


Fig. 6. *S. noctilio*

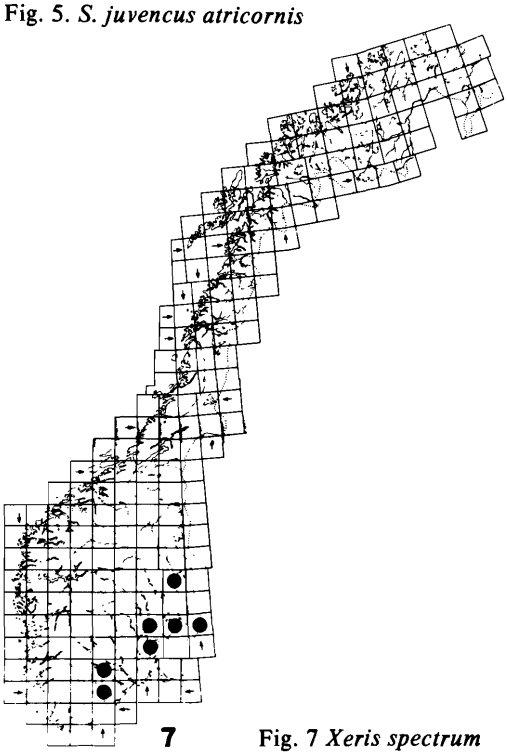


Fig. 7 *Xeris spectrum*

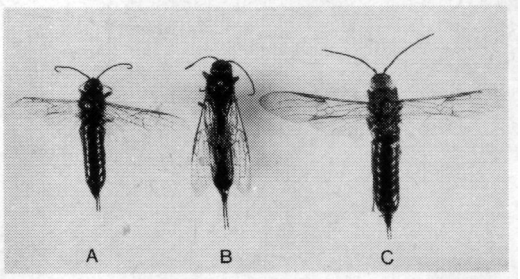


Fig. 8. Typical specimens of the three black-antennate *Sirex* taxa in Norway may often be recognized on habitus. A: *Sirex juvencus atricornis,* B: *S. cyaneus* and C: *S. noctilio.*

Saltdal: Storjord, EIS 127, Jul. 1899, leg. Sp. Schneider, ZMTR: 2 ♀♀ ; NSI, Saltdal: Storjord, EIS 127, Jun. 1899, leg. Sp. Schneider, ZMTR: ♀ ; leg. T. Sæther, NFRI: ♀ ; NSI, Rana: Svartvasshei, EIS 123, 12 Jul. 1983, leg. O. Myhre, RM: ♀ ; TRI, Målselv, Frihetsli, EIS 147, leg. Soot-Ryen, ZMTR: 3 ♀♀ ; TRI, Målselv: Bjerkeng, EIS 154, 17 Jun. 1897, leg. Sp. Schneider, ZMTR: ♂ ; FI, Karasjok: Karasjok, EIS 167, ZMTR: ♀ .

*Konowia megapolitana* Brauns, 1884: New to Norway. ON, Nord-Fron: Vinstra, Hesteskobakken, EIS 62, 20 Jun. 1986, leg. O. Hanssen, FM: 2 ♀♀ . Only one species of the family Xiphydriidae has so far been reported from Norway: *X. camelus.* However, several species occuring in northern Europe are to be expected but have not yet been reported from Norway: *X. prolongata* (Fourcroy, 1785), *X. longicollis* (Fourcroy, 1785), *X. picta* Konow, 1897, *Konowia betulae* (Enslin, 1911) and *K. megapolitana.* The latter species is very rare and is so far only known from a few specimens from Austria (type loc.: Mecklenburg), Germany, Hungaria, Yugoslavia, Poland, European USSR and Finland (Smith 1978). Only one specimen is reported from northern Europe: Finland, ES: Imatra, 11 Jun. 1920, leg. W. Hellén (in the southeasternmost part of Finland) (Viitasaari 1984). The species is reported to develope in wood of *Betula* sp. (Semenov-Tian-Shanskij & Gussakovskij 1935) and *Alnus incana* (Huflejt 1976).

## Siricidae

*Urocerus gigas* (L., 1758): The species was regarded as comprising two subspecies in northern Europe by Benson (1943). These two subspecies were regarded as valid species by Kapuscinskij (1962).

The type locality of the subspecies *U. gigas taiganus* is Kunes in northern Finland, and in Norway the specimens from northern Norway belong to this subspecies. In southern Norway a part of the specimens would belong to the nominal subspecies, but there is a considerable overlap in the characters used to distinguish between the two subspecies, and often it is not possible with certainty to say which subspecies a given specimen belongs to (Midtgaard 1984). Nuorteva (1969) found in a rearing experiment that a brood originating from one female might consist of specimens coloured as in both subspecies. Fig. 3 shows the distribution without regard to subspecies. Recorded from: Ø, Onsøy: Rauøy, EIS 19, 19 Aug. 1960, leg. A. Bakke, NFRI: ♀ ; Ø, Fredrikstad: Fredrikstad, EIS 20, 9 Aug. 1960, ZMOS: ♀ ; AK, Ås: Ås, EIS 28, 15 Nov. 1959, reared, leg. A. Bakke, NFRI: 6 ♂♂ ; AK, Oslo: Tøyen, EIS 28, leg. Moe, ZMOS: 3 ♂♂ ; AK, Oslo: Oslo, EIS 28, leg. Esmark, ZMOS: ♂ ; AK, Oslo: Oslo, EIS 18, leg. Münster, ZMOS: ♂ ; AK, Nes: Seterstøa, EIS 37, 27 Aug. 1942, leg. J. Ingeborgrud, ZMOS: ♀ ; AK, Enebakk: Råken, EIS 29, 1 Sept. 1950, leg. H. Grosalt, ZMOS: ♀ ; AK, Frogn: Håøya, EIS 28, 18 Jul. 1981, leg. FM, FM: ♀ ; HES, Elverum: Elverum, EIS 55, Jul. 1961, leg. A. Bakke, NFRI: ♀ ; HES, Hamar: Hamar, EIS 46, 20 Aug. 1960, leg. A. Bakke, NFRI: ♀ ; HES, Ringsaker: Moelv, EIS 54, 10 Aug. 1964, ZMOS: ♀ ; HES, Eidskog: Skotterud, EIS 38, 23 Aug. 1960, leg. E. Hoel, ZMOS: ♀ ; HES, Grue: Grue, EIS 47, Aug. 1925, leg. Münster, ZMOS: ♀ ; HEN, Rendal: Solbakken, Y. Rendal, EIS 73, leg. Natvig, ZMOS: ♀ ; ON, Lom: Lom, EIS 70, 23 Sept. 1958, leg. Lühr, ZMBE: ♀ ; ON, Sel: Otta, EIS 62, 23 Aug. 1968, leg. Lühr, ZMTH: ♀ ; ON, Vågå: Vågåmo, EIS 71, 1963, leg. Lühr, ZMTH: ♀ ; BØ, Hurum: Filtvet, EIS 28, 22 Jul. 1981, leg. FM, FM: ♀ ; BØ, Kongsberg: Kongsberg, EIS 27, leg. Münster, ZMOS: ♂♂ ; BØ, Ringerike: Krokskogen, EIS 36, 20 Jul. 1974, leg. S. Hågvar, FM: ♀ ; BV, Ål: Ål, EIS 43, 16 Sept. 1960, leg. A. Bakke, NFRI: ♀ ; BV, Rollag, Rollag, EIS 35, 25 Jul. 1979, leg. B. Sagvolden, ZMOS: ♀ ; BV, Gol: Gol, EIS 43, 31 Aug. 1968, leg. T. Bakken, ZMBE: ♀ ; VE, Tønsberg, Tønsberg, EIS 19, leg. Siebke, ZMOS: ♂ ; VE, Tjøme: Hulebak, EIS 19, 25 Jul. 1953, ZMBE: ♀ ; TEY, Drangedal: Hom-

lei, EIS 17, 11 Aug. 1983, leg. FM, FM: ♀ ; TEY, Porsgrunn: Øklungen, EIS 18, 19 Jul. 1983, leg. T. Kvamme, NFRI: ♀ ; TEI, Kviteseid: Brunkeberg, EIS 17, 25 Jul. 1959, leg. S. Tvermyr, NFRI: ♀ ; TEI, Notodden: Notodden, EIS 27, 6 Oct. 1954, leg. T. Bjørlie, ZMOS: ♀ ; AAY, Birkenes: Herefoss, EIS 6, 30 Jul. 1953, leg. M. Brobakke, FM: ♀ ; AAY, Risør: Risør, EIS 11, 12 Aug. 1918, leg. Warloe, ZMOS: ♀ ; AAY, Grimstad: Drottningborg, EIS 6, 17 Jul. 1982, leg. S. Svendsen, FM: ♂ ; VAY, Mandal: Mandal, EIS 2, 1962, leg. A. Bakke, NFRI: ♀ ; VAY, Lyngdal: Lyngdal, EIS 1, 14 Aug. 1974, leg. K. Opsal, ZMOS: ♀ ; RY, HÅ: Nærbø, EIS 7, 4 Aug. 1960, leg. L. Haugseth, FM: ♀ ; RI, Sauda: Sauda, EIS 24, 28 Aug. 1958, FM: ♀ ; HOY, Lindås: Kvalvågnes, EIS 39, 20 Aug. 1983, leg. J.J. Knudsen, ZMBE: ♀ ; HOY, Bergen: Almeland, Fana, EIS 31, 8 Aug. 1983, J.O. Igland, ZMBE: ♀ ; HOY, Bergen: Fjøsanger, EIS 30, 22 Aug. 1958, ZMBE: ♀ ; HOY, Osterøy: Lonevåg, Haus, EIS 40, 8 Aug. 1954, ZMBE: ♀ ; HOI, Voss: Reimegrend, EIS 41, Aug. 1982, leg. L. Anthun, ZMBE: ♀ ; HOI, Ullensvang: Nå, EIS 32, 7 Aug. 1950, leg. J. Eggereide, ZMBE: ♀ ; HOI, Samnanger: Høyseter, EIS 40, 26 Aug. 1951, leg. Tjønneland, ZMBE: ♀ ; SFY, Eid: Stårheim, EIS 67, 14 Aug. 1954, leg. Høgnes, ZMBE: ♀ ; SFY, Gulen: Haveland, EIS 48, 5 Aug. 1981, leg. W. Sørli, ZMBE: ♀ ; STI, Orkdal: Orkanger, EIS 91, 25 Jul. 1948, leg. Tjønneland, ZMBE: ♀ ; STI, Røros, Djypsjøleira, EIS 81, Sept. 1960, leg. O. Kjeldsberg, ZMTH: ♀ ; STI, M. Gauldal: Støren, EIS 87 Sept. 1961, ZMTH: ♀ ; STI, Trondheim: Strinda, EIS 92, 1946, ZMTH: ♀ ; STI, Selbu: Selbu, EIS 93, 5 Aug. 1959, leg. J. Aftret, ZMTH: ♀ ; NTY, Namdalseid: Langvatnet, EIS 101, 6 Jun. 1978, leg. FM, FM: ♀ ; NTI, Snåsa: Trømpel, EIS 102, 6 Aug. 1979, leg. B. Sagvolden, FM: ♀ ; NTI, Steinkjer: Steinkjer, EIs 101, 7 Aug. 1968, leg. T. Lund, ZMTH: ♀ ; NTI, Snåsa: Jørstad, EIS 102, 17 Aug. 1967, leg. J.W. Klüm, ZMTH: ♀ ; NTI, Verdal: Verdal, EIS 98, 15 Aug. 1951, ZMTH: ♀ ; NSY, Lurøy: Okstind, EIS 122, 21 Aug. 1979, leg. H. Larsen, RM: ♀ ; NSI, Saltdal, Saltdalen, EIS 127, leg. Hagemann, ZMTR: ♀ ; NSI, Rana: Andfiskå, EIS 123, 20 Sept. 1981, leg. H.R. Olsen: RM: ♀ ; NSI, Rana, Selforslia, EIS 123, 3 Aug. 1983, leg. O. Bjørgan, RM: ♀ ; NSI, Rana: Mo, EIS 123, 21 Aug. 1978, leg. O. Stupforsmo, RM: ♀ ; NSI, Rana: Mjølan, EIS 123, 6 Sept. 1979, leg. B. Osmo, RM: ♀ ; NSI, Rana: Hauknes, EIS 123, 3 Aug. 1982, leg. T. Johannesen, RM: ♀ ; NSI, Rana: Svartvasshei, EIS 123, 15 Jul. 1984, leg. O. Myhre, RM: ♀ ; NSI, Rana: Straumfors, EIS 122, 27 Aug. 1979, leg. A. Straumfors, RM: ♀ ; NSI, Rana: Båsmofjæra, EIS 123, 22 Jul. 1981, leg. R. Nilsskog, RM: ♀ ; NSI, Rana: Ytteren, EIS 123, 12 Aug. 1981, leg. H. Larsen, RM: ♀ ; NSI, Rana: Røssvoll, EIS 123, 21 Jul. 1984, leg. I. Adolfsen, RM: ♀ ; NSI, Rana: Selfors, EIS 123, 14 Aug. 1981, leg. P. Straumfors, RM: ♀ ; NSI, Rana: Utskarpen, EIS 122, 15 Aug. 1969, leg. S. Lundmo, RM: ♀ ; NSI, Vefsn: Grovamarka, EIS xx, 29 Aug. 1979, leg. K. Tverå, RM: ♀ ; NSI, Hemnes: Finneid, EIS 118, Jul. 1979, leg. J. Roghell, RM: ♀ ; NSI, Hemnes: Hemnesberget, EIS 118, 10 Aug. 1981, leg. R. Nilsskog, RM: ♀ ; NNØ, Evenes: Ramnes, EIS 139, leg. Foden, ZMOS: ♀ ; NNV, Sortland: Sigerfjorden, EIS 144, 6 Aug. 1954, leg. A. Holen, ZMTR: ♀ ; NNV, Bø: Nykvåg, EIS 143, 15 Jul. 1954, leg. R. Kristoffersen, ZMTR: ♀ ; TRY, Berg: Bergsbotten, EIS 161, 3 Aug. 1954, leg. O. Heitman, ZMTR: ♀ ; TRY, Karlsøy: Torsvåg, EIS 171, 1 Aug. 1954, leg. J. Olsen, ZMTR: ♀ ; TRY, Lenvik: Finnfjordeidet, EIS 154, 1 Aug. 1954, leg. M. Sollien, ZMTR: ♀ ; TRY, Tromsø: Tromsøya, EIS 162, Jul. 1954, ZMTR: ♀ ; TRY, Lenvik: Klaura, Finnsnes, EIS 153, 1 Aug. 1957, leg. E. Kristiansen, ZMTR: ♀ ; TRI, Storfjord, Signaldalen, EIS 155, 11 Aug. 1977, leg. Hegvik & Lühr, ZMTH: ♀ ; TRI, Gratangen: Gratangsbotten, EIS 146, 2 Aug. 1954, leg. E.B. Elivsen, ZMTR: ♀ ; TRI, Kvænangen: Sørstraumen, EIS 164, 20 Jul. 1954, leg. M. Holand, ZMTR: ♀ ; TRI, Bardu: Sørdalen, EIS 146, 1 Aug. 1954, leg. O. Helberg, ZMTR: ♀ ; TRI, Kåfjord: Olderdalen, EIS 163, leg. H. Rismo, ZMTR: ♀ ; FV, Alta: Komagfjord, EIS 173, leg. Fantrem, ZMOS: ♀ ; FV, Hasvik: Sørøy, Sørvær, EIS 179, 31 Jul. 1954, leg. Nielsen, ZMTR: ♀ ; FV, Sørøysund: Skarvfjordhamn, EIS 180, 6 Aug. 1954, leg. O. Olsen, ZMTR: ♀ ; FN, Vadsø: Vadsø, EIS 177, 23 Aug. 1940, ZMBE: ♀ ; FN, Vardø: Varsø, EIS 185, Aug. 1936, leg. Brinkmann, ZMBE: ♀ ; FN, Porsanger: Kistrand, EIS 181, ZMOS: ♀ ; FN, Tana: Skipagurra, EIS 176, 10 Aug. 1948, leg. P. Hornberg, ZMOS: ♀ ; FN, Gamvik: Mehamn, EIS 188, 15 Aug. 1928, leg. Gjørehaug, ZMTR: ♀ ; FN, Lebesby: Ifjordfjellene, EIS 183, leg. I. Ingebrigtsen, ZMTR: ♀ ; FØ, Sør-Varanger: Pasvikdalen, EIS 160, 15

Nov. 1945, leg. Brinkmann, ZMBE: ♀ ; FØ, Sør-Varanger: G. Jakobselv, EIS 169, 5 Aug. 1977, leg. Hegvik & Lüuhr, ZMTH: ♀ ; FØ, Sør-Varanger: Sandnes, EIS 168, Aug. 1894, ZMTR: ♀ ; FØ, Sør-Varanger: Kirkenes, EIS 169, 5 Aug. 1956, leg. E. Næss, ZMTR: ♀ . The sumbiont fungus following this species is most likely *Amylostereum chailetii* (Polypoacea, Thelephoraceae) in Norway, because *A. areolatum,* which is often mentioned as the symbiont fungus of *U. gigas,* has not been found in Norway (Halvor Solheim oral comm.).

*U. flavicornis* (Fabricius, 1781): Reported from Ø, Halden: Halden, EIS 20, Aug. 1984, leg. FM: 45 ♂♂ , 134 ♀♀ on a ship unloading timber of *Picea mariana* and *Abies balsamea* from Canada, New Foundland: Goose Bay. Not established in Norway.

*Sirex juvencus juvencus* (L., 1758): Common and widely distributed in southern and Central Norway. The reports from northern Norway (Bakke 1960) are based on misidentifications. Recorded from: Ø, Onsøy: Rauøy, EIS 19, 9 Nov. 1959, e.l., Ø, Moss: Jeløya, EIS 19, 15 Aug. 1946, leg. H. Henriksen, ZMOS: ♀ ; Ø, Fredrikstad: Fredrikstad, EIS 20, 3 Sept. 1960, ZMOS: ♀ ; Ø, Rygge: Rygge, EIS 19, Jul. 1974, leg. S.A. Bakke, NFRI: ♀ ; leg. A. Bakke, NFRI: 12 ♂♂ , 8 ♀♀ ; AK, Oslo: Oslo, EIS 28, leg. Siebke, ZMTR: ♀ ; AK, Oslo: Oslo, EIS 28, leg. Siebke, ZMTR: ♂ ; AK, Bærum: Valler, EIS 28, 4 Aug. 1959, leg. S. Hågvar, FM: ♂ ; AK, Ås: Ås, EIS 28, 1 Aug. 1960, leg. A. Bakke, NFRI: 2 ♂♂ , ♀ ; AK, Ås: Ås, EIS 28, 28 Aug. 1962, leg. A. Bakke, NFRI: ♂ , 2 ♀♀ ; AK, Skedsmo: Lillestrøm, EIS 29, 10 Sept. 1960, leg. A. Bakke, NFRI: 2 ♂♂ , 2 ♀♀ ; AK, Ås: Ås, EIS 28, 15 Nov. 1959, e.l., leg. A. Bakke, NFRI: ♂ ; AK, Ås: Ås, EIS 28, 26 Jul. 1960, leg. A. Bakke, NFRI: ♀ ; AK, Ås: Ås, EIS 28, 15 Nov. 1959, reared, leg. A. Bakke, NFRI: ♀ ; AK, Ås: Ås, EIS 28, 24 Aug. 1960, leg. A. Bakke, NFRI: ♂ ; AK, Nes: Hvam, EIS 37, Aug. 1961, leg. A. Bakke, NFRI: ♀ ; AK, Oslo: Malmøya, EIS 28, 9 Sept. 1970, leg. B. Nyhus, ZMOS: ♀ ; AK, Enebakk: Flateby, EIS 29, 18 Aug. 1974, leg. L. Blomberg, ZMOS: 3 ♀♀ ; AK, Oslo: Oslo, EIS 28, 1969, leg. O. Norrvall, ZMOS: 3 ♂♂ , ♀ ; AK, Oslo: Oslo, EIS 28, leg. Siebke, ZMOS: 2 ♂♂ , 6 ♀♀ ; AK, Oslo: Oslo, EIS 28, 20 Aug. 1944, ZMOS: 6 ♂♂ , 12 ♀♀ ; AK, Bærum: Sandvika, EIS 28, 29 Mar. 1969, indoors, leg. A. Torgersen, ZMOS: 2 ♀♀ ; AK, Oslo: Oslo, EIS 28, leg. Esmark, ZMOS: ♂ ; AK, Oslo: Slemdal, EIS 28, 7 Aug. 1958, leg. E. Vigeland, ZMOS: ♀ ; AK, Oslo: Oslo, EIS 28, leg. Münster, ZMOS: ♂ ; AK, Oslo: Oslo, EIS 28, 1 Sept. 1860, leg. Siebke, ZMOS: ♂ ; HES, Nord-Odal: Garvik, EIS 46, Aug. 1950, leg. A. Kjelsrud, ZMOS: ♂ ; HES, «Odalen», leg. Schøyen, ZMOS: ♀ ; HES, Hamar: Hamar, EIS 46, 29 Jul. 1963, leg. A. Bakke, NFRI: ♂ , ♀ ; OS, Ringbu: Fåvang, EIS 63, 18 Sept. 1956, leg. C.F. Lühr, ZMBE: ♀ ; OS, Lillehammer: Fåberg, EIS 54, 29 Aug. 1951, leg. A. Nielsen, ZMOS: ♀ ; ON, Lom: Lom, EIS 70, 1959, leg. C.F. Lühr, ZMBE: ♀ ; BØ, Kongsberg: Kongsberg, EIS 27, ZMTR: ♂ ; BØ, Ringerike: Ringerike, EIS 36, leg. Seip, ZMOS: ♀ ; BØ, Hurum: Filtvet, EIS 28, 21 Jul. 1981, leg. FM, FM: ♀ ; BØ, Hurum: Filtvet, EIS 28, 11 Aug. 1982, leg. FM, FM: ♂ ; BV, Rollag: Fløtterud, EIS 35, 21 Sept. 1978, leg. K.I. Magnussen, FM: ♀ ; BV, Rollag: Toreshov, EIS 27, 21 Oct. 1978, leg. B. Sagvolden, FM: ♀ ; VE, Holmestrand: Botne, EIS 19, 2 Aug. 1960, leg. Ø. Austarå, NFRI: ♀ ; VE, Sandefjord: Sandefjord, EIS 19, 24 Jul. 1957, ZMOS: ♀ ; VE, Sem: Sem, EIS 19, Sept. 1963, leg. A. Bakke, NFRI: ♂ , ♀ ; TEY, Siljan: Siljan, EIS 18, 31 Aug. 1964, leg. A. Bakke, NFRI: ♀ ; TEY, Porsgrunn: Eidanger, EIS 18, Aug. 1948, leg. J. Kjellerød, ZMOS: 3 ♂♂ , ♀ ; TEI, Tinn: Rjukan, EIS 26, 1966, leg. B. Sagvolden, FM: ♀ ; AAY, Froland: Froland, EIS 6, 24 Aug. 1960, leg. S. Tvermyr, NFRI: ♂ , ♀ ; AAY, Moland: Moland, EIS 6, 20 Aug. 1961, leg. S. Tvermyr, NFRI: ♂ , ♀ ; AAY, Tromøy: Tromøy, EIS 6, 9 Aug. 1957, leg. A. Bakke, NFRI: ♀ ; AAY, Froland: Løiarnes, EIS 6, 8 Sept. 1960, leg. A. Bakke, NFRI: ♀ ; RY, Karmøy: Rosseland, Kopervik, EIS 13, 15 Jul. 1953, FM: ♂ ; RY, Eigersund: Egersund, EIS 3, 1950, leg. M. Anker, ZMOS: 3 ♀♀ ; HOY, Osterøy: Espeland, Haus, EIS 40, 28 Jun. 1955, ZMBE: ♂ ; HOY, Vaksdal: Dale, Bruvik, EIS 40, 1963, on a boat, ZMBE: ♂ , ♀ ; HOY, Bømlo: Meling, Bremnes, EIS 22, 14 Aug. 1951, leg. S. Mjånes, ZMBE: ♀ ; HOY, Bergen: Øvsttun, EIS 30, 19 Aug. 1950, leg. Gullaksen, ZMBE: 2 ♀♀ ; HOY, Bømlo: Meling, Bremnes, EIS 22, 16 Aug. 1951, leg. S. Mjånes, ZMBE: ♀ ; HOY, Bergen: Laksevåg, EIS 30, 5 Jul. 1954, ZMBE: ♀ ; HOY, Os: Syfteland, EIS 31, 21 Jun. 1954, ZMBE: ♂ , ♀ ; HOY, Bergen: Tertnes, Åsane, EIS 39, 19 Sept. 1956,

ZMBE: ♀ ; STI, Trondheim: Charlottenlund, EIS 92, 26 May 1954, indoor, ZMTH: ♀ ; STI, Trondheim: Trondheim, EIS 92, 28 Aug. 1964, leg. Vinje, ZMTH: ♀ ; STI, Trondheim: Trondheim, EIS 92, 1972, ZMTH: ♀ ; NTI, Frosta: Nesset, EIS 97, 28 Aug. 1964, ZMTH: ♀ ; NTI, Steinkjer: Steinkjer, EIS 101, 1958, NFRI: ♂ , ♀ ; NTI, Verdal: Verdal, EIS 98, 15 Jul. 1963, leg. A. Bakke, NFRI: ♂ .

*S. juvencus atricornis* Kjellander, 1945: New to Norway. Records from: HEN, Åmot: Åmot, EIS 55, leg. Münster, ZMOS: ♀ ; HEN, Trysil: Osen, EIS 55, ZMOS: ♀ ; NSY, Sømna: Sandvåg, EIS 110, ZMTR: ♀ ; NSI, Rana: Snefjella, EIS 123, 24 Aug. 1948, ZMTR: ♀ ; NSI, Rana: Utskarpen, EIS 122, 22 Jun. 1984, leg. A. Polvinen, RM: ♂ ; NSI, Rana: Utskarpen, EIS 122, 4 Apr.—2 May 1982, leg. S. Lundmo, RM: 2 ♂♂ , ♀ ; NSI, Rana: Straumbygda, EIS 122, 24 Jul. 1980, leg. O. Pettersen, RM: ♀; NSI, Rana: Snøfjellåa, Eis 123, 12 Aug. 1979, leg. R. Straumfors, RM: ♀ ; FV, Hammerfest: Hammerfest, EIS 180, ZMTR: ♀ ; FV, Alta: Reipas, EIS 173, 1923, leg. J. Romsdal, ZMTR: 2 ♀♀ ; FN, Vadsø: Vadsø, EIS 185, 24 Aug. 1940, ZMBE: ♀ ; FØ, Sør-Varanger: Kirkenes, EIS 169, 24 Aug. 1936, leg. A. Wessel, ZMTR: ♀ ; FØ, Sør-Varanger: Grense Jakobselv, EIS 169, 5 Aug. 1977, leg. Hegvik & Lühr, ZMTH: ♀ ; FØ, Sør-Varanger, leg. Sommerfeld, ZMOS: ♀ .

All reports of *S. juvencus* and *S. noctilio* from northern Norway (Bakke 1960) appear to be based on misidentified specimens of *S. juvencus atricornis.* The subspecies may be distinguished from related taxa on the combination of completely black antenna, apical tarsal segments not darker than the previous segments, wings often hyaline, ovipositor with longer distance between the pits, and smaller pits than *S. noctilio,* the ratio between the total length of ovipositors sheat and the apical part of the ovipositor sheat as in *S. juvencus juvencus.* Males are very similar to males of *S. noctilio* but the excision on the eight sternite is shallower in *S. juvencus atricornis.* The three taxa of *Sirex* in Norway with black antennae may, in typical specimens, often be recognized on habitus (Fig. 8). The food-plant is unknown, but is very likely to be *Pinus sylvestris.*

*S. noctilio* Fabricius, 1773: Fairly common in southern Norway (Fig. 6): Ø, Rygge: Sildebauen, EIS 19, 1 Aug. 1977, leg. L. Aarvik, FM: ♀ ; AK, Oslo: Oslo, EIS 28, Sept. 1949, leg. T.H. Schøyen, NFRI: ♀ ; ON, Lom: Lom, EIS 70, 6 Sept. 1958, leg. C.F. Lühr, ZMBE: ♀ ; ON, Lom: Lom, EIS 70, 4 Sept. 1963, leg. C.F. Lühr, ZMTH: ♀ ; TEY, Kragerø: Kjøllebrønn, EIS 11, 4 Sept. 1983, leg. B. Sagvolden, FM: ♀ ; VAY, Vennesla: Eikeland, EIS 5, 28 Aug. 1975, leg. S. Svendsen, FM: ♀ ; VAY, Kristiansand: Kristiansand, EIS 2, 8 Sept. 1985, leg. B. Borgersen, FM: ♀ ; RY, Haugesund: Haugesund, EIS 13, 1948, leg. A. Bakke, NFRI: ♀ ; RY, Sandnes: Sandnes, EIS 7, 16 Sept. 1950, leg. A. Nielsen, ZMOS: ♀ ; RY, Sandnes: Myrland, EIS 7, 16 Sept. 1950, leg. A. Nielsen, ZMOS: ♂ , ♀ ; HOY, Stord: loc., EIS 23, 19 Jun. 1961, ZMBE: ♂ ; HOY, Lindås: Alverstraumen, Alversund, EIS 39, 15 Jul. 1952, ZMBE: ♀ ; HOI, Ullensvang: Djønno, Kinsarvik, EIS 32, 15 Jun. 1936, leg. O.B. Lundetræ, ZMBE: ♀ ; HOI, Odda: Ro, EIS 32, Aug. 1970, leg. K. Johansen, ZMOS: ♀ ; MRY, Ørskog: Solnøi, Skodje, EIS 76, 17 Sept. 1944, ZMBE: ♀ .

The records from northern Norway (Bakke 1960) are based on misidentified specimens of *S. juvencus atricornis.*

*S. cyaneus* Fabricius, 1781: Two introduced specimens have been collected in HOY, Bergen: Bergen, Vinmonopolet, 28 Aug. 1970, leg. Rollsmo, ZMBE: 2 ♀♀ . The specimens belong to the nominal subspecies; the ratio between the total length of ovipositor sheath and the apical part are 1.88 and 1.81, respectively.

*Xeris spectrum* (L., 1758): Rather rare, but widely distributed in southeastern and Central parts of Norway: AK, Ås: Ås, EIS 28, leg. Ø. Austarå, NFRI. 3 ♀♀ ; AK, Ås: Ekerholt, Ås, EIS 28, 22 Jun. 1962, leg. Ø. Austarå, NFRI. ♂ ; AK, Oslo: Oslo, EIS 28, leg. Münster, ZMOS: ♀ ; AK, Oslo: Oslo, EIS 28, leg. Münster, ZMOS: ♀ ; AK, Oslo: Oslo, EIS 28, leg. Siebke, ZMOS: ♀ ; HES, Elverum: Elverum, EIS 55, leg. Münster, ZMOS: ♀ ; HES, Sør-Odal, loc., EIS 37, leg. Schøyen, ZMTR: ♀ ; HES, Sør-Odal, loc., EIS 37, leg. Schøyen, ZMOS: ♀ ; HES, Eidskog: Finsrud, EIS 38, 13—27 Jun. 1984, leg. K. Narvestad, NFRI: 2 ♀♀ ; OS, Lunner: Harestua, EIS 36, 9 Aug. 1958, leg. A. Bakke, NFRI: 4 ♂♂ ; TEI, Kviteseid: Kviteseid, EIS 17, 25 Jul. 1873, leg. Siebke, ZMOS: ♀ ; AAY, Vegårs-

hei: Vegårshei, EIS 10, 26 Jul. 1960, leg. S. Tvermyr, NFRI. ♀.

*Tremex fuscicornis* (Fabricius, 1787): Mentioned by Smith (1978) as Norwegian referring to Bakke (1960). The species has not been found in Norway.


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# *Melieria omissa* (Meigen, 1826) and *Tetanops myopina* Fallén, 1820 (Diptera; Otitidae) new to Norway

LITA GREVE

**ABSTRACT**

*Melieria omissa* (Meigen, 1826) and *Tetanops myopina* Fallén, 1820 are reported new to the Norwegian fauna. A survey of the genus *Melieria* in Norway is given, together with keys to the species of *Melieria* and *Tetanops* in Scandinavia. The distribution is mapped.

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The fly family *Otitidae* numbers few species in Scandinavia. The recent list of Finnish Diptera (Hackman, 1980) includes fourteen species, but according to Soós (1984) seven of these are placed separately in the family *Ulidiidae*. In the British Isles the number of species according to the check-list by Kloet & Hincks (1976) is twice as high.

The *Otitidae*, small or medium-sized flies, are often easily recognized even in the field on account of their strongly spotted or banded wings. Around 110 species are reported from the Palaearctic (Soós, 1984). The first list of *Otitidae* from Norway was made by Siebke (1877) who records a few species under the genus name *Ortalis*. After Siebke no survey has been made of the family in this country.

Two species of *Otitidae* new to the Norwegian fauna were discovered while checking the material in Norwegian museum collections and other material collected by various entomologists in the recent years.

The first, *Melieria omissa* (Meigen, 1826), belongs to a genus in which four species have been recorded from Scandinavia. The Scandinavian species can be separated on the following characters:

Key to the Scandinavian species of *Melieria:*

1. The abdominal tergites with a dark, posterior margin ..... 2
   The abdominal tergites unicolored, without a dark posterior margin ..... 3
2. 1.st. flagellomere yellow, reddish-yellow or greyish yellow. The costal cell is partly darkened where the sub-asal band reach the costa. Length 6—9 mm ..... *M. crassipennis* Fabricius, 1794.
   Norwegian distribution, see below. Recorded from Sweden, Denmark and Finland.
   1.st. flagellomere dark, very dark-brown or blackish. The subasal band do not reach to costa. Length 5—6 mm ..... *M. picta* (Meigen, 1826).
   (Reported by Lyneborg (1964) from Denmark. Very rare.
3. 1.st. flagellomere distinctly pointed and out-drawn. (In *M. crassipennis* the 1.st. flagellomere is also dorso-apically pointed, but with a short point) ... *M. omissa* (Meigen, 1826).
   Norwegian distribution, see below. Recorded from Sweden, Denmark and Finland.
   The fourth species, *M. obscuripes* (Loew, 1873) was listed from Finland (Hackman, 1980). I have seen material in the museum in Helsinki determined as *M. obscuripes*. Following the key given by Soós (1971) this material is after my opinion *M. omissa*. Soós (1971) regards *M. obscuripes* as an eastern Palaearctic species distributed from Kurdistan to China.

Norwegian material of the genus *Melieria*.

1. *Melieria crassipennis* (Fabricius, 1794) Ø 0103 Fredrikstad: Fredrikstad EIS 20 1 ♀ (ZMO 11257). AK 0201 Oslo: Oslo EIS 28 3 ♂♂ (ZMO 7281, 7282, 7283), Oslo: Ryenberg EIS 28 1 ♀ (ZMO 7284), Oslo: Skøyen EIS 28 1 ♀ (ZMO 7285), Oslo: Østensjøvann (near Ski) EIS 28 1 ♀; 0214 Ås: Southern Ånungen EIS 28 1 ♀ (T. Randulff Nielsen p.c.); 0220 Asker: Sems-

vann EIS 28 1 ♀. VE 0927 Hedrum: Gjennes EIS 19 1 ♂ 1 ♀ (1 ♂ B. Borgersen p.c.). HES 0320 Eidskog: ?loc EIS 38 1 ♂ lex. (ZMO 7278, 7277). HEN 0429 Åmot: ?loc EIS 55 2 ♀♀ (ZMO 7275, 7276); 0430 Storelvdal: ?loc EIS 64 1 ♂ 1 ♀ (ZMO 7280).

Total material: 6 ♂♂ 10 ♀♀ 1 ex., distribution see Map 1.

2. *Melieria omissa* (Meigen, 1826)

Ø 0104 Moss: Jeløy, S. Albybukt EIS 28 1 ♀. AK 0201 Oslo: Oslo EIS 28 ♀ (ZMO 7279) 1 ♀ Tromsø Museum. VE 0903 Horten: Karl Johansvern EIS 19 14 ♂♂ 9 ♀♀; 0905 Tønsberg: Korten EIS 19 4 ♂♂ 6 ♀♀; 0906 Sandefjord: Sørbyøya EIS 19 2 ♂♂ 2 ♀♀, Vesterøya, Sørpynten EIS 19 1 ♀; 0916 Våle: Mulvika EIS 19 2 ♀♀; 0922 Nøtterøy: Ekenes EIS 19 2 ♂♂ 7 ♀♀; 0923 Tjøme: Mostranda EIS 19 4 ♂♂ 9 ♀♀, Moutmarka EIS 19 1 ♂ 1 ♀, Sunnane EIS 19 4 ♂♂ 5 ♀♀. TEY 1005 Porsgrunn: Sandøy EIS 11 2 ♂♂ 7 ♀♀, Skjelvik, Kohtøya EIS 11 6 ♂♂ 16 ♀♀.

Total material 39 ♂♂ 67 ♀♀, distribution see Map 1.

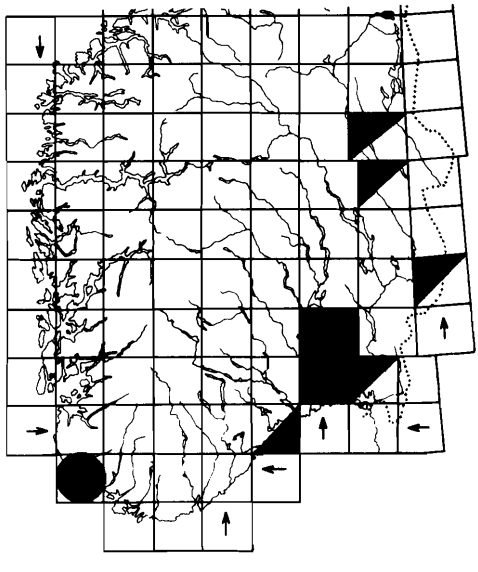
*M. omissa* is here reported new to Norway. Where nothing else is noted in the list of material, the specimens are deposited in the Zoological Museum, University of Bergen.

*M. crassipennis* has the widest area of distribution of the two *Melieria* species in Norway. Some localities, Eidskog, Storelvdal and Åmot, are located in inland districts with a continental climate, others are in the vicinity of the coast viz. Oslo at the Oslofjord. Ardö (1957) mentions *M. crassipennis* from a beach locality like the localities preferred by the other *Melieria, M. omissa.* The bulk of the material is fairly old, partly dating back to the middle of the last century. Adult flies have been collected from 22. June untill 17. July, however, several specimens are without dates.

*M. omissa* has a much more restricted distribution than *M. crassipennis* in Norway, found hitherto only in the Oslofjord area. The localities are nearly all at or very near to beaches and sand dunes localities. The total number of specimens is much higher than for *M. crassipennis* and on some localities several specimens were found. Thus *M. omissa* is probably not rare in this area. At the locality Mostranda specimens have been collected through several years, viz. the four males and nine females were caught at different dates. Adult flies have been collected between 22. June untill 31. July.

Compared with information given by Lyneborg (1964), the flight period for *M. omissa* is about the same as in Denmark. Lyneborg also states that *M. crassipennis* is the most common species of the two in Denmark while in Norway *M. crassipennis* is probably a fairly rare species. *M. crassipennis* is in Sweden (Wahlgren, 1919) found north to Norrbotten, it is not stated if it is rare or common. By Ringdahl (1960) *M. omissa* is noted from Skåne only in Sweden.

The other species new to Norway is *Tetanops myopina* Fallén 1820. One female was collected at Ogna, Ogna county, Rogaland province at 8. July 1986. The collecting with a net was done 150—250 m from the outlet of a river. *T. myopina* is only found in connection with beach localities with sand dunes. *T. myopina* is probably rare in Norway since no



Map 1. The distribution of *Melieria* and *Tetanops* in Norway. The northern part of the country without records is omitted. The distribution is given as EIS-squares. *Melieria crassipennis* = Square black upper left half. *M. omissa* = Square lower right half. Black squares when both species are present. The record of *Tetanops myopina* is marked with a circle in square 3.

specimens were found at several suitable localities in the Oslofjord area where collecting have been done in the latest years. *T. myopina* is a fairly large fly which should not be easily overlooked. The specimen is deposited in Zoological Museum, University of Bergen. The record is marked on Map 1.

The genus *Tetanops* can in Scandinavia be recognized among other genera of *Otitidae* on the markedly pronounced frons and the weak spots on the wings. One other species has been recorded from this area viz. *T. sintenisi* Becker, 1909 (Hackman, 1980).

Key to the Scandinavian *Tetanops:*

1. Frons very pronounced, dusted and not shining, with brown spots. Wings with weak spots at $R_{2+3}$ and $R_{4+5}$. The crossveins somewhat shaded. Length 5—8 mm ..... *T. myopina* Fallén, 1820. Recorded from Denmark, Sweden and Finland.
   Frons less pronounced, glossy and shining. Very weak spots on $R_1$, $R_{2+3}$ and $R_{4+5}$. Length 6—8 mm .... *T. sintenisi* Becker, 1909.
   Recorded from Finland.


## ACKNOWLEDGEMENTS

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# *Trypodendron piceum* Strand (Col., Scolytidae): Flight period and response to synthetic pheromones

TORSTEIN KVAMME

Kvamme, T. 1986. *Trypodendron piceum* Strand (Col., Scolytidae): Flight period and respons to synthetic pheromones. *Fauna norv. Ser. B, 33:* 65—70.

**ABSTRACT**

*Trypodendron piceum* Strand, 1946, was collected at five localities in Norway in drainpipe traps baited with synthetic pheromones and host tree compounds. Flight period and abundance are compared in *T. piceum* and the more common *T. lineatum* (Olivier, 1795). The following results are presented: 1) *T. piceum* has a very early and short flight period. 2) The percentage of *T. piceum* varied from 2.1% to 5.9% of the total numbers of *Trypodendron* specimens. In some of the samples from early May, however, more than half of the collected beetles were *T. piceum.* 3) The percentage of females in *T. piceum* is higher than in *T. lineatum.* 4) $\alpha$ -pinene is of less importance as an attractant for *T. piceum* compared to *T. lineatum.*

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The ambrosia beetles, *Trypodendron lineatum* (Olivier, 1795), *T. signatum* (Fabricius, 1787) and *T. domesticum* (Linnaeus, 1758) respond to a common pheromone, Lineatin, when in combination with ethanol (Vité & Bakke 1979, Klimetzek et al. 1981, Schurig et al. 1982). North-American populations of *T. lineatum* also respond to the same attractant (Borden et al. 1979, Lindgren et al. 1983).

When $\alpha$-pinene is added to the attractant, *T. lineatum* responds positively whereas trap catches of *T. signatum* and *T. domesticum* are reduced (Klimetzek 1984). From a biological point of view this seems logical; *T. lineatum* lives in coniferous trees, which contain $\alpha$-pinene, while the two others use decidious trees as hosts.

A fourth species, *T. piceum,* was described from Norway (Strand 1946), and is hitherto mainly known from Scandinavia (Lekander et al. 1977). The systematic position is not yet clarified. Schedl (1981) has treated *T. piceum* as a synonym to *T. lineatum* and Klimetzek (1984) leaves the question of its validity as a separate species open. Little attention is paid to *T. piceum,* and little is known about its biology. Strand (1946) found *T. piceum* partly intermingled with *T. lineatum* in Norway spruce (*Picea abies* (L.) Karst.), but does not give any details concerning gallery construction. The species has later been recorded in logs of Scots pine (*Pinus sylvestris* L.) (Leg. Ø. Austarå), and also emerging from about 4 cm thick branches of pine (Leg. L. Kirkendall). In Sweden *T. piceum* had occasionally been sampled from *Betula sp.* together with *T. signatum* (Baranowski 1977).

Some information on the flight activity, abundance and response to synthetic pheromones of *T. piceum* is presented and discussed in this paper.

## METHODS AND LOCALITIES

Drainpipe traps of the Norwegian 1979 model (Bakke et al. 1983) were used. Semiochemicals were released from polyethylene bags inside the traps. The release rates per hour as estimated in the laboratory at 20—22°C, were as follows; Lineatin 1.0—1.5 mg, $\alpha$-pinene 1.2—1.4 mg and ethanol 0.5—0.6 mg (information from Borregaard Ind. Ltd.). The field work was conducted in 1982 and 1983 at 5 localities: Kongsberg: Saggrenda; Lyngdal: Kvås; Rennebu: Berkåkmoen; Sør-Varanger: Pasvik and Sør-Varanger: Jarfjordbotn.

*1) Kongsberg, Saggrenda*

In 1982, five traps baited on 27 April with Lineatin + ethanol + α-pinene and five traps with only Lineatin + ethanol were deployed in stands of Norway spruce. The distance between the traps was 20 m and between the replicates 100 m. The forest was dominated by mature Norway spruce, with single specimens of Scots pine. The tree density was high. There were still snow on patches in the area when the experiment started.

In 1983 traps were deployed in 9 localities throughout Norway (Fig. 1). One trap baited with Lineatin + ethanol + α-pinene and one trap identical, but with only Lineatin + ethanol, were used in each area. The former was placed in coniferous stands and the latter in decidous stands. However, only the stands where *T. piceum* was caught are described here. The traps from all the following areas were all baited with Lineatin + ethanol + α-pinene except for the trap in Sør-Varanger, Jarfjordbotn, which had no α-pinene.

*2) Lyngdal, Kvås*

The trap was deployed in a stand dominated by Scots pine, but with single Norway spruce. Some dead pines were present. The ground vegetation was dominated by oak shrubs (*Quercus robur* L.). Altitude was about 50 m. The trap was baited on 28 April.

*3) Rennebu, Berkåkmoen*

The trap was baited on 4 May, just after snow melting, in a dense and healthy stand of Norway spruce, 80—100 years old. Altitude was about 230 m.

*4) Sør-Varanger, Pasvik*

One trap was deployed on 9 May in an uneven-aged stand of Scots pine, with both live and dead trees. Altitude was 130 m.

*5) Sør-Varanger, Jarfjordbotn*

The trap was baited with Lineatin + ethanol on 12 May, when snow still partly was present. Birches of different age and health dominated the stand. Snow-broken trees were common. Altitude was about 70 m.

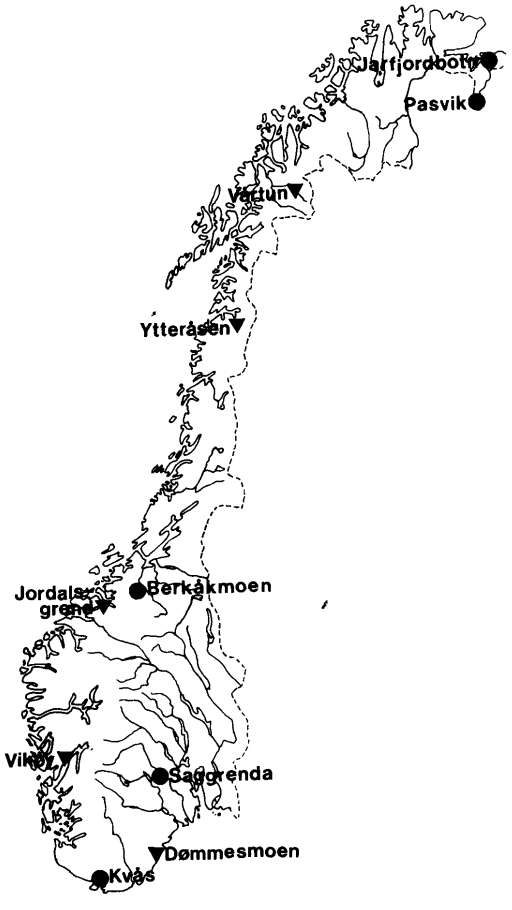


Fig. 1. ● = Localities from which *T. piceum* has been sampled: VAY, Lyngdal: Kvås (EIS 4), BØ, Kongsberg: Saggrenda (EIS 27), STI, Rennebu: Berkåkmoen (EIS 87), FØ, Sør-Varanger: Pasvik (EIS 160), Sør-Varanger: Jarfjordbotn (EIS 169). Δ = Localities where *T. piceum* was not sampled: AAY, Grimstad: Dømmesmoen (EIS 6), HOI, Kvam: Vikøy (EIS 31), MRI, Sunndal: Jordalsgrend (EIS 85), NSI, Saltdal: Ytteråsen (EIS 127), TRI, Målselv: Vårtun (EIS 154). The faunal codes in front of the names are in agreement with Økland (1981) and the codes behind refer to the EIS-grid system.

## RESULTS

It was a common trend in the catches from Kvås, Kongsberg and Pasvik, that *T. piceum* reached the top of the flight activity in the first half of May. *T. lineatum* had the maxi-

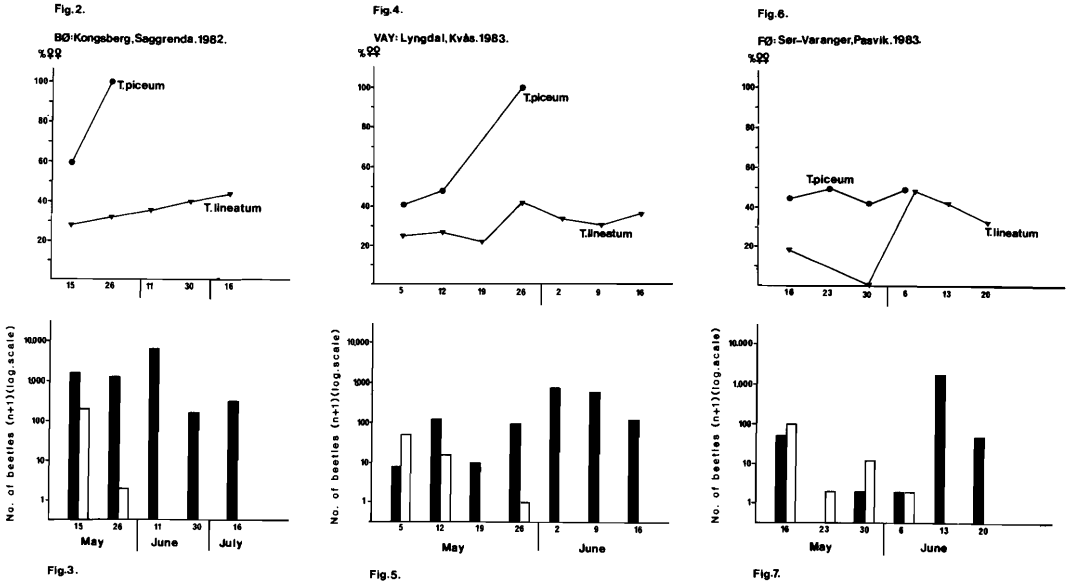


Fig. 2, 4 and 6. The percent of *T. piceum* females compared with females of *T. lineatum*. Fig. 2 is based upon samples from five traps and Fig. 4 and 6 are based upon one trap respectively.

Fig. 3, 5 and 7. The numbers of beetles sampled at the different dates. Dark coloumns are *T. lineatum* and white coloumns are *T. piceum*. All the traps were baited with Lineatin + ethanol + α -pinene.

mum flight activity in the first half of June. It is also evident that the flight activity of *T. piceum* was consentrated to a much shorter period than that of *T. lineatum* (Fig. 3, 5 and 7). At Kvås and Kongsberg *T. piceum* catches always held a higher percentage of females than did *T. lineatum* (Fig. 2 and 4). At Pasvik this relation was more difuse (Fig. 6).

When the catches from traps with α-pinene at Kongsberg ís compared with those where α-pinene was omitted, it is evident that *T. lineatum* responded in significantly higher numbers ($p>0.01$) when α-pinene was present. In *T. piceum* the differences are not statistically significant.

At Jarfjordbotn only two females and one male of *T. piceum* and two females of *T. lineatum* were caught during the whole summer. The total catch at Rennebu, in the trap baited with Lineatin + ethanol + α-pinene, was only three females and two males of *T. piceum,* as compared to 1496 females and 4025 males of *T. lineatum.*

Table 1. The catches from Saggrenda, 1982. The samples from five traps baited with Lineatin + ethanol + α -pinene are compared with samples from five traps baited with Lineatin + ethanol.

| Components: / Species: | Lineatin Ethanol α-pinene | Lineatin Ethanol | Statistical results |
|---|---|---|---|
| T.piceum (total no.) | 187 | 150 | Not. sign. diff. |
| % | 55,5 | 45,5 | - |
| ♂♂/♀♀ | 0,7:1 | 0,9:1 | - |
| T.lineatum (total no.) | 8851 | 1628 | Sign. diff. at 0,1% level |
| % | 84,5 | 15,5 | - |
| ♂♂/♀♀ | 1,9:1 | 2,6:1 | - |

Table 2. The total numbers of *T. piceum* compared to *T. lineatum.*

| Localities | Saggrenda 1982 (5 traps) | Kvås 1983 (1 trap) | Pasvik 1983 (1 trap) |
|---|---|---|---|
| Tot. no. T. piceum | 187 | 72 | 116 |
| Tot. no. T. lineatum | 8851 | 1763 | 1859 |
| % T. piceum | 2,1 | 3,9 | 5,9 |
| % T. lineatum | 97,9 | 96,1 | 94,1 |

## DISCUSSION

The release rate of ethanol and the trap design are important factors for the sex ration of *T. lineatum* sampled in drainpipe traps (Klimetzek et al. 1980, Bakke 1983). The present data do not explain why *T. piceum* and *T. lineatum* have different sex ratio when caught in the same traps. Possibly, sexually different response to ethanol and $\alpha$-pinene is due to their attraction to and selection of host material. It is less probable that sex ratio in natural populations are different. The more indistinct result from Pasvik may be caused by the cold weather conditions in this area in May 1983.

A synergistic effect of $\alpha$-pinene when combined with Lineatin + ethanol is observed in *T. lineatum* (Klimetzek et al. 1981, Bakke 1983). The lack of reaction in *T. piceum* was unexpected. It is possible that *T. piceum* is less strictly associated to coniferous trees than *T. lineatum,* but it is also possible that *T. piceum* choose host material after criteria where $\alpha$-pinene plays a less important role.

Annila et al. (1972) have studied the flight activity of *T. lineatum* in Scandinavia. *T. piceum* was not reported found in this material, but might be mixed with *T. lineatum.* The early flight of *T. lineatum* fits very well with the present study if their results are based on a mixture of the two species. The earlier flight of *T. piceum* could be due to the fact that the hibernating place is being warmed up earlier in spring. *T. lineatum* is known from areas far south than for *T. piceum.* Thus an earlier flight might be an adaptation to a colder climate and a shorter summer season.

The percentage of *T. piceum* of the total number is low (Tab. 2). However, in early May the numbers of *T. piceum* reached more than 50% in some samples (Fig. 5 and 7).

The low number of *T. piceum* caught at Rennebu indicates that the trap might have been baited too late. The cool and wet climatical conditions together with a less suitable sampling area may explain the low catches at Jarfjordbotn as compared to Pasvik.

The biological differences between *T. piceum* and *T. linceatum* described above support the opinion that *T. piceum* is a separate species. However, the reason for the differences can only be explained when more biological knowledge is available.


## ACKNOWLEDGEMENTS

I wish to express my thanks to the staff of the Civil Forest Service for assistance in fieldwork at the different areas; Professor Alf Bakke for critics of the manuscript and Berit Sanness for testing the material statistically. The pheromones and semiochemicals are kindly supplied by Borregaard Ind. Ltd..


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# Empidoidea (Dipt.) new to the Norwegian fauna

TERJE JONASSEN

Jonassen, T. 1988. Empidoidea (Dipt.) new to the Norwegian fauna. *Fauna norv. Ser. B 33;* 71—76.

Sixtyfour species of Empidoidea (Dipt. Empididae, Hybotidae, Atelestidae and Dolichopodidae) are reported from Norway probably for the first time.

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## INTRODUCTION

This paper presents data for 64 species of Empidoidea (viz. Empididae, Hybotidae, Atelestidae and Dolichopodidae), none of which seem to have been reported from Norway previously. The greater part of the material for this report stems from Fred Midtgaard's investigations of the invertebrate fauna at Håøya and Ostøya in 1984. Some previous papers (e.g. Greve & Midtgaard 1986, Hauge & Midtgaard 1986, Aarvik & Midtgaard 1986) have presented extensive information on these localities.

I have also had the opportunity of working on much of the Empidoidea material at Tromsø Museum (ZMT). This material also yielded some species new to the Norwegian fauna, all of which are incorporated into the present report.

The material from Ostøya and Håøya has been collected by F. Midtgaard, whereas the specimens from ZMT have, with a few indicated exceptions, been collected by T. Soot-Ryen.

Elsewhere, when nothing else is mentioned, the specimens have been collected by the author and is deposited in the author's collection. A few of the specimens are deposited in the Museum of Zoology, Bergen (ZMB).

The family concept follows Chvála (1983), while the subfamilies and sequence of species largely follow Kloet & Hincks (1975).

The geographical division of the districts follows Økland (1981).

## SYSTEMATIC LIST

### HYBOTIDAE

#### Subfamily Tachydrominae

*Drapetis arcuata* Loew

AK, Frogn: Håøya, EIS 28, 16—27 June 1984, 1 ♀ ; 27 June—22 July 1984, 1 ♀ (both Malaise trap A); Bærum: Ostøya, EIS 28, 1—24 July 1984, 2 ♀♀ (Malaise trap A), 1 ♂ (Malaise trap B); 24 July—12 August 1984, 1 ♂ (Malaise trap A); RI, Forsand: Hatleskog, Songesand, EIS 7, 18 June 1985, 1 ♀ ; 19 June 1985, 2 ♂♀ (in copula), 10 ♂♂, 4 ♀♀ . This species was abundant at this particular locality in Songesand around the given dates only. A great number of the flies were observed running about on the trunks of the trees in a small birch forest.

*D. parilis* Coll.

AK, Frogn: Håøya, EIS 28, 16—27 June 1984, 1 ♀ (Malaise trap A), 1 ♀ (Malaise trap B); 27 June—22 July 1984, 5 ♀♀ (Malaise trap A), 2 ♂♂ , 6 ♀♀ (Malaise trap B); 22 July—18 August 1984, 1 ♂ , 3 ♀♀ (Malaise trap A), 1 ♀ (Malaise trap B); Bærum: Ostøya, EIS 28, 10 June—1 July 1984, 1 ♂ (Malaise trap A), 3 ♀♀ (Malaise trap C); 1—24 July 1984, 1 ♀ (Malaise trap A), 1 ♂ (Malaise trap B), 2 ♀♀ (Malaise trap C); 24 July—12 August 1984, 2 ♀♀ (Malaise trap B), 1 ♀ (Malaise trap C); VE, Tjøme: Mostranda, EIS 19, 10—20 July 1985, 1 ♂ , A. Fjeldså; HOY, Bergen: Åsane, EIS 39, 21 June—10 July 1985 (Malaise trap), 4 ♀♀ , L. Greve.

*D. pusilla* Loew

AK, Bærum: Ostøya, EIS 28, 12 August—1 September 1984, 1 ♂ (Malaise trap A).

*D. simulans* Coll.

AK, Bærum: Ostøya, EIS 28, 1—24 July 1984, 2 ♂♂ (Malaise trap B). This species has previously been known as Norwegian from a specimen in Coll. Becker lacking any further data (Chvála 1975). Consequently, the specimens above are the first from a confirmed Norwegian locality.

*Crossopalpus curvinervis* (Zett.)
AK, Frogn: Håøya, EIS 28, 19 April—5 May 1984, 1 ♂ (Malaise trap B); Bærum: Ostøya, EIS 28, 28 April—12 May 1984, 1 ♂ (Malaise trap C); 10 June—1 July 1984, 1 ♀ (Malaise trap A).

*C. nigritellus* (Zett.)
AK, Frogn: Håøya, EIS 28, 19 April—5 May 1984, 2 ♂♂, 4 ♀♀ ; 5—19 May 1984, 1 ♀ ; 19 May—3 June 1984, 1 ♀ (all Malaise trap A); Bærum: Ostøya, EIS 28, 1—28 April 1984, 1 ♂ , 1 ♀ (Malaise trap A) (ZMB); RI, Forsand: Songesand, EIS 7, 1—7 May 1985, 2 ♂♂ ; 8—14 May 1985, 3 ♂♂ , 1 ♀ (all caught in a water trap in a compost heap).

*Tachydromia woodi* (Coll.)
VE, Tjøme: Mostranda, EIS 19, 10—20 July 1985, 1 ♂ . Only the second Scandinavian record of this seemingly rare species.

*Symballophthalmus fuscitarsis* (Zett.)
AK, Frogn: Håøya, EIS 28, 3—16 June 1984, 2 ♀♀ ; 27 June—22 July 1984, 1 ♀ (all Malaise trap A), 1 ♂ (Malaise trap B); Bærum: Ostøya, EIS 28, 30 May—10 June 1984, 1 ♀ (Malaise trap A), 1 ♀ (Malaise trap C); 10 June—1 July 1984, 2 ♀♀ ; 1—24 July 1984, 1 ♂ , 1 ♀ (all Malaise trap C); RY, Finnøy: Kyrkjøy, EIS 14, 5 June 1986, 1 ♀ ; 16 June 1986, 1 ♂ , 2 ♀♀ ; 22 June 1986, 2 ♂♂ , 1 ♀ ; 1 July 1986, 1 ♂, 2 ♀♀ ; 4 June 1986, 1 ♀ (Malaise trap); 28 May 1987, 3 ♂♂ , 3 ♀♀ ; 4 June 1987, 1 ♂; 4 July 1987, 1 ♀ (Malaise trap); 15 August 1987, 1 ♀ .

*Platypalpus agilis* (Meig.)
RY, Hå: Brusand, EIS 3, 11—12 June 1985, 1 ♂ , 2 ♀♀ ; 13 June 1985, 2 ♂♂ , 1 ♀ (1 ♂ , 1 ♀ in ZMB).

*P. brachystylus* (Bezzi)
AK, Frogn: Håøya, EIS 28, 19 May—3 June 1984, 11 ♂♂ ; 3—16 June 1984, 1 ♂ , 10 ♀♀ (all Malaise trap B); 2 ♀♀ (Malaise trap A); 18 August—16 September 1984, 6 ♀♀ (Malaise trap A); Bærum:Ostøya, EIS 28, 10 June—1 July 1984, 1 ♂ ; 24 July—12 August 1984, 1 ♀ (both Malaise trap B); 1 ♂ (Malaise trap A); 12 August—1 September 1984, 1 ♂ , 10 ♀♀ (Malaise trap A); 18 ♀♀ (Malaise trap B); 1—23 September 1984, 10 ♀♀ (Malaise trap A); RY, Finnøy: Kyrkjøy, EIS 14, 14 May 1987, 1 ♀; RI, Forsand: strekn. Helmikstøl—Håhellerstølen, EIS 8, 27 June 1985, 1 ♀ ; HOI, Voss: 4 km east of Mjølfjell, EIS 41, 8 June—13 July 1985, 7 ♂♂ , 11 ♀♀ (Malaise trap), L. Greve (ZMB). This species has previously been known as *brunneitibia* (Strobl), a name which now has become a synonym. Based on the Norwegian specimens listed above, I find this a rather problematic species. When examining the material from Mjølfjell, I came across some *Platypalpus* specimens which would normally key out to *longicornis* (Meig) in Chvála (1975), due to its polished thorax. In all other details, however, it fitted the description of *brachystylus* (Bezzi), in that it had a dark antennal segment 1, were darker bristled and had a brownish tibia 3. This is, in fact, rather close to the description given by Collin (1961) of the species which he calls *Tachydromia* ( = Platypalpus) *longicornis* var. The specimens from Mjølfjell also show a great variation in the dusting of the thorax, from densely and completely dusted, through having a small polished patch in the middle, to specimens being largely polished on thorax. In these latter cases, however, the dusting in front of the scutellum always extends further forward than in e.g. *longicornis* and, most important of all, the genitalia are obviously those of *brachystylus*. A female from RI, Forsand: Songesandstølen, EIS 7, also having a largely polished thorax, can probably also be referred to this species.

I have also noticed some variation in the extention of the brown colour of the tibiae of this species. Most often only the hind tibiae are obviously brownish, but I have also seen specimens where the tibiae are all yellow. All this shows *brachystylus* varies a great deal more than it has previously been allowed for. Without having examined Collin's specimens of *longicornis* var., I would suggest that these too are in fact specimens of *brachystylus* (Bezzi).

*P. brevicornis* (Zett.)
AK, Bærum: Ostøya, EIS 28, 10 June—1 July 1984, 1 ♀ (Malaise trap C).

*P. calceatus* (Meig.)
AK, Frogn: Håøya, EIS 28, 16—27 June 1984, 1 ♀ ; 27 June—22 July 1984, 3 ♀♀ ; 22 July—18 August 1984, 4 ♀♀ ; 18 August—16 September 1984, 1 ♀ (all Malaise trap A); Bærum: Ostøya, EIS 28, 1—24 July 1984, 1 ♂ , 4 ♀♀ ; 24 July—12 August 1984, 2 ♀♀ (all Malaise trap C); 8 ♀♀ (Malaise trap A); 12 August—1 September 1984, 1 ♀ (Malaise trap A); BØ, Ringerike,

Åsa v/Hønefoss, EIS 36, 26 July 1983, 1 ♀, M. Chvála det.

*P. cryptospina* (Frey)
AK, Bærum: Ostøya, EIS 28, 30 May—10 June 1984, 1 ♂, 1 ♀; 10 June—1 July 1984, 1 ♂; 1—24 July 1984, 1 ♂, 1 ♀ (all Malaise trap A); 2 ♀♀ (Malaise trap C); 24 July—12 August 1984, 1 ♀ (Malaise trap A).

*P. excisus* (Beck.)
TRY, Karlsøy: Torsvåg, EIS 171, 9 July 1925, 1 ♂; 15 July 1925, 3 ♂♂; Vannø, EIS 171, 17 July 1925, 1 ♂ (ZMT). The genitalia have been examined, and they agree closely with Chvála's (1975) figures. These specimens also have the characteristic excision in the hind tibiae of the males. I cannot, however, observe any particular darkening of the legs in comparision with *nigritarsis* (Fall.), as noted by Chvála (1975). This makes the females of *excisus,* of which I believe there to be a pair among the material from Torsvåg, practically inseparable from the females of *nigritarsis.*

*P. mikii* (Beck.)
AK, Frogn: Håøya, EIS 28, 16—27 June 1984, 1 ♂ (Malaise trap A); 27 June—2 July 1984, 1 ♂, 1 ♀ (Malaise trap B); Bærum: Ostøya, EIS 28, 10 June—1 July 1984, 1 ♀ (Malaise trap A); 1—24 July 1984, 1 ♀ (Malaise trap B), 1 ♀ (Malaise trap C); 24 July—12 August 1984, 1 ♀ (Malaise trap A).

*P. rapidus* (Macq.)
AK, Bærum: Ostøya, EIS 28, 30 May—10 Juni 1984, 2 ♀♀ (Malaise trap A); 10 June—1 July 1984, 1 ♀ (Malaise trap B).

*P. tuomikoskii* Chvála
AK, Frogn: Håøya, EIS 28, 22 July—18 August 1984, 1 ♀ (Malaise trap B); 18 August—16 September 1984, 1 ♂ (Malaise trap A).

**Subfamily Ocydromiinae**

*Bicellaria halterata* Coll.
AK, Frogn: Håøya, EIS 28, 22 July—18 August 1984, 1 ♂, 1 ♀ (Malaise trap B); RY, Finnøy: Kyrkjøy, EIS 14, 15—23 September 1987, 1 ♂ (Malaise trap). The genitalia of the two males have been examined, and they agree closely with the figures given by Collin (1961). A male from RY, Rennesøy: Vikevåg, EIS 14, can, although lacking the genitalia, probably also be referred to this species. New to Scandinavia.

*B. nigrita* Coll.
AK, Frogn: Håøya, EIS 28, 16—27 June 1984, 1 ♀ (Malaise trap B); Bærum: Ostøya, EIS 28, 12—30 May 1984, 1 ♂; 30 May—10 June 1984, 8 ♂♂, 11 ♀♀ (all Malaise trap B), 1 ♂, 1 ♀ (Malaise trap A); 10 June—1 July 1984, 1 ♂, 8 ♀♀ (Malaise trap A), 3 ♂♂, 18 ♀♀ (Malaise trap B), 2 ♀♀ (Malaise trap C); 1—24 July 1984, 4 ♀♀ (Malaise trap A), 1 ♂, 8 ♀♀ (Malaise trap B). New to Scandinavia.

*B. simplicipes* (Zett.)
This is a species which has not previously been reported from Norway, but there is in fact a good number of specimens in Soot-Ryen's collection at ZMT. The localities include: NSY, Sømna: Sømnes, EIS 114; Gjerdevatn, EIS 110?; NNV, Værøy: Værøy, EIS 132—133; Røst: Røst, Sandøy N., EIS 129; TRI, Balsfjord: Skjåvikør, EIS 154.

*Oropezella sphenoptera* (Loew)
AAY, Grimstad: Landvik, EIS 6, 5 July 1971, 1 ♀, E. Oug (ZMB). RY, Finnøy: Kyrkjøy, EIS 14, 30 June 1986, 2 ♂♂, 3 ♀♀; 1 July 1986, 3 ♂♂; 4 July 1986, 3 ♀♀ (Malaise trap); 6 July 1986, 1 ♂, 2 ♀♀; 12 July 1986, 3 ♂♂; 16 July 1986, 1 ♂, 2—10 August 1987, 1 ♀ (Malaise trap); 23 September—5 October 1987, 1 ♂ (Malaise trap).

*Trichina opaca* Loew
AK, Bærum: Ostøya, EIS 28, 30 May—10 June 1984, 1 ♂ (Malaise trap B).

*Oedalea hybotina* (Fall.)
AK, Frogn: Håøya, EIS 28, 19 May—3 June 1983, 1 ♀; 27 June—22 July 1984, 1 ♀ (both Malaise trap B).

*O. ringdahli* Chvála
AK, Frogn: Håøya, EIS 28, 3—16 June 1984, 1 ♀ (Malaise trap A); Bærum: Ostøya, EIS 28, 12—30 May 1984, 1 ♂ (Malaise trap C); RI, Forsand: Songesand, EIS 7, 27 May 1984, 2 ♂♂, 1 ♀ (M. Chvála det.); 28 May 1985, 2 ♂♂; HOY, Bergen: Åsane, EIS 39, 21 June—10 July 1986 (Malaise trap), 1 ♀, L. Greve (ZMB). A species which has been described fairly recently (Chvála 1983) from one Swedish specimen. The above are thus the only known records beside the holotype. Chvála (1983) suggests that this species is a «northern rather mountainous species». My records, which are all from coastal areas, show that this is not the case. Investigations of its habitat at Songesand showed

that the species had a rather short flight period, here only a few days at the end of May. The specimens from Håøya and Ostøya seem to suggest the same. Consequently, this species could in fact prove to be rather widespread if it can be collected at the right place at the right time. Since the female is previously undescribed, a short diagnosis can be given as follows:

♀. Very like male. Frons broad, polished black, widening above. All eye facets equally small. Legs, abdomen and thorax as in male, pubescence only indistictly shorter. Halteres yellowish brown to light brownish. Ovipositor slender and long, blackish.

*O. tibialis* Macq.

AK, Bærum: Ostøya, EIS 28, 1—24 July 1984, 1 ♀ (Malaise trap B).

*Anthalia schoenherri* Zett.

AK, Bærum: Ostøya, EIS 28, 30 May—10 June 1984, 1 ♀ (Malaise trap B).

*Allanthalia pallida* (Zett.)

AK, Frogn: Håøya, EIS 28, 3—16 June 1984, 1 ♂, 1 ♀ (Malaise trap A); Bærum: Ostøya, EIS 28, 12—30 May 1984, 1 ♀ (Malaise trap C).

## ATELESTIDAE

*Atelestus pulicarius* (Fall.)

AK, Bærum: Ostøya, EIS 28, 10 June—1 July 1984, 3 ♂♂, 1 ♀ (of which 2 ♂♂ are det. P.J. Chandler and, are deposited in ZMB); 1—24 July 1984, 1 ♀ (all Malaise trap A), 1 ♂ (Malaise trap B).

## EMPIDIDAE

### Subfamily Empidinae

*Rhamphomyia (Pararhamphomyia) dentata* Oldenb.

AK, Frogn: Håøya, EIS 28, 19 May—3 June 1984, 1 ♀ (Malaise trap A); TRI, Balsfjord: Indrevand, EIS 154, 13 July 1943, 2 ♂♂; Skjåvikør, EIS 154, 7 July 1941, 1 ♀; Bjerkeng, EIS 154, ?date, 2 ♀♀, Sparre Schneider (all ZMT).

*R. (P.) caudata* Zett.

NSI, Beiarn: Gråtådalen, EIS 126, 5 July 1948, 17 ♂♂, 13 ♀♀; Rana: Islia, EIS?, 23 July 1947, 1 ♂; TRI, Balsfjord: Fisklaustind, EIS 154, 29 July 1944, 2 ♀♀; Lillemorvatn, Blåfjell, EIS 154, 30 July 1944, 1 ♀; Kåfjord: Guolasjavrre, EIS 163, 26 June 1986, 3 ♂♂, 1 ♀, Fjellberg & Midtgaard, FI; Kautokeino: Bidjovagge, EIS 157, 19 June 1986, 2 ♀♀, Fjellberg & Midtgaard (all ZMT). It is probable that previous Norwegian records of *caudata* actually refers to *aethiops* Zett. As shown by Collin (1961), the true *caudata* is the species which in previous literature has been known under the name of *longestylata* Frey. Consequently, these are the first confirmed Norwegian records of the true *caudata.*

*R. (s.str.) dorsata* Beck.

TRI, Kåfjord: Guolasjavrre, EIS 163, 26 June 1986, 6 ♂♂, 2 ♀♀, Fjellberg & Midtgaard (ZMT).

*R. (s.str.) ignobilis* Zett.

TRI, Kåfjord: Guolasjavrre, EIS 163, 26 June 1986, 4 ♂♂, 2 ♀♀, Fjellberg & Midtgaard; FI, Kautokeino: Bæljasvarre, Avži, EIS 157, 18 June 1986, 4 ♂♂, Fjellberg & Midtgaard (all ZMT).

*R. (Holoclera) caliginosa* Coll.

AK, Bærum: Ostøya, EIS 28, 1—24 July 1984, 1 ♂ (Malaise trap A).

*Empis (s.str.) chioptera* Meig.

AK, Bærum: Ostøya, EIS 28, 30 May—10 June 1984, 2 ♂♂, 1 ♀ (Malaise trap A), 1 ♂ (Malaise trap C).

*Hilara albitarsis* von Roser

AK, Bærum: Ostøya, EIS 28, 12—30 May 1984, 1 ♂; 30 May—10 June 1984, 2 ♂♂ (all Malaise trap A), 1 ♂ (Malaise trap B).

*H. beckeri* Strobl

There are three males leg. Soot-Ryen of this species in ZMT. They are all labelled Ramsø 21.7.35. Neither Arne Fjellberg nor I have been able to localize where this is, but it has to be either in VA or AA. It might be identical with Ramse in Åmli, AAI (EIS 9).

*H. bistriata* Zett.

TRI, Balsjord: Nordfjord, EIS 154, 5 July 1942, 1 ♂; FN, Båtsfjord: Sandfjord, EIS 185, 20 June 1986, 1 ♂, Fjellberg & Midtgaard (all ZMT).

*H. longivittata* Zett.

AK, Bærum: Ostøya, EIS 28, 30 May—10 June 1984, 1 ♂ (Malaise trap B). The genitalia have been dissected, and they agree with the figures given by Collin (1961).

## DOLICHOPODIDAE

### Subfamily Dolichopodinae

*Dolichopus clavipes* Hal.
AK, Bærum: Østøya, EIS 28, 1—24 July 1984, 1 ♀ (Malaise trap A).

*D. consimilis* Wahlb.
TRI, Målselv: Øverbygd, EIS 154, 26 July 1926, 1 ♂ ; Balsfjord: Fjellfrøskv., EIS 154, 29 July 1926, 1 ♂ (both ZMT).

*D. parvicaudatus* Zett.
NNV, Andøy: Andenes, EIS 152, 28 July 1941, 1 ♂ (ZMT).

*D. sabinus* Hal.
RY, Finnøy: Kyrkjøy, EIS 14, 1 July 1986, 2 ♂♂ ; 11 July 1986, 2 ♀♀ ; 5 July 1987, 1 ♂ , 2 ♀♀ . All of the specimens captured on a salt marsh.

*D. signatus* Meig.
AAY, Hisøy: Hisøy, EIS 6, 23 July 1935, 1 ♂ ; 24 July 1935, 1 ♂ (ZMT).

*Hercostomus chalybeus* Wied.
AK, Bærum: Østøya, EIS 28, 10 June—1 July 1984, 2 ♂♂ ; 1—24 July 1984, 11 ♂♂, 12 ♀♀ (all Malaise trap C), 1 ♂ (Malaise trap A); 24 July—12 August 1984, 6 ♂♂ (Malaise trap C).

*H. metallicus* Stann.
AK, Frogn: Håøya, EIS 28, 3—16 June 1984, 2 ♀♀ (Malaise trap A), 1 ♂ (Malaise trap B); 16—27 June 1984, 1 ♂ , 3 ♀♀ ; 27 June—22 July 1984, 4 ♀♀ (all Malaise trap A); Bærum: Østøya, EIS 28, 30 May—10 June 1984, 2 ♂♂ (Malaise trap C), 1 ♂ (Malaise trap A); 10 June—1 July 1984, 2 ♂♂ ; 1—24 July, 2 ♂♂ , 1—24 July, 14 ♀♀; 24 July—12 August 1984, 1 ♂ (all Malaise trap C).

*H. nigriplantis* (Stann.)
AK, Frogn: Håøya, EIS 28, 22 July—18 August 1984, 1 ♀ (Malaise trap A).

### Subfamily Hydrophorinae

*Hydrophorus alpinus* Wahlb.
TRY, Tromsø: Fløyfjell, EIS 162, 25 August 1925, 6 ♂♂ , 10 ♀♀ (ZMT).

*H. rufibarbis* Gerst.
TRY, Torsken: Sandsvika, EIS 153, 6 July 1986, 1 ♂ , A. Fjellberg (ZMT).

*Thinophilus ruficornis* (Hal.)
RY, Finnøy: Kyrkjøy, EIS 14, 14 August 1985, 3 ♂♂ , 1 ♀ ; 15 August 1985, 1 ♂ , 1 ♀ ; 2 September 1985, 1 ♂ , 1 ♀ ; 30 June 1986, 1 ♂ ; 1 July 1986, 5 ♀♀ ; 16 July 1986, 1 ♂ ; 5 July 1987, 1 ♀ . Rather a common salt marsh species at this particular locality.

### Subfamily Medeterinae

*Medetera abstrusa* Thuneb.
AK, Frogn: Håøya, EIS 28, 19 May—3 June 1984, 3 ♂♂ ; 3—16 June 1984, 2 ♂♂ ; 27 June—22 July 1984, 1 ♂ ; 22 July—18 August 1984, 1 ♂ (all Malaise trap A); Bærum: Østøya, EIS 28, 12—30 May 1984, 1 ♂ , 3 ♀♀ (Malaise trap C); 10 June—1 July 1984, 1 ♂ (Malaise trap A), 3 ♂♂ , 4 ♀♀ (Malaise trap B); 1—24 July 1984, 1 ♂ , 2 ♀♀ (Malaise trap A), 1 ♂ (Malaise trap B); RY, Finnøy: Kyrkjøy, EIS 14, 14 May 1987, 1 ♂ ; 28 May 1987, 1 ♂ ; 2 June 1987, 2 ♂♂ ; 4 June 1987, 1 ♂ , 1 ♀ ; 20—25 July 1987, 1 ♀ (Malaise trap). Probably an overlooked species in Norway.

*M. acanthura* Negr. & Thuneb.
AK, Frogn: Håøya, EIS 28, 19 May—3 June 1984, 1 ♂ (Malaise trap A); 3—16 June 1984, 1 ♂ , 4 ♀♀ (Malaise trap B); Bærum: Østøya, EIS 28, 10 June—1 July 1984, 1 ♂ (Malaise trap A).

*M. borealis* Thuneb.
RY, Finnøy: Kyrkjøy, EIS 14, 5 July 1986, 1 ♂ ; HOI, Voss: 4 km east of Mjølfjell, EIS 41, 8 June—13 July 1985, 1 ♂ , 1 ♀ (Malaise trap), L. Greve (ZMB).

*M. cuspidata* Coll.
AK, Frogn: Håøya, EIS 28, 19 May—3 June 1984, 1 ♂ (Malaise trap A).

*M. impigra* Coll.
AK, Bærum: Østøya, EIS 28, 30 May—10 June 1984, 1 ♂ (Malaise trap B); 24 July—12 August 1984, 1 ♂ (Malaise trap C). The male genitalia have been examined in all the Medetera species above.

*Thrypticus paludicola* Negr.
RY, Finnøy: Kyrkjøy, EIS 14, 12 July 1987, 1 ♂ . A species which has been comparatively recently described (Negrobov 1972). Due to the fact that the nearest known location for this species has been Berlin (ibid.), it is rather surprising to find it at the west coast of Norway. One may be led to believe that at least some North and West-European collections hold misidentified specimens of this species. The genitalia have been examined and they agree very well with the figures given by Negrobov (1972).

*T. tarsalis* Par.
AK, Frogn: Håøya, EIS 28, 3—16 June 1984, 1 ♂ , 1 ♀ (Malaise trap A).

**Subfamily Rhaphiinae**

*Systenus bipartitus* (Loew)
AK, Bærum: Ostøya, EIS 28, 10 June—1 July 1984, 1 ♀; 1—24 July 1984, 1 ♂, 1 ♀ (all Malaise trap B), 1 ♀ (Malaise trap C); 24 July—12 August 1984, 1 ♀ (Malaise trap C); 12 August—1 September 1984, 1 ♂ (Malaise trap A).

*S. pallipes* (von Roser)
AK, Frogn: Håøya, EIS 28, 18 August—16 September 1984, 1 ♀ (Malaise trap A).

*S. scholtzii* (Loew)
AK, Bærum: Ostøya, EIS 28, 24 July—12 August 1984, 1 ♀ (Malaise trap B).

*Achalcus cinereus* (Hal.)
AK, Frogn: Håøya, EIS 28, 19 April—5 May 1984, 1 ♀ (Malaise trap A), 1 ♂, 2 ♀♀ (Malaise trap B); Bærum: Ostøya, EIS 28, 28 April—12 May 1984, 3 ♂♂, 8 ♀♀; 12—30 May, 1 ♂, 3 ♀♀ (all Malaise trap C).

*A. flavicollis* (Meig.)
AK, Bærum: Ostøya, EIS 28, 1—24 July 1984, 1 ♀ (Malaise trap A); 24 July—12 August 1984, 1 ♂ (Malaise trap C); RY, Finnøy: Kyrkjøy, EIS 14, 1 July 1986, 1 ♂, 2 ♀♀; 6 July 1986, 1 ♂; 11 July 1986, 1 ♀; 16 July 1986, 1 ♀, 12 July 1987, 1 ♀. All the Kyrkjøy specimens were captured among low herbage in a salt marsh.

**Subfamily Neurigoninae**

*Neurigona abdominalis* (Fall.)
AK, Frogn: Håøya, EIS 28, 3—16 June 1984, 1 ♂ (Malaise trap A), Bærum: Ostøya, EIS 28, 30 May—10 June 1984, 7 ♂♂, 1 ♀ (Malaise trap A), 1 ♂ (Malaise trap B); 10 June—1 July 1984, 2 ♂♂, 2 ♀♀; 1—24 July 1984, 1 ♂, 1 ♀ (all Malaise trap A), 1 ♀ (Malaise trap B).

**Subfamily Diaphorinae**

*Argyra confinis* (Zett.)
AK, Bærum: Ostøya, EIS 28, 1—24 July 1984, 1 ♂; 24 July—12 August 1984, 1 ♂ (both Malaise trap C).

**Subfamily Campsicneminae**

*Campsicnemus armatus* (Zett.)
AK, Bærum: Ostøya, EIS 28, 14—28 April 1984, 1 ♂; 28 April—12 May 1984. 1 ♂ (both Malaise trap A); TRY, Karlsøy: Måkeskjær, EIS 170?, 5 August 1934, 1 ♂; 10 August 1934, 1 ♂, 2 ♀♀; 11 August 1934, 2 ♂♂, 3 ♀♀; 15 August 1934, 4 ♂♂; 19 August 1934, 1 ♂; 3 ♀♀; 20 August 1934, 1 ♂; 21 August 1934, 1 ♂; Tromsø: Tromsø, EIS 162, 12 October 1981, 1 ♂, A. Fjellberg; TRI, Balsfjord: Skjåvikør, EIS 154, 14 August 1941, 1 ♀; 1 September 1941, 1 ♂ (all ZMT).


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# New and interesting records of Lepidoptera from Norway

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The authors list new distributional records of Lepidoptera made in the years 1980—85. The following species are new to Norway: *Siederia listerella* (Linnaeus, 1758); *Coleophora partitella* Zeller, 1849; *Scythris disparella* (Tengström, 1848); *Bryotropha purpurella* (Zetterstedt, 1839); *Gnorimoschema valesiella* (Staudinger, 1877); *Ptycerata petasitis* (Pfaffenzeller, 1867); *Caryocolum petrophila* (Preissecker, 1914); *C. viscariella* (Stainton, 1855); *Syncopacma sangiella* (Stainton, 1863); *Phalonidia minimana* (Caradja, 1916); *Olethreutes aquilonana* (Karvonen, 1932) and *Cataplectica profugella* (Stainton, 1856).

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## INTRODUCTION

In 1980—1985 we collected Lepidoptera in several localities in Norway, mainly in Gudbrandsdalen and in the Dovre Mountains. Other places visited include Trondheim, by K. Larsen in 1980; Elverum in 1980 and 1981; Rendalen in 1981; many places in northern Norway, by K. Larsen and L. Aarvik in 1982, and Myking near Gol by O. Karsholt in 1984. J.P. Baungård and P. Falck participated in the collecting trips in 1981. In this paper some records made by K. Myhr, S. Svendsen and K.R. Tuck are also included.

The locality at Vinstra turned out to be particularly interesting. A closer description of the site has been given elsewhere (Karsholt et al. 1986). The record of *Clepsis mehli* (Opheim, 1964) was published by Aarvik & Larsen (1984), and that of *Scrobipalpa reiprichi* Povolný, 1984 by Karsholt et al. (1986).

The present account contains 12 species new to Norway and new distributional records for the remaining species. As the distribution in Norway of species belonging to the families Micropterigidae, Eriocraniidae and Nepticulidae has not been catalogued, we have chosen to give a complete list of our records of these families.

Names of localities are cited in accordance with K.A. Økland (1981). EIS-grid-numbers (J. Økland 1977) are also included. In order to save space, the names of most of the localities are cited in full only here:

HES Elverum: Damtjern (EIS 55)
HES Elverum: Hernes (EIS 55)
HES Ringsaker: Mengshol (EIS 45)
HEN Rendalen: Berget (EIS 73)
HEN Åmot: Rena (EIS 55)
ON Dovre: Fokstua or Fokstumyra (EIS 71)
ON Nord-Fron: Vinstra (EIS 62)
ON Sel: Mysuseter (EIS 71)
ON Vågå: Gjendesheim (EIS 61)
ON Vågå: Jetta (EIS 71)
ON Vågå: Lalm (EIS 71)
ON Vågå: Valbjør (EIS 71)
ON Vågå: Vågåmo (EIS 71)
BV Nes: Myking (EIS 43)
TEI Vinje: Ståvatnet (1000 m) (EIS 24)
STI Oppdal: Fagerhaug (EIS 79)
STI Oppdal: Gåvåliseter (EIS 79)
STI Oppdal: Knutshø (EIS 79)
STI Oppdal: Kongsvoll (EIS 79)
STI Trondheim: Lohove (EIS 92)
STI Trondheim: Rørmyra (EIS 92)
STI Trondheim: Tonstad (EIS 92)
STI Trondheim: Trondheim (EIS 92)
NSI Rana: Krokstrand (EIS 124)
NSI Saltdal: Junkerdalsura (EIS 127)

NSI Saltdal: Rusånes (EIS 127)
NSI Saltdal: Røkland (EIS 127)
TRI Balsfjord: Reingjerdfjell (EIS 154)
TRI Målselv: Skjold (EIS 154)
TRI Storfjord: Paras (EIS 155)
TRI Storfjord: Signaldalen (EIS 155)
FV Alta: Elvebakken (EIS 173)
FV Alta: Grønnåsen (EIS 165)
FV Alta: Kviby (EIS 173)
FV Alta: Laukvik (EIS 173)
FV Alta: Rafsnes (EIS 173)
FV Alta: Stengelse (EIS 173)
FV Alta: Øvre Alta (EIS 173)
FN Porsanger: Kistrand (EIS 181)

The names of collectors are abbreviated as follows:

JPB = Jens Peter Baungård
KL = Knud Larsen
KM = Kai Myhr
KRT= Kevin R. Tuck
KS = Karsten Schnack
LAA= Leif Aarvik
PF = Per Falck
OK = Ole Karsholt
SS = Svein Svendsen

The sequence of taxa and nomenclature are according to Gustafsson et al. (1987). Latin names of plants are according to Lid (1985).

**Micropterigidae**

*Micropterix mansuetella* Zeller, 1844 TRI Signaldalen numerous ex 5—7 Jul. 1982 (KL, LAA)

*M. aureatella* (Scopoli, 1763) STI Fagerhaug numerous ex 22—23 Jun. 1981 (JPB, KL, LAA, PF, OK), 1 ex 12 Jun. 1985 (OK); 4 km s Oppdal sentrum 2 ex 19 Jun. 1985 (OK)

**Eriocraniidae**

*Eriocrania sparrmannella* (Bosc, 1791) STI Gåvåliseter 1 ex 25 Jun. 1981 (JPB); Kongsvoll 5 ex 12—20 Jun. 1985 (OK)

*E. haworthi* Bradley, 1966 STI Kongsvoll 1 ex 20—26 Jun. 1981 (KL); 1 ex 12—20 Jun. 1985 (OK)

**Nepticulidae**

*Stigmella lapponica* (Wocke, 1862) ON Fokstua 1 ex 21 Jun. 1981 (OK); STI Kongsvoll 5 ex 7 Jun. 1980, 21—23 Jun. 1981 (KL), 2 ex 24—25 Jun. 1981 (OK), 2 ex 5 Jul. 1983 (KS), numerous ex 12—20 Jun. 1985 (KS, OK); STI Rørmyra 1 ex 4 Jun. 1980; FV Rafsnes 30 Jun. 1982 (KL)

*S. betulicola* (Stainton, 1856) (f. *nanivora* W. Petersen, 1930) STI Fagerhaug 2 ex 22—23 Jun. 1981 (OK)

*S. salicis* (Stainton, 1854) HOI Odda: Tyssedal, Skjeggedal (EIS 32) 1 ex 8 Jul. 1984; STI Kongsvoll 1 ex 25 Jun. 1981 (OK)

*S. myrtillella* (Stainton, 1857) TRI Skjold 1 ex 7 Jul. 1982; FV Øvre Alta 3 ex 4 Jul. 1982 (KL)

*S. lappovimella* Svensson, 1976 STI Fagerhaug 4 ex 22—23 Jun. 1981 (OK)

*S. aeneofasciella* (Herrich-Schäffer, 1855) ON Vågåmo (900 m) 1 ex 4 Jul. 1983 (KS); STI Kongsvoll 1 ex 12—20 Jun. 1985 (OK)

*S. dryadella* (Hofmann, 1868) STI Knutshø 21 ex 23—26 Jul. 1983 (OK)

*S. poterii* (Stainton, 1857) (f. *tengstroemi* Nolcken, 1871) HEN Berget 2 ex 27 Jun. 1981; STI Fagerhaug 3 ex 22—23 Jun. 1981 (KL, OK)

*Ectoedemia weaveri* (Stainton, 1855) STI Kongsvoll 3 ex 20—28 Jul. 1983 (OK)

*E. minimella* (Zetterstedt, 1839) HOI Odda: Seljestad (EIS 24) 1 ex 9 Jul. 1984 (OK); STI Fagerhaug 7 ex 22—23 Jun. 1981 (KL, OK); Gåvåliseter 2 ex 25 Jun. 1981 (KL); Kongsvoll 1 ex 5 Jul. 1983 (KS), 2 ex 20—28 Jul. 1983, 5 ex 12—20 Jun. 1985; 10 km s Oppdal sentrum 5 ex 12 Jun. 1985 (OK); NSI Junkerdalsura 1 ex 28 Jun. 1982 (KL)

**Adelidae**

*Nematopogon pilella* (Denis & Schiffermüller, 1775) HEN Berget 1 ex 27 Jun. 1981 (KL)

*N. magna* (Zeller, 1878) ON Lom: Lom (EIS 70) 1 ex 13 Jul. 1983; ON Valbjør 1 ex 8 Jul 1983 (KS)

*N. robertella* (Clerck, 1759) BV Myking 1 ex 2—7 Jul. 1984 (OK)

*Nemophora esmarkella* (Wocke, 1864) BV Myking 2 ex 2—7 Jul. 1984 (OK); FV Stengelse 1 ex 1 Jul. 1982; FN Kistrand 1 ex 3 Jul. 1982 (LAA).

**Incurvariidae**

*Incurvaria praelatella* (Denis & Schiffermüller, 1775) TRI Skjold 1 ex 7 Jul. 1982 (KL)

*I. pectinea* Haworth, 1828 STI Kongsvoll 1 ex 12—20 Jun. 1985; 10 km s Oppdal sentrum 1 ex 12 Jun. 1985 (OK); TRI Reingjerdfjell 1 ex 8 Jul. 1982 (KL)
*Alloclemensia mesospilella* (Herrich-Schäffer, 1854) NSI Junkerdalsura 1 ex 28 Jun. 1982 (KL)

**Prodoxidae**

*Lampronia luzella* (Hübner, 1817) HEN Berget 3 ex 27 Jun. 1981 (KL, LAA)
*L. flavimitrella* (Hübner, 1817) STI Trondheim 1 ex 3 Jun. 1980 (KL)

**Psychidae**

*Lypusa maurella* (Denis & Schiffermüller, 1775) ON Fokstua 2 ex 11 Jul. 1982 (KL, LAA)
*Dahlica lazuri* (Clerck, 1759) STI Kongsvoll 2 ex 12—20 Jun. 1985 (OK); NSI Rusånes 1 ex 28 Jun. 1982 (LAA)
*Siederia rupicolella* (Sauter, 1954) STI Rørmyra 2 ex 4 Jun. 1980 (KL)
*S. listerella* (Linnaeus, 1758) NSI Junkerdalsura 1 ♂ 28 Jun. 1982 (KL). This species is new to Norway. It has otherwise been collected in Finland, Sweden and Denmark (Suomalainen 1980), and extends north to Uppland in Sweden (Gustafsson et al. 1987). For description of this and related species see Suomalainen (1980). There is one additional Norwegian record of *listerella:* HES, Damtjern 1 ♂ 23 May 1981 (LAA)
*Psyche norvegica* (Schøyen, 1880) STI Fagerhaug numerous ♀♀, 1 ♂ e.p. 22—23 Jun. 1981 (JPB, KL, LAA, PF, OK)

**Tineidae**

*Psychoides verhuella* Bruand, 1853 ON Vinstra 1 ex 21 Jun. 1985 (OK)
*Nemapogon picarella* (Clerck, 1759) ON Mysuseter 1 ex 17 Jul. 1983 (KS)
*Archinemapogon yildizae* Koçak, 1981 ON Vinstra 2 ex 19—29 Jul. 1983 (OK, LAA), 1 ex ex fungus 17 May 1985 (KM), 1 ex 11 Jun. 1985 (OK)
*Monopis spilotella* (Tengström, 1848) STI Kongsvoll 1 ex 20—28 Jul. 1983 (OK)
*Elatobia fuliginosella* (Lienig & Zeller, 1846) ON Lalm 1 ex 10 Jul. 1983 (KS). This is the second Norwegian locality for the species. Previous records from HES Elverum.
*Niditinea fuscella* (Linnaeus, 1758) STI Kongsvoll 1 ex 20—28 Jul. 1983 (OK)

**Gracillariidae**

*Caloptilia suberinella* (Tengström, 1848) ON Vinstra 4 ex 19—29 Jul. 1983 (KS, OK)
*C. elongella* (Linnaeus, 1761) STI Lohove 2 ex 5 Jun. 1980 (KL)
*C. betulicola* (M. Hering, 1928) STI Kongsvoll 1 ex 8 Jun. 1980; Lohove 2 ex 5 Jun. 1980; Rørmyra 4 ex 4 Jun. 1980 (KL)
*Micrurapteryx gradatella* (Herrich-Schäffer, 1855) HES Hernes numerous ex. e.l. *Lathyrus montanus* 18 Jun. 1981 (JPB, KL, LAA, PF, OK)
*Parornix polygrammella* (Wocke, 1862) HES Damtjern 5 ex 1 Jun. 1980 (KL, LAA); BV Myking 1 ex 2—7 Jul. 1984 (OK)
*Phyllonorycter rolandi* (Svensson, 1966) STI Kongsvoll 2 ex 8 Jun. 1980 (KL), 1 ex 21 Jun. 1981 (OK)
*P. anderidae* (W. Fletcher, 1885) STI Fagerhaug numerous ex 22—23 Jun. 1981 (KL, LAA, OK); Kongsvoll 1 ex 25 Jun. 1982 (KL)
*P. ulmifoliella* (Hübner, 1817) STI Fagerhaug 1 ex 22 Jun. 1981 (LAA); Kongsvoll 5 ex 8 Jun. 1980 (KL), 1 ex 12—20 Jun. 1985 (OK); Rørmyra 1 ex 4 Jun. 1980 (KL)
*Phyllocnistis labyrinthella* (Bjerkander, 1790) HEN Rena numerous ex 22 Jul. 1983 (KS)

**Bucculatricidae**

*Bucculatrix cristatella* (Zeller, 1839) STI Kongsvoll 1 ex 20—28 Jul. 1983 (OK)
*B. nigricommella* (Zeller, 1839) ON Lalm 1 ex 10 Jul. 1983 (KS)
*B. capreella* Krogerus, 1952 ON Vinstra 4 ex e.l. 20 Jul. 1983, 11 ex e.l. 3 Jul. 1984 (OK), 2 ex e.p. 27 Jun. 1985 (LAA). All specimens reared from *Achillea millefolium.*

**Yponomeutidae**

*Swammerdamia caesiella* (Hübner, 1796) TRI Reingjerdfjell 1 ex 8 Jul. 1982 (LAA)
*S. compunctella* (Herrich-Schäffer, 1855) ON Vinstra 1 ex 19—29 Jul. 1983 (OK)
*Paraswammerdamia lapponica* (W. Petersen, 1932) ON Mysuseter 1 ex 17 Jul. 1983 (KS)
*Plutella haasi* Staudinger, 1883. We have collected numerous specimens in the vicinity of Kongsvoll since 1980. It was found flying around *Draba dovrensis* and *Arabis*

*alpina,* which must be the food-plants. Some specimens were collected at Knutshø at about 1500 m altitude. The species was only recently recorded in Scotland and Härjedalen in Sweden (Kyrki & Jalava 1983, Svensson 1985). Otherwise known from the Altai Mountains.

*Acrolepiopsis assectella* (Zeller, 1839) FV Kviby 1 ex 30 Jun. 1982 (LAA); Laukvik numerous ex 1 Jul. 1982 (KL, LAA). The specimens were netted around *Allium sibiricum,* which must be the food-plant. The occurence of *assectella* in Alta is remarkable as the species otherwise has a distinctly southern distribution in Scandinavia (Gustafsson et al. 1987, Kyrki 1978, Opheim & Fjeldså 1980). Barca was the first who collected *assectella* in Alta. He mentions (1934) that he found a specimen there in 1924. This specimen is kept in the collection of the Zoological Museum in Oslo.

**Ochsenheimeriidae**

*Ochsenheimeria urella* Fischer von Röslerstamm, 1842 HEN Rena 2 ex 22 Jul. 1983 (KS)

**Lyonetiidae**

*Leucoptera malifoliella* (Costa, 1836) ON Vinstra 2 ex 11 + 21 Jun. 1985 beaten from *Cotoneaster integerrimus* (OK)

*Lyonetia prunifoliella* (Hübner, 1796) ON Vinstra since 1983 numerous ex reared from *Cotoneaster integerrimus* (KM, KS, LAA, OK). The first Norwegian specimen was collected at this site in 1980 (Berggren & Svendsen 1980)

*L. clerkella* (Linnaeus, 1758) STI Rørmyra 2 ex 4 Jun. 1980 (KL); NSI Junkerdalsura 2 ex 28 Jun. 1982 (KL, LAA)

**Glyphipterigidae**

*Glyphipterix haworthana* (Stephens, 1834) STI Kongsvoll 1 ex 8 Jun. 1980; Rørmyra 2 ex 4 Jun. 1980 (KL); Fagerhaug 1 ex 12 Jun. 1985 (OK)

*G. bergstraesserella* (Fabricius, 1781) ON Gjendesheim 1 ex 9 Jul. 1983 (KS)

**Oecophoridae**

*Semioscopis steinkellneriana* (Denis & Schiffermüller, 1775) STI Tonstad 1 ex 6 Jun. 1980 (KL)

*Depressaria pimpinellae* Zeller, 1839 STI Oppdal: Drivstua (EIS 79) 1 ex Aug. 1862 M.F. Wocke leg. (Zool. Mus. Copenhagen coll.)

*D. silesiaca* Heinemann, 1870 ON Vinstra 3 ex e.l. 19—29 Jul. 1983, 3 ex e.l. 3 Jul. 1984 (OK), 4 ex e.l. 17 Jun. 1984, 2 ex e.l. 27 Jun. 1985 (LAA). All specimens reared from *Achillea millefolium*

*Exaeretia ciniflonella* (Lienig & Zeller, 1846) STI Oppdal: Fagerhaug 1 ex 12 Jun. 1985 (OK)

*Levipalpus hepatariella* (Lienig & Zeller, 1846) STI Kongsvoll 1 ex 20—28 Jul. 1983 (OK)

*Agonopterix ciliella* (Stainton, 1849) ON Vinstra 1 ex e.l. *Pimpinella saxifraga* 17 Jun. 1984 (LAA)

*A. angelicella* (Hübner, 1813) STI Trondheim numerous ex e.l. *Angelica* 3 Jun. 1980 (KL)

*Pseudatemelia josephinae* (Toll, 1956) ON Vinstra 1 ex 4—5 Jul. 1984 (OK)

*Borkhausenia fuscescens* (Haworth, 1828) ON Vinstra 4 ex 18—29 Jul. 1983 (KM, KS, OK)

*B. luridicomella* (Herrich-Schäffer, 1856) ON Vinstra 1 ex 11 Jul. 1982 (LAA)

**Elachistidae**

At Kongsvoll numerous specimens of this family were found resting on snow-fences.

*Elachista kilmunella* Stainton, 1849 BV Myking 4 ex 2—7 Jul. 1984 (OK)

*E. alpinella* Stainton, 1854 ON Fokstumyra 1 ex 22 Jul. 1983 (OK)

*E. diederichsiella* E. Hering, 1889 STI Kongsvoll 23 ex. 20—28 Jul. 1983 (OK)

*E. apicipunctella* Stainton, 1849 STI Trondheim 2 ex 3 Jun. 1980 (KL); NSI Rusånes numerous ex 28 Jun. 1982; FV Elvebakken numerous ex 1 Jul. 1982 (KL, LAA)

*E. subnigrella* Douglas, 1853 STI Kongsvoll 2 ex 20—28 Jul. 1983 (OK)

*E. ingvarella* Traugott-Olsen, 1974 STI Fagerhaug 2 ex 22—23 Jun. 1981 (LAA, OK); Kongsvoll 1 ex 8 Jun. 1980 (KL), numerous ex 21—26 Jun. 1981 (KL, LAA, OK), 25 Jun. 1982 (KL, LAA), 12—20 Jun. 1985 (OK), 28 Jun. 1985 (LAA)

*E. humilis* Zeller, 1850 HES Mengshol 1 ex 20 Jun. 1981 (KL); Hernes 2 ex 28 Jun. 1981 (OK); NSI Rusånes 3 ex 28 Jun. 1982 (LAA)

*E. canapennella* (Hübner, 1813) BV Myking

2 ex 2—7 Jul. 1984; STI Kongsvoll 1 ex 20—28 Jul. 1983, 1 ex 12—20 Jun. 1985 (OK)

*Biselachista serricornis* (Hübner, 1813) STI Fagerhaug 1 ex 23 Jun. 1981 (LAA); TRI Signaldalen 1 ex 7 Jul. 1982 (KL)

*Cosmiotes freyerella* (Hübner, 1825) ON Vinstra 1 ex 19—29 Jul. 1983, 1 ex 11 Jun. 1985 (OK), 1 ex 16 Jun. 1984 (LAA); STI Kongsvoll 2 ex 25 Jun. and 11 Jul. 1982 (KL), 1 ex 26 Jul. 1983 (LAA), 1 ex 23 Jun. 1981, 9 ex 20—28 Jul. 1983, 1 ex 12—20 Jun. 1985 (OK)

*C. exactella* (Herrich-Schäffer, 1855) STI Fagerhaug 5 ex 22—23 Jun. 1981 (KL, OK); Kongsvoll 2 ex 12—20 Jun. 1985 (OK); NSI Junkerdalsura 1 ex 28 Jun. 1982 (KL); TRI Signaldalen 2 ex 5 Jul. 1982 (LAA)

**Coleophoridae**

*Coleophora viminetella* Zeller, 1849 ON Fokstumyra 1 ex 22 Jul. 1983; STI Kongsvoll 1 ex 20—28 Jul. 1983 (OK)

*C. vacciniella* Herrich-Schäffer, 1861 ON Lom: Soleggi (EIS 70) 1 ex 10 Jul. 1983 (KS); BV Myking 2 ex 2—7 Jul. 1984 (OK)

*C. unigenella* Svensson, 1966 TRI Reingjerdfjell 6 ex 8 Jul. 1982 (KL, LAA)

*C. plumbella* Kanerva, 1941 ON Fokstua 1 ex 24 Jun. 1981 (LAA); Mysuseter 1 ex 17 Jul. 1983 (KS); BV Myking 1 ex 2—7 Jul. 1984 (OK); FN Kistrand 1 ex 3 Jul. 1982 (LAA)

*C. glitzella* Hoffmann, 1869 STI Kongsvoll 1 ex 26 Jun. 1982 (LAA), 3 ex 20—28 Jul. 1983 (OK)

*C. juncicolella* Stainton, 1851 HEN Berget 1 ex 27 Jun. 1981 (LAA)

*C. orbitella* Zeller, 1849 NSI Junkerdalsura 1 ex 28 Jun. 1982 (LAA)

*C. potentillae* Elisha, 1885 STI Fagerhaug 1 ex 22—23 Jun. 1981 (OK)

*C. albitarsella* Zeller, 1849 ON Vinstra 1 ex 4—5 Jul. 1984 (OK)

*C. frischella* (Linnaeus, 1758) HEN Berget 1 ex 27 Jun. 1981 (LAA); BV Myking 2 ex 2—7 Jul. 1984 (OK)

*C. betulella* Wocke, 1876 ON Vinstra 1 ex 4—5 Jul. 1984 (OK)

*C. partitella* Zeller, 1849 ON Vinstra 1 ♂ 26 Jun. 1980 (SS), 2 ♂♂ 11—12 Jul. 1982 (KL, LAA), 3 ♂♂ 4—5 Jul. 1984 (OK). This species is new to Norway. It is known from SE Finland (Kyrki 1978) and was recently collected in Västmanland and Blekinge in Sweden (Svensson 1981, 1984). Otherwise in Central Europe. The moth is figured by Svensson (1981) and the genitalia by Toll (1952). Food-plants are *Achillea* and *Artemisia* (Svensson 1981).

*C. glaucicolella* Wood, 1892 ON Fokstumyra 1 ex 22 Jul. 1983; BV Myking 1 ex 2—7 Jul. 1984 (OK)

*C. murinipennella* (Duponchel, 1844) ON Fokstua 1 ex 11 Jul. 1982 (LAA)

*C. alticolella* Zeller, 1849 STI Fagerhaug 1 ex 23 Jun. 1981 (LAA); TRI Skjold 1 ex 7 Jul. 1982 (KL)

*C. squamosella* Stainton, 1856 STI Kongsvoll numerous ex in the years 1980—85 (JPB, KL, KRT, LAA, PF, OK)

*C. atriplicis* Meyrick, 1928 FV Rafsnes 3 ex 30 Jun. 1982 (KL)

*C. trochilella* (Duponchel, 1843) STI Kongsvoll 1 ex 20—28 Jul. 1983 (OK)

*C. algidella* Zeller, 1857 FV Rafsnes 2 ex 30 Jun. 1982 (KL)

**Momphidae**

*Mompha locupletella* (Denis & Schiffermüller, 1775) HES Mengshol 1 ex 20 Jun. 1981 (LAA)

*M. raschkiella* (Zeller, 1839) STI Kongsvoll 2 ex 20—28 Jul. 1983, 2 ex 12—20 Jun. 1985 (OK); NSI Krokstrand numerous ex 27 Jun. 1982 (KL, LAA); Junkerdalsura 2 ex 28 Jun. 1982 (KL)

*M. conturbatella* (Hübner, 1819) NSI Krokstrand 4 ex e.l. *Chamaenerion angustifolium* 27 Jun. 1982 (KL, LAA)

**Cosmopterigidae**

*Pancalia latreillella* (Curtis, 1830) ON Vinstra 1 ex 11 Jun. 1985 (OK)

**Scythrididae**

*Scythris limbella* (Fabricius, 1775) ON Vinstra 2 ex 4—5 Jul. 1984, 1 ex 21 Jun. 1985 (OK), 1 ex 27—28 Jun. 1985 (KRT)

*S. disparella* (Tengström, 1848) HES Hernes ♂ 2 ♀♀ 28 Jun. 1981 (KL, LAA, OK). New to Norway. The specimens were swept by day in a lush meadow. *S. disparella* is distributed in Sweden up to Ångermanland, in S Finland and Germany, the Netherlands, Belgium, France, Yugo-

slavia and Switzerland (Bengtsson 1984). Wings and genitalia are figured by Bengtsson (1984). The biology is not known.

**Gelechiidae**

*Monochroa saltenella* (Benander, 1928) BV Myking 1 ex 2—7 Jul. 1984 (OK); NSI Rusånes and Røkland numerous ex 28 Jun. 1982 (KL, LAA). At Røkland the species was abundant about midnight flying around *Rumex acetosa.* The specimen from Myking was also flying around this plant at about 23.00 hours. *Rumex acetosa* obviously is the food-plant.

The male genitalia are figured by Svensson (1980), and the female genitalia are figured for the first time in the present paper (Fig. 5). They are very similar to those of *M. palustrella* (Douglas, 1850) (Fig. 6), but there are differences in the shape of the signa and the setae of the genital plates.

*Chrysoesthia drurella* (Fabricius, 1775) ON Vinstra 1 ex 4—5 Jul. 1984 (OK)

*Xystophora pulveratella* (Herrich-Schäffer, 1854) ON Vinstra numerous ex 16 Jun. 1984 (LAA), numerous ex 4—5 Jul. 1984, several ex 11 Jun. 1985 (OK); Lalm 2 ex 10—14 Jul. 1983; Valbjør 1 ex 14 Jul. 1983 (KS)

*Teleiodes paripunctella* (Thunberg, 1794) ON Vinstra 3 ex around *Betula* 11 Jun. 1985 (OK)

*Teleiopsis diffinis* (Haworth, 1828) TEI Ståvatnet 2 ex 9 Jul. 1984 (OK)

*Athrips pruinosella* (Lienig & Zeller, 1846) BV Myking 4 ex 2—7 Jul. 1984 (OK)

*Bryotropha similis* (Stainton, 1854) HOI Odda: Skjeggedal (EIS 32) 1 ex 8 Jul. 1984 (OK)

*B. purpurella* (Zetterstedt, 1839) STI Kongsvoll numerous ex 20—28 Jul. 1983 (OK). The specimens were flying before dusk in a dry meadow. It has not been reported from Norway before. However, under the *Bryotropha plantariella* label in the collection of the Zoological Museum in Oslo 4 specimens were present. They were from ON Sel: Lårgard (EIS 71) 6 Jul. 1871 W.M. Schøyen leg. Additionally there is a male labelled «Dovre» ex coll. C.S. Larsen in the collection of the Zoological Museum in Copenhagen.

In Sweden *purpurella* is known from Värmland in the south to Torne Lappmark in the north (Gusttafsson et al. 1987). In Finland it is distributed throughout the country (Kyrki 1978). Outside Fennoscandia it has only been collected in the northern part of the USSR.

This species is easily separated from other species of the genus by its plain violet black forewings and distinctly yellow labial palps. The genitalia are figured by Svensson (1962).

*Chionodes viduella* (Fabricius, 1794) TEI Ståvatnet 1 ex 9 Jul. 1984 (OK); FN Kistrand 2 ex 3 Jul. 1982 (KL)

*C. holosericella* (Herrich-Schäffer, 1854) BV Myking 4 ex 2—7 Jul. 1984 (OK)

*Aroga velocella* (Zeller, 1839) FV Kviby 5 ex 1 Jul. 1982 (LAA)

*Neofaculta infernella* (Herrich-Schäffer, 1854) HEN Berget 1 ex 27 Jun. 1981 (KL)

*Altenia perspersella* (Wocke, 1862) BV Myking 8 ex 2—7 Jul. 1984 (OK); TRI Signaldalen 3 ex 7 Jul. 1982 (LAA)

*Gnorimoschema valesiella* (Staudinger, 1877) STI Kongsvoll 2 ♂♂ 1 ♀ 12—20 Jun. 1985 (OK). This species is new to Norway. In Sweden it is known from alpine habitats in Torne Lappmark (Svensson 1984), and in Finland from several districts from Satakunta and Tavastia australis northwards to Lappland (Kyrki 1978). Otherwise distributed in mountains of S and C Europe, Caucasus, Iceland, Greenland and Alaska (Povolný 1965). The moth is figured by Svensson (1984) and its genitalia by Povolný (1965). Food-plant unknown.

*Scrobipalpula psilella* (Herrich-Schäffer, 1854) ON Vågåmo (900 m) 1 ex 4 Jul. 1983 (KS); STI Kongsvoll 1 ex 20—28 Jul. 1983, 16 ex 12—20 Jun. 1985 (OK), 1 ex 5 Jul. 1983, 1 ex 13—15 Jun. 1985 (KS).

Specimens from Kongsvoll differ from specimens from southern Scandinavia in having the forewings more covered with light grey scales. The ochreous brown longitudinal lines which are seen in typical specimens are weaker, for which reason especially male specimens are very similar to *Scrobipalpa acuminatella* (Sircom).

*S. psilella* occurs within its distribution area in several forms which can be separated by forewing patterns and host plants, whereas only small differences in genitalia can be found (Povolný 1964). Typical specimens of *psilella* feed on *Artemisia campestre,* which does not grow at Kongsvoll.

Most specimens from this locality were caught near a large growth of *Erigeron politus*. *S. diffluella* (Heinemann), which occurs in the Alps and by some authors is considered to be distinct from *psilella,* was found by Klimesch (1951) to feed on, inter alia, *Erigeron uniflora.* The forewing pattern of *diffluella* is something between typical *psilella* and the specimens from Kongsvoll. Specimens from NE Finland (Kuusamo) are very similar to specimens from Kongsvoll, and further studies are necessary to determine if the North Scandinavian population of *psilella* belongs to a separate taxon. Apart from Kongsvoll and the present record from Vågåmo, *psilella* has in Norway only been recorded from VE Tjøme: Hvasser (Opheim 1978).

*Ptycerata petasitis* (Pfaffenzeller, 1867) ON Fokstua 1 ♀ 11 Jul. 1982 (KL). This species is new to Norway.

It is known from NE Finland: Kuusamo (Kyrki 1978) (Fig. 11), the Alps and N America.

The forewing is figured by Kyrki (1976) and the genitalia by Povolný (1967).

The larvae feed, often gregariously, in a large mine in the leaves of *Petasites frigidus* (Kyrki 1976).

*Scrobipalpa murinella* (Duponchel, 1843) ON Jetta (1000 m) 1 ex 6 Jul. 1983; Lalm 1 ex 10 Jul. 1983; Vågåmo (900 m) 2 ex 4—6 Jul. 1983 (KS); Vinstra 1 ex 27 Jun. 1985 (LAA); BV Myking 1 ex 2—7 Jul. 1984; STI Kongsvoll 1 ex 20—28 Jul. 1983, 35 ex. 12—20 Jun. 1985 (OK), 2 ex 13—15 Jun. 1983 (KS)

*S. atriplicella* (Fischer von Röslerstamm, 1841) STI Kongsvoll 1 ex 24 Jun. 1981 (OK)

*Caryocolum petrophila* (Preissecker, 1914) ON Vinstra 2 ♂♂ 12 Jul. 1982 (KL, LAA), 3 ♀♀ 23 Jul. 1984 (KM, LAA), 1 ♂ 19—29 Jul. 1983 (OK). This species is new to Norway.

*C. petrophila* is found in many districts in S Finland north to Ostrobottnia borealis southern part (Kyrki 1978). In Sweden there are few records from four eastern districts from Södermanland to Norrbotten (Svensson 1981, Gustafsson et al. 1987). It is otherwise known from Austria, Italy and Macedonia (Klimesch 1954).

The species is xerophilous, and the foodplants are *Cerastium* (Klimesch 1954) and *Stellaria graminea* (Itämies 1982). The genitalia are figured by Klimesch (1954). We bring a photograph of the moth (Fig. 1).

*C. viscariella* (Stainton, 1855) ON Vinstra 2 ♂♂ 19—29 Jul. 1983 (OK), 6 ♂♂ 1 ♀ 23 Jul. 1984 (KM, LAA). This species is new to Norway.

This species is known from four districts in Sweden, ranging from Uppland to Norrbotten (Gustafsson et al. 1987); it is known from several districts in Finland, north to Ostrobottnia borealis southern part (Kyrki 1978), and from one locality in eastern Jutland, Denmark (Schnack ed. 1985). It is otherwise known from England, France and Switzerland (Klimesch 1954). Foodplants are *Viscaria vulgaris, Melandrium rubrum* and *M. diurna* (Klimesch 1954). The genitalia are figured by Klimesch (1954). We bring a photograph of the moth (Fig. 2).

*Aproaerema anthyllidella* (Hübner, 1813) ON Vinstra 1 ex 25 Jun. 1982 (KL), 1 ex 11 Jun. 1985 (OK), 1 ex 27 Jun. 1985 (LAA)

*A. karvoneni* (Hackman, 1950) STi Kongsvoll numerous ex 1980—85 (JPB, KL, KRT, KS, LAA, PF, OK), Lohove 1 ex 5 Jun. 1980 (KL); NSI Røkland numerous ex 28 Jun. 1982; FV Elvebakken and

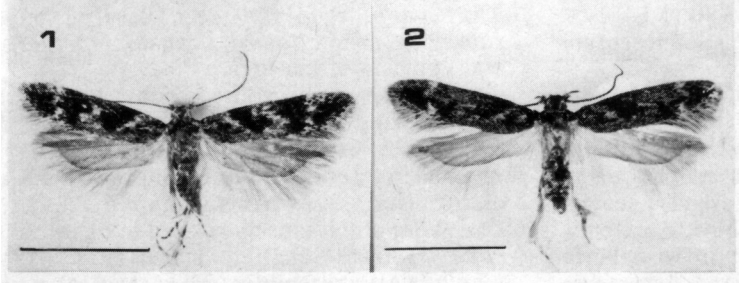


Fig. 1—2. — 1. *Caryocolum petrophila* Preiss. — 2. *C. viscariella* Stt. — Scale 5 mm.

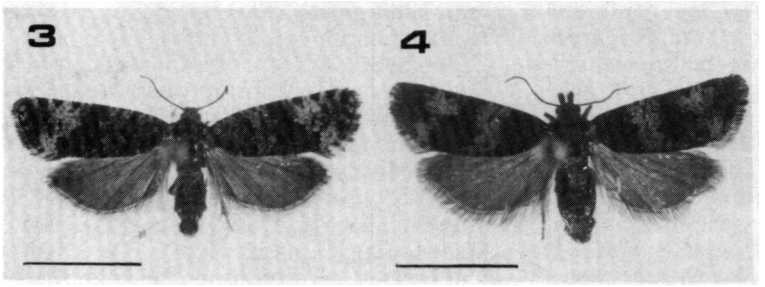


Fig. 3—4. — 3. *Olethreutes aquilonana* Karv. — 4. *O. noricana* HS. — Scale 5 mm.

Kviby numerous ex 1 Jul. 1982 (KL, LAA).

*Syncopacma sangiella* (Stainton, 1863) ON Vinstra 1 ♂ 18 Jul. 1983 (LAA), 1 ♂ 20 Jul. 1983 (KS), 2 ♂♂ 1 ♀ e.l. *Lotus corniculatus* 11 Jun. 1985 (OK). This species is new to Norway. In Sweden it is rare, known from Södermanland, Uppland and Dalarne (Gustafsson et al. 1987), and also from five districts in southern Finland (Kyrki 1978). It is otherwise known from Britain, central and southern Europe. The species is figured by Svensson (1985), its male genitalia are shown by Wolff (1958). Food-plant *Lotus corniculatus.*

*Acanthophila alacella* (Zeller, 1839) ON Vinstra numerous ex 1982—85 (KL, KM, KRT, KS, LAA, OK)

## Tortricidae

*Pandemis heparana* (Denis & Schiffermüller, 1775) ON Vinstra 1 ex e.l. *Prunus padus* 10 Jul. 1982 (KL)

*Eana argentana* (Clerck, 1759) STI Kongsvoll 1 ex 20—28 Jul. 1983 (OK)

*Acleris notana* (Donovan, 1806) STI Kongsvoll 1 ex 21 Jun. 1981 (KL)

*A. lipsiana* (Denis & Schiffermüller, 1775) STI Rørmyra 1 ex 4 Jun. 1980 (KL)

*A. maccana* (Treitschke, 1835) STI Rørmyra 2 ex 4 Jun. 1980 (KL)

*Phalonidia minimana* (Caradja, 1916) HEN Berget 1 ♂ 27 Jun. 1981 (KL leg., LAA coll.). This species is new to Norway. It has a wide distribution in the neighbouring countries, but the localities are very scattered. Otherwise the distribution extends through Europe from Britain to Siberia and Japan. *P. minimana* has two generations, and the habitat is wet places with *Pedicularis* or *Menyanthes* (Bradley et al. 1973, Palm 1982).

The species is figured by Bradley et al. (1973) and Razowski (1970). The latter also figures the genitalia.

*Aethes smeathmanniana* (Fabricius, 1781) HEN Engerdal: Lillebu (EIS 74) 1 ex 27 Jun. 1981 (LAA)

*Celypha rurestrana* (Duponchel, 1843) ON Vinstra 2 ex 4—5 Jul. 1984 (OK)

*Olethreutes mygindiana* (Denis & Schiffermüller, 1775) HEN Berget 2 ex 27 Jun. 1981 (JPB, OK)

*O. bipunctana* (Fabricius, 1794) HEN Berget 1 ex 27 Jun. 1981 (LAA)

*O. olivana* (Treitschke, 1830) HEN Berget 6 ex 27 Jun. 1981 (KL, LAA)

*O. palustrana* (Lienig & Zeller, 1846) HEN Berget 1 ex 27 Jun. 1981 (KL)

*O. turfosana* (Herrich-Schäffer, 1851) STI Fagerhaug 3 ex 22—23 Jun. 1981 (KL, LAA, OK)

*O. concretana* (Wocke, 1862) STI Fagerhaug 2 ex 22 Jun. 1981 (LAA)

*O. aquilonana* (Karvonen, 1932) TRI Paras 2 ♂♂ 6 Jul. 1982; Reingjerdfjell numerous ex 8 Jul. 1982 (KL, LAA). this species is new to Norway. The specimens were netted in sunshine just above the timberline. They were frequently seen basking on rocks. Rich growths of *Dryas octopetala* were present at the sites.

This arctic species is known only from N Sweden and N Finland (Johansson & Svensson 1968, Karvonen 1932, Krogerus 1972, Linnaluoto & Koponen 1980). Its distribution is shown on the map (Fig. 11). *O. aquilonana* is closely related to *O. noricana* (Herrich-Schäffer, 1851) (Fig. 4), which it also resembles. The latter, however, has two distinct light fasciae on the

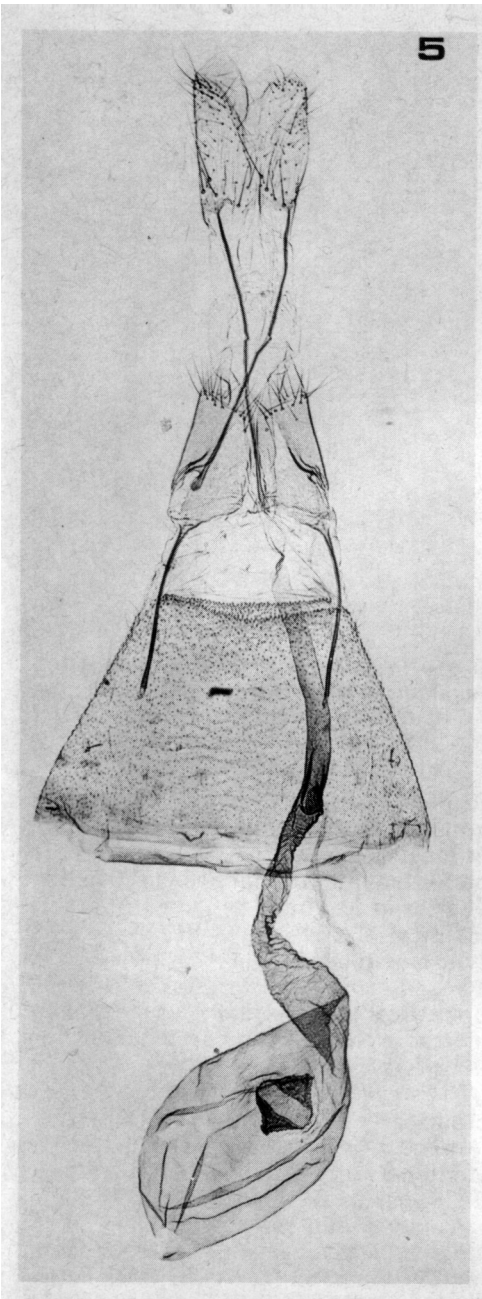


Fig. 5. *Monochroa saltenella* Ben., female genitalia. Genital prep. 4098 O. Karsholt.

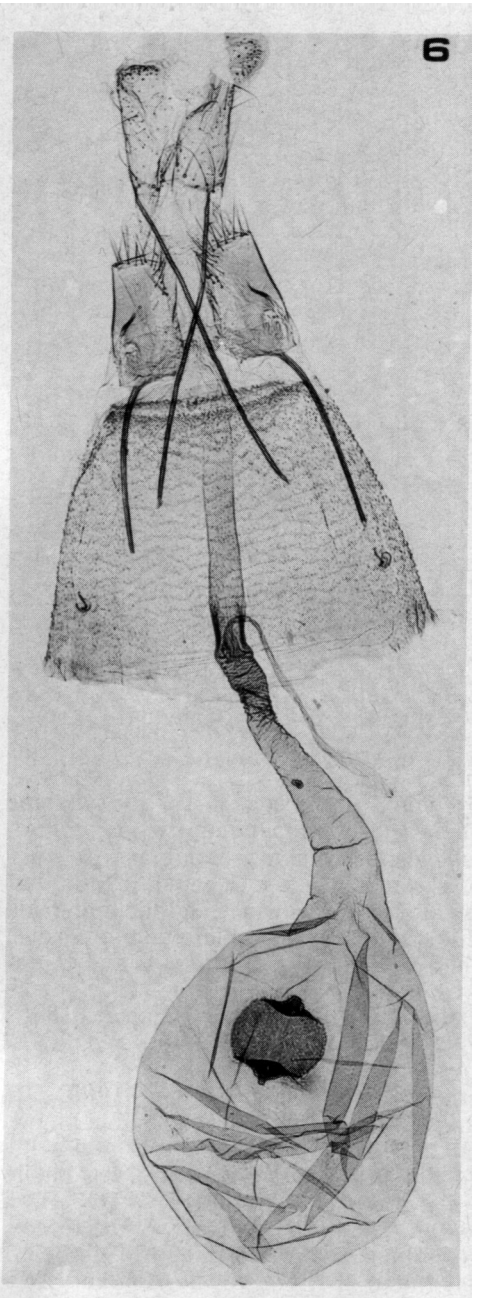


Fig. 6. *Monochroa palustrella* Dgl., female genitalia. Genital prep. 4099 O. Karsholt.

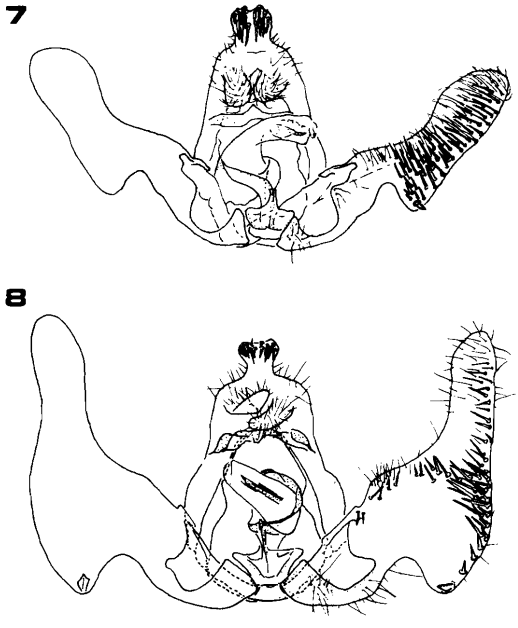


Fig. 7—8. Male genitalia of *Olethreutes* Hb. — 7. *O. aquilonana* Karv. Genital prep. 1067 L. Aarvik. — 8. *O. noricana* HS. Genital prep. 1214 L. Aarvik.


Fig. 9—10. Female genitalia of *Olethreutes* Hb. — 9. *O. aquilonana* Karv. Genital prep. 1069 L. Aarvik. — 10. *O. noricana* HS. Genital prep. 1216 L. Aarvik.

forewing. Both species fly in sunshine where *Dryas octopetala* grows. *O. aquilonana* also bears some resemblance to *Apotomis lemniscatana* (Kennel, 1900), but has narrower forewings and the underside of the hindwings completely unicolorous. The genitalia of *O. aquilonana* and *O. noricana* are shown on Figs. 7—10.

*Pristerognatha penthinana* (Guenée, 1845) HES Mengshol 3 ex 20 Jun. 1981 (KL, LAA)

*Apotomis lemniscatana* (Kennel, 1900) ON Fokstua 2 ex 8 Jun. 1980 (KL), 2 ex 11 Jul. 1982 (LAA)

*Endothenia oblongana* (Haworth, 1811) ON Vinstra 1 ex 19—29 Jul. 1983 (OK), 1 ex 16 Jun. 1984 (SS). In Norway the species has not been collected since 1849, when it was found at AK Oslo: Bygdøy and HES Ringsaker: Helgøy.

*E. hebesana* (Walker, 1863) HES Hernes 1 ex e.p. *Aconitum septentrionale* 1 Jun. 1980 (KL, LAA); ON Vinstra 1 ex 25 Jun. 1984 (KM); Lalm 1 ex 10 Jul. 1983 (KS). At Hernes pupae were collected in dry stems of the food-plant. A round exit-hole shows the presence of a pupa.

The present discovery of the species' food-plant made a search for the species in further localities possible. It was recently found for the first time in Sweden (Svensson 1981), and has been collected in several localities in SE Norway (L. Aarvik, K. Myhr unpublished).

In Scandinavia *hebesana* seems to be monophagous on *Aconitum septentrionale,* whereas in North America it feeds on other plants (Opheim 1972).

*Ancylis comptana* (Frölich, 1828) STI Fagerhaug 3 ex 23 Jun. 1981 (KL, OK); Rørmyra 1 ex 4 Jun. 1980 (KL); TRI Signaldalen 3 ex 7 Jul. 1982 (KL, LAA)

*A. diminutana* (Haworth, 1811) STI Rørmyra 1 ex 4 Jun. 1980 (KL)

*A. subarcuana* (Douglas, 1847) ON Fokstua 1 ex 25 Jun. 1982 (LAA); Gjendesheim 1 ex 9 Jul. 1983 (KS); STI Fagerhaug numerous ex 22—23 Jun. 1981 (JPB, KL, LAA, OK, PF); Kongsvoll 1 ex 7 Jun. 1980 (KL); NSI Krokstrand 3 ex 27 Jun. 1982 (KL, LAA)

*A. tineana* (Hübner, 1799) BV Myking 1 ex 2—7 Jul. 1984 (OK); STI Fagerhaug 9 ex 22 Jun. 1981 (LAA, KL); Kongsvoll 1 ex 21 Jun. 1981 (KL)

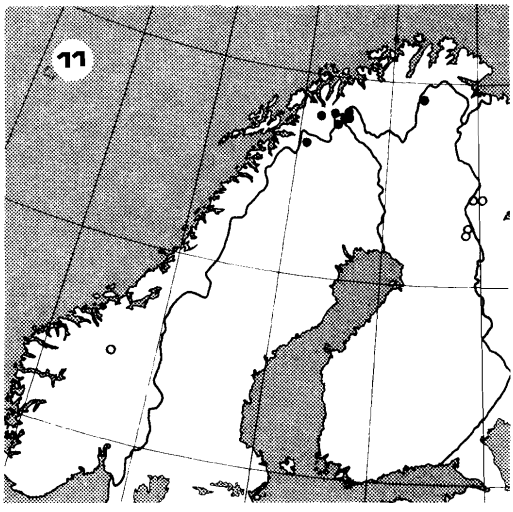

Fig. 11. Distribution in Fennoscandia of *Ptycerata petasitis* Pfaff. (open circles) and *Olethreutes aquilonana* Karv. (filled circles).

*Epinotia tetraguetrana* (Haworth, 1811) HEN Berget 1 ex 27 Jun. 1981 (LAA)
*E. tedella* (Clerck, 1759) STI Tonstad 1 ex 6 Jun. 1980 (KL)
*Eriopsela guadrana* (Hübner, 1813) HOI Eidfjord: Dyranutane (EIS 33) 2 ex 8 Jul. 1984 (OK)
*Blastesthia posticana* (Zetterstedt, 1839) STI Fagerhaug 2 ex 22 Jun. 1981 (LAA)
*B. turionella* (Linnaeus, 1758) HEN Berget 1 ex 27 Jun. 1981 (LAA); STI Lohove 1 ex 5 Jun. 1980 (KL)
*Pammene clanculana* (Tengström, 1869) HES Damtjern 8 ex 1 Jun. 1980 (KL, LAA); HEN Berget 1 ex 27 Jun. 1981 (LAA); ON Fokstua 1 ex 24 Jun. 1981 (LAA); BV Myking 2 ex 2—7 Jul. 1984 (OK); FN Kistrand 1 ex 3 Jul. 1982 (LAA)
*Cydia cosmophorana* (Treitschke, 1835) STI Fagerhaug 3 ex 22—23 Jun. 1981 (KL, LAA)
*Dichrorampha alpinana* (Treitschke, 1830) HES Hernes 10 ex 28 Jun. 1981 (KL, LAA, OK)
*D. plumbana* (Scopoli, 1763) NSI Junkerdalsura 1 ex 28 Jun. 1982 (KL)
*D. aeratana* (Pierce & Metcalfe, 1915) HES Hernes numerous ex 28 Jun. 1981 (KL, LAA, OK)

**Choreutidae**

*Choreutis pariana* (Clerck, 1759) STI Lohove 1 ex 5 Jun. 1980 (KL)

**Sesiidae**

*Synanthedon formicaeformis* (Esper, 1783) STI 4 km s Oppdal sentrum 1 ex 19 Jun. 1985 (OK)
*S. polaris* (Staudinger, 1877) STI Gåvåliseter numerous ex e.l. and e.p. *Salix lapponum, S. glauca* and 1 ex *S. phylicifolia* 26 Jun. 1981 (JPB, KL, LAA, OK, PF)

**Schreckensteiniidae**

*Schreckensteinia festaliella* (Hübner, 1819) STI Fagerhaug 2 ex 23 Jun. 1981; TRI Signaldalen 1 ex 5 Jul. 1982; FV Øvre Alta 1 ex 4 Jul. 1982 (LAA)

**Epermeniidae**

*Cataplectica profugella* (Stainton, 1856) ON Vinstra 1 ♀ 19—29 Jul. 1983 (OK), 1 ♀ 24 Jul. 1983 (LAA). This species is new to Norway. In Sweden it has been collected in several provinces north to Uppland (Gustafsson et al. 1987). It is known from five southern provinces in Finland (Kyrki 1978), and many parts of Denmark (Schnack ed. 1985). It is otherwise known from Germany, Austria England and France (Gaedike 1966, Leraut 1980). The food-plants are *Pimpinella saxifraga* and *Angelica silvestris*. The moth is figured by Svensson (1980), and the genitalia are shown by Gaedike (1966).
*Epermenia chaerophyllella* (Goeze, 1783) STI Lohove, Rørmyra, Trondheim numerous ex 3—5 Jun. 1980 (KL)

**Pterophoridae**

*Amblyptilia punctidactyla* (Haworth, 1811) STI Kongsvoll 1 ex 20—28 Jul. 1983; 10 km s Oppdal sentrum 1 ex 12 Jun. 1985 (OK); Rørmyra 1 ex 4 Jun. 1980 (KL)
*Platyptilia calodactyla* (Denis & Schiffermüller, 1775) STI Kongsvoll 3 ex e.l. *Erigeron politus* 17 Jun. 1985 (OK). In the literature *Erigeron* has not been mentioned as a food-plant for this species, which particularly feeds on *Solidago virgaureae*. No larvae of *calodactyla* were found on examined *Solidago* at Kongsvoll.
*Stenoptilia islandica* (Staudinger, 1857) STI Kongsvoll 12 ex e.l. *Saxifraga caespitosa,*

1 ex e.l. *S. adscendens* 12—15 Jun. 1985 (KS, OK). The biology of this species was previously unknown. The larvae were feeding at night. By day they hid under the leaves of the food-plant. The larva will be described elsewhere by Karsten Schnack.

*Pterophorus baliodactylus* Zeller, 1841 ON Vinstra 1 ex 11 Jul. 1982 (KL), 3 ex 19—29 Jul. 1983 (KS, LAA, OK). This is the world's most northern locality for the species.

*Oidaematophorus rogenhoferi* (Mann, 1877) STI Kongsvoll numerous ex 20—28 Jul. 1983 (LAA, OK), 24 Jul. 1984 (KM, LAA), numerous ex e.l. *Erigeron politus* 12—15 Jun. 1985 (KS, OK). This species has been considered as a great rarity. At Kongsvoll it occurs on the east-facing slope along the river Driva just south of the railway station. Here imagines could be disturbed at dusk. They were flying actively at about 3.00 am just before dawn. In the Alps the larva is known to feed on *Erigeron alpinus* (Burmann 1944), which does not grow in Scandinavia.

### Pyralidae

*Eudonia alpiňa* (Curtis, 1850) TRI Signaldalen 1 ex 7 Jul. 1982 (LAA)

*Loxostege commixtalis* (Walker, 1866) STI Fagerhaug 1 ex 23 Jun. 1981 (KL)

### Geometridae

*Eupithecia actaeata* (Walderdorff, 1869) HES Mengshol 1 ex 20 Jun. 1981 (LAA)

*E. gelidata* Möschler, 1860 HEN Berget 1 ex 27 Jun. 1981 (LAA)

### Sphingidae

*Macroglossum stellatarum* (Linnaeus, 1758) ON Vinstra 1 ex e.l. *Galium verum* 20 Jul. 1983 (OK)

### Noctuidae

*Syngrapha microgamma* (Hübner, 1823) HEN Berget 1 ex 27 Jun. 1981 (JPB)

*Discestra furca* (Eversmann, 1852) STI Kongsvoll 2 ex 26—27 Jul. 1983 (LAA, OK). This is the northernmost record of the species. Of this otherwise Asian noctuid the following records in Norway have been made:
ON Dovre: Dombås (EIS 71) 1 ex 11 Jun. 1871 (R. Collett); ON Lom: Lom (EIS 70) 1 ex 18 Aug. 1964 (C.F. Lühr); ON Vågå: Vågåmo (EIS 71) 1 ex 4 May 1980 (C.F. Lühr); ON Vågå: Russliseter (EIS 61) 2 ex 10—11 Aug. 1985 (M. Lindeborg & Å. Selling); HOI Ullensvang: Ullensvang forsøksgard (EIS 32) 1 ex 12 Jul. 1962 (T. Edland); SFI Luster: Skjolden (EIS 60) 1 ex 15 Jul. 1938 (N. Knaben); SFI Luster: Optun (EIS 60) 1 ex 5 Jul. 1985 (L. Kullmar).

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# Short communications

## *ACARTOPHTHALMUS BICOLOR* OLDENBERG, 1910 (ACARTOPHTHALMIDAE, DIPTERA), A NEW FAMILY AND SPECIES TO THE NORWEGIAN FAUNA

LITA GREVE

One male and one female of *Acartophthalmus bicolor* Oldenberg, 1910 were collected in a Malaise trap on the island Ostøya in the inner Oslofjord in the period 10 June—1 July 1984. No species of the family Acartophthalmidae has formerly been reported from Norway.

Lita Greve, Zoological Museum, University of Bergen, Muséplass 3, N-5007 Bergen-Universitetet, Norway.

One male and one female *Acartophthalmus bicolor* Oldenberg, 1910 was collected in a Malaise trap in the province Akershus, Bærum: Ostøya (EIS 28) period 10 June—1 July 1984 (trap B) by Fred Midtgaard. Three Malaise traps were operated on the island throughout the summer 1984. An outline of the localities was given in Greve & Midtgaard (1986). Trap B was placed on the border between a meadow and a decidious forest. The two specimens were picked at random from the material from the trap, and more specimens might have been present in the material.

The family Acartophthalmidae has three species belonging to the genus Acartophthalmus in Europe. All three are known from Fennoscandia. They are very small, 1—2.5 mm, flies. A description of the family is given by Papp in Soós (1984). In earlier surveys from this century the family is placed as a subfamily in the family Clusiidae (Czerny, 1930). Imagos have been caught on decaying fungi, carrion and dung. Neither larval or pupal morphology is described and the biology is unknown, Papp in Soós (1984).

*Acartophthalmus bicolor* is widely distributed in the Holarctic.

ACKNOWLEDGEMENTS

I am very grateful to Hugo Andersson, Lund who verified the determination. I also wish to thank Fred Midtgaard, Ås who gave me opportunity to study the material from Ostøya.

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## *ACALLES ECHINATUS* GERMAR (COL., CURCULIONIDAE) NY ART FOR NORGE

KARL ERIK ZACHARIASSEN

The curculionid beetle *Acalles echinatus* Germar is reported found in Norway for the first time. Two specimens were collected near Kragerø in the county of Telemark on 10th August 1982.

Karl Erik Zachariassen, Department of Zoology, The University of Trondheim, AVH, 7055 Dragvoll, Norway.

Snutebilleslekten *Acalles* har fem arter i Skandinavia, hvorav bare to har vært kjent fra Norge (Lindroth 1960, Silvferberg 1979). Artene er små (1.8—4 mm lange) og utvikler seg i gamle grener, først og fremst av løvtrær (Hansen 1965, Landin 1971). *A. echinatus* finnes som regel på askegrener på skogbunn om sensommeren (Hansen 1965).

To eksemplarer av *A. echinatus* ble funnet ved Berg Museum ved Kragerø 10. august 1982. De satt på bakken på en fuktig, leiret og spredt gressbevokst sandstrand nær sjøen. De forekom på stranden i høyt antall, men bare to eksemplarer ble samlet inn. Dyrene er henholdsvis 2.3 og 2.6 mm lange, målt fra dekkvingespiss til pronotums forkant. Dyrene befinner seg i forfatterens samling.

Jeg takker Oddvar Hansen for kontrollbestemmelse av dyrene.

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## NYE BILLEARTER (COLEOPTERA) FOR NORGE BADISTER PELTATUS (PANZER, 1797) (COL., CARABIDAE)

STIG OTTO HANSEN

*Badister peltatus* (Panzer, 1797) (Carabidae) is reported new to Norway from Semsvatnet, Asker, Akershus province (AK) EIS 28. The species were found nomerous on the north-west side of the lake.

Stig Otto Hansen, Gml. Stavernsvei 28, 3250 Larvik, Norway.

Semsvatnet som ligger i Asker kommune er en mesotrof innsjø med en rekke ulike biotoper. Nord-vest siden som jeg særlig har undersøkt innehar tette sivrørskoger, sumpstrender og flytebladsamfunn. Under sikting av fuktig løv og oppskyll fant jeg ovennevnte art i fire eksemplarer den 20. mai 1986. Jeg oppsøkte lokaliteten igjen 7. og 12. september 1986, og fant da arten tallrik under løv og stein. Arten ble observert tallrik også i juni 1987. Lokaliteten er sikker, men begrenset. Biotopen er leiraktig, sumpet med mose og mye vissent løv fra trærne som henger utover vannet. Arten synes å foretrekke fuktig skygget bund.

Av andre carabidae arter var følgende tallrike i området *Elaphrus cupreus, Elaphrus riparius, Blethisa multipunctata, Agonum gracile, Agonum piceum* og *Pterostichus nigrita.*

### Deleaster dichrous (Gravenhorst, 1802) (Col., Staphylinidae)

*Deleaster dichrous* (Gravenhorst, 1802) is reported new to Norway. Two specimens were found in Sørkedalen, Akershus province (AK). The beetles were picked from a riverbank together with the carabidae Perileptus areolatus (Creutzer, 1799) and Bembidion saxatile (Gyllenhal, 1827).

Under leting etter biller langs Sørkedalselven fant jeg 31. mai 1986 to eksemplarer av arten *D. dichrous* (Gravenhorst, 1802). Staphylinidaen ble funnet på gruset/sandet elvebanke helt fri for vegetasjon. Arten er tatt fåtallig i våre naboland.

### Tropiderinus undulatus (Panzer, 1795) (Col., Anthribidae)

*Tropiderinus undulatus* (Panzer, 1795) is reported new to Norway. One species were found on a rotten laying birch-tree in Fetsund, Akershus province (AK).

Et eksemplar av denne lille Anthribidaen ble banket av en tynn delvis rotten bjerkestamme 16. august 1987. Stammen lå åpent solbeskinnende. Arten er lett kjennelig ved den karakteristiske innsvingede snuteformen. Arten er sjelden også i våre naboland, og er der funnet på bl.a. bøk, lind og frukttrær.

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## NYE BILLEFUNN (COLEOPTERA) FOR VESTFOLD, OPPLAND OG AUST-AGDER

STIG OTTO HANSEN

The article presents a list of 28 species of Coleoptera which are new to certain districts in Norway, mainly Vestfold (VE).

Stig Otto Hansen, Gml. Stavernsvei 28, 3250 Larvik, Norway.

I denne artikkelen publiseres nye funn av biller som representerer ny fylkesutbredelse for vedkommende art i Norge i henhold til Lindroth 1960 (Catalogus Coleopterorum Fennoscandia et Daniae) og tillegg i Fauna norvegica. Nomenklaturen følger Silfverberg (1979).

### Carabidae

*Carabus coriaceus* (L.). VE, Tjølling: Løveskogen, EIS 19, juni 1974. Ett eksemplar funnet i hage krypende fremme om dagen. VE, Tjølling: Bisjord, 1. sept.—1. okt. 1985 i barberfelle i hul eikestubbe, ett eksemplar. Arten er utbredt og ikke uvanlig i Sør-Norge.

*Dyschirius aeneus* (Dejan). VE, Hedrum: Gjønnesvatnet, 8. juni 1986. Ett eksemplar funnet ved sikting av oppskyll. Uvanlig.

*Harpalus distinguendus* (Duftschmidt). VE, Tjølling: Heggdal, 18. aug. 1985, ett eksemplar. 20. mai 1986, ett eksemplar. 19. juli 1986, fire eksemplarer. Alle funnene er gjort på spredt bevokst sand- og grusbunn. Meget uvanlig.

### Scaphidiidae

*Scaphidium quadrimaculatum* (Olivier). VE, Larvik: Bøkeskogen, 13. juli 1985 fire eksemplarer. 24. juli 1985 tre eksemplarer, 17. mai 1986 tre eksemplarer og 16. juni 1986 2 eksemplarer. Billene er funnet på undersiden av på marken liggende råtnende bøkekubber. VE, Tjølling: Løveskogen, 16. mai 1986 ett eksemplar på soppinfisert selje. Uvanlig.

### Leiodidae

*Agathidium mandibulare* (Sturm). VE, Tjølling: Løveskogen 17. mai 1986. Ett eksemplar på un-

dersiden av på marken liggende råtten seljestamme. Uvanlig.

**Catopidae**

*Catops subfuscus* (Kellner). VE, Tjølling: Bisjord, 8. juni 1985 tre eksemplarer på åte (beinrester). Utbredt langs Oslofjorden.

**Histeridae**

*Dendrophilus cortcalis* (Paykull). VE, Tjølling: Gon, 11. mai 1987 to eksemplarer ved sikting av gjærende kompost. Uvanlig.
*Carcinops pumilo* (Steph.). VE, Tjølling: Gon, 11. mai 1987 to eksemplarer ved sikting av gjærende kompost. Uvanlig.
*Atholus bimaculatus* (Linnaeus): VE, Tjølling: Løveskogen, 17. mai 1985 ett eksemplar i haug bestående av hestemøkk og sagmugg. Uvanlig.

**Scarabaeidae**

*Aegialia sabuleti* (Panzer). VE, Hedrum: Hovland (Lågen), 20. juli 1986. Ett eksemplar på sandete elvebredde. Meget vanlig.

**Elateridae**

*Ampedus sanguinolentus* (Schrank). VE, Tjøme: 14. juni 1986 ett eksemplar på blomstrende hundekjeks, *Anthriscus sylvestris* (L.). Uvanlig.
*Ampedus praeustus* (Fabricius). VE, Brunlanes: Pauler, 2. februar 1988. Tre vellykkede eksemplarer klekket ut. Larvene ble funnet i hul eik i mai 1987, og har blitt oppbevart i eikemuld. Uvanlig.

**Eucnemidae**

*Melasis buprestoides* (Linnaeus). VE, Brunlanes: Vassbotn, 15. juni og 17. juni 1986 to eksemplarer svermende over bøk og oreved. Meget uvanlig.
*Xylophilus corticalis* (Paykull). VE, Larvik: Bøkeskogen, 13. juli 1985 ett eksemplar funnet krypende på morken bøkestubbe. VE, Brunlanes: Pauler, 23. juli 1985 ett eksemplar under barken på gran. Borgersen B. fant denne arten tallrik sommeren 1987 på gran i Askedalen i Hedrum. Utbredt i Sør-Norge langs Oslofjorden ned til Aust-Agder.

**Buprestidae**

*Poecilonota variolosa* (Paykull). VE, Tjølling: Bisjord, 25. juni 1987 dekkvinge funnet i maurtue. Utbredt, men ikke vanlig. På døende osper.
*Agrilus suvorovi* (Obenberger). VE, Hedrum: Roppastad, 22. juni 1985 ett eksemplar svermende over blandingsved. Utbredt i AAY og TY.

**Cucujidae**

*Silvanus bidentatus* (Fabricius). OS, Sør-Fron: Toverud, EIS 62 27. juni 1986 ett eksemplar under barken på selje. Uvanlig.

*Dendrophagus crenatus* (Paykull). VE, Hedrum: Vest-Marka 19. mai 1986 ett eksemplar på furutømmer. Utbredt, men ikke vanlig i Sør-Norge.

**Mycetophagidae**

*Mycetophagus atomarius* (Fabricius). VE, Larvik: Bøkeskogen, 15. mai 1985 tre eksemplarer, to eksemplarer 21. juni 1985. 10. mai 1986 to eksemplarer. På bøkestubber med kjuker bl.a. knuskkjuke, *Fomes fomentarius*. VE, Tjølling: Sande, 20. mai 1987 seks eksemplarer i knuskkjuke på bøk. Utbredt, men ikke vanlig i Sør-Norge.
*Mycetophagus fulvicollis* (Fabricius). AAY, Risør: Avreid (EIS 11), 21. juni 1987 ett eksemplar på ospeved. Uvanlig.

**Oedmeridae**

*Ischnomera (Asclera) coerulea* (Linnaeus). AAY, Tvedestrand: Sagesund, EIS 6, 21. juni 1987. Arten ble funnet på blomstrende hundekjeks. *Anthriscus sylvestris* (L). Det foreligger tidligere kun 2 funn av arten i Norge. Meget uvanlig.

**Tenebrionidae**

*Eledona Agricola* (Herbst). VE, Tjølling: Heggdal, 2. april 1988. Arten ble funnet tallrik i hul ask hvor veden var så morken og soppinfisert at den lett kunne smuldres opp med fingrene. Arten er meg bekjent funnet to ganger tidligere i Norge og må med sitt meget spesialiserte levevis totalt sett betraktes som meget uvanlig i Norge.
*Alphitophagus bifasciatus* (Say.). VE, Tjølling: Løveskogen, 26. juli 1987 ett eksemplar funnet ved sikting av gjærende kompost. Arten er funnet to ganger tidligere i Norge bl.a. i kaningjødning. Uvanlig, men i ferd med å bre seg i Sør-Norge?

**Melandryidae**

*Phloiotrya rufipes* (Gyllenhall). VE, Brunlanes: Mørje, EIS 11 19. juli 1986 ett eksemplar slaghåvet i hassel/eikekratt. Uvanlig med få funn i Norge.

**Chrysomelidae**

*Donacia versicolorea* (Brahm). VE, Tjølling: Løveskogen, 17. juni 1985 fem eksemplarer på tjønnaks, *Potamogeton natans*. Utbredt i Sør-Norge.

**Curculionidae**

*Antonomus conspersus* (Desbrochers des Loges). VE, Tjølling: Gon, 18. mai 1986 ett eksemplar på Rogn. Uvanlig.
*Tanysphyrus lemnae* (Paykull). VE, Hedrum: Gjønnesvatnet, 9. juni 1986 to eksemplarer siktet av oppskyll. Sammen med bl.a. *Notaris aethiops, Notaris acridulus, Lymnobaris pilistriata* og carabiden *Stenolophus mixtus*. Uvanlig.

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# Book reviews

BLANDIN, P. 1988. The genus *Morpho* (Lepidoptera, Nymphalidae). Part I: the subgenera *Iphimedeia* and *Schwartzia.* English translation by B. Morris. Sciences Nat, Venette — 60 Compiègnes, Frankrike. 42 pp, 6 utbredelseskarter, 20 farveplansjer. Pris: F 450 (ca. 500 norske kroner).

Siden Seitz verk om dagsommerfuglene i den neotropikale regionen, har det eneste verket viet til slekten *Morpho* vært boka av le Moult og Réal (1962—1963) «les Morphos d'Amérique du Sud et Centrale». Den var skrevet på fransk og vanskelig å bruke for selv spesialister, slik at Blandins arbeid dekker et behov. Denne flotte boka er den første av en rekke på tre, og vil være den første moderne **systematiske** behandlingen av slekten. Hver eneste art, og hver underart, blir nøyaktig definert og beskrevet. Praktisk talt blir alle underartene også avbildet, og de som blir beholdt i systematikken, blir det etter en omstendig diskusjon. Ofte blir samme underart avbildet flere ganger på samme plansje for å illustrere farvevariasjoner eller kontinuerlige variasjoner innen samme utbredelsesområder. De mangfoldige individuelle former som finnes i litteraturen blir nevnt og kortfattet beskrevet, slik at samlere kan klare seg med sine eksemplarer, men de blir naturligvis ikke tillagt noen systematisk verdi. På bokas første sider finnes en bestemmelsesnøkkel over underslektene i slekten *Morpho,* med tegninger av viktige detaljer. De tyve farveplansjer som finnes sist i boka er av toppkvalitet, og er meget pålitelige, og også meget pene. Teksten, som er kortfattet og klar, er lett å lese og å bruke. Den inneholder også avsnitt om utbredelsen og biologien for hver eneste art og underart. En kan bare finne detaljbebreidelser til den boken, som for eksempel at det ikke finnes bestemmelsesnøkler til artene og underartene i de to underslektene som tas i betraktning. Men disse artene og underartene er ikke meget tallrike, og kan lett bestemmes ved hjelp av beskrivningene og plansjene, slik at dette neppe er noen vanskelighet. Denne fine boka anbefales uten forbehold, ikke bare til lepidopterologene, men også til enhver entomolog som vil lære mere om insektenes verden.

*J.-F. Voisin*

ASKEW, R. R., 1988. *The Dragonflies of Europe.* Harley Books. 291 s.

Denne boken har vi hatt store forventninger til på grunn av forhåndsomtalen fra forlaget. En omfattende teoretisk orientering var forventet, da også med et godt bestemmelsesverk over alle europas arter. Det er i den senere tid blitt utgitt en rekke bøker på engelsk om øyenstikkere (libeller og vann-nymfer), uten at noen av dem helt ut har dekket det norske behovet. Hva så med Askews bok? Den er delt i syv kapitler som henholdsvis gir en introduksjon, en oversikt over lisssyklus, en beskrivelse av det voksne insektets oppførsel, et sammendrag av utbredelsesmønsteret til de europeiske artene, en beskrivelse av morfologien til det voksne insektet, en omfattende beskrivelse av alle arter og en bestemmelsesnøkkel til siste larvestadium. I tillegg kommer referanser og fargetavler.

Introduksjonen er kortfattet og omfatter et slektskapsdiagram for de ulike øyenstikkerfamiliene. Livssyklus er beskrevet på åtte sider, inkludert enkle strektegninger, og omtalene av de voksne insektenes oppførsel har fått elleve sider, også her inkludert en del strektegninger. Mange interessante forhold vedrørende øyenstikkerne er tatt opp i disse to kapitlene, men det hele virker nokså ordinært og lite utfyllende i forhold til forventningene om en utfyllende tekst. Kapitlet om utbredelsesmønsteret er også kortfattet, ca. fire sider, og gir heller ikke særlig mye nytt eller dyptpløyende stoff. De følgende ni sider er en morfologisk beskrivelse som kanskje er nødvendig for å kunne bruke bestemmelsesnøklene, men ellers virker det svært ordinært. Totalt sett er det generelle stoffet nærmest skuffende, et tema som naturvern og øyenstikkere har ikke fått den plass det burde få i en europeisk oversiktsbok av 1988, det er bare så vidt nevnt i denne boken.

Artsbeskrivelsene fyller rundt 150 sider og omfatter nøkler til artsnivå for 114 europeiske arter, deriblant alle norske arter. Viktige detaljer i nøklene er illustrert med gode figurer. For hver art er det gitt en beskrivelse av imagines, en kort omtale av biologien, flygeperioden og utbredelsen. Et utbredelseskart som dekker Europa og de nordligste delene av Afrika er også obligatorisk for alle omtalte arter. Den kjente utbredelsen i Norge synes riktig angitt for de fleste artene av vann-nymfer. For libellene er det flere feil.

*Aeshna subarctica* er utbredt over store deler av Sør-Norge, men bare angitt fra Troms på kartet, *Cordulegaster boltoni* (tidligere *C. annulatus)* er funnet flere steder i Trøndelag enn angitt, *Cordulia aenea* er kjent fra Trøndelag, men er angitt med nordgrense på Møre, *Somatochlora arctica* er kjent fra flere steder i Nordland og Trøndelag, hvor den er angitt å mangle. *Sympetrum flaveolum* er ikke angitt fra Trøndelag hvor den forekommer, det samme gjelder *Leucorrhinia rubicunda.* Kort sagt, forfatteren har ikke tatt hensyn til publiserte funn fra Norge for libellenes del siden Sømmes oversikt fra 1937, og det er jo en alvorlig mangel ved kart fremstilt i 1987—1988.

Artsomtalen blir fulgt av en bestemmelsesnøkkel for larver til art (der det er mulig). Nøkkelen er godt illustrert, men ellers bygd opp på ordinær måte. Litteraturlisten er omfattende men ikke utfyllende nok for særnorske behov.

Fargetavlene er mange, vakre og sikkert nyttige for de som ikke kjenner gruppen så godt fra før, men en kan reflektere over valget av forstørrelsesgrad, når vann-nymfer gjengis større enn f.eks. *Sympetrum*-artene.

Boken koster £ 49.95, altså mer enn et halvt tusen norske kroner. Den har mange positive sider, men skuffer litt som «tekstbok» og ved sine unøyaktigheter i utbredelseskartene.

*Kaare Aagaard*

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SANDHALL, Å., 1987. *Trollsländor i Europa.* Interpublishing. 251 s.

Sandhall er godt kjent for sine mange fotografiske billedbøker over ulike insektgrupper. Nå har han sammen med Ulf Norling og Peter Nielsen utgitt en fargesprakende bok om øyenstikkere i Europa, eller nærmere bestemt i Europa nord for Alpene De første 60—70 sidene gir korte oppslag om ulike tema som kroppsbygning, farger, vinger, flukt, livslengde, aggressivitet, oppførsel osv., illustrert med interessante fotos. Biotopbilder dekker ca. 10 sider. Eget kapittel om naturvern og øyenstikkere mangler også i denne boken. Artsbeskrivelsene dekker ca. 140 sider. Hver art har fått én til to sider, hvor fargefotos ugjør en god del av oppslaget. I tillegg kommer en kort tekst, faktiske opplysninger om flygetid, størrelse og utviklingstid, og et utbredelseskart over Nord- og Mellom-Europa. Utbredelsen i Norge er riktig angitt i forhold til publiserte data for de aller fleste artene. Unntakene synes å være begrenset til *Sympetrum flaveolum* og *Leucorrhinia rubicunda* hvor utbredelsen i Trøndelag ikke er tatt med.

Artsbeskrivelsesdelen etterfølges av en side om øyenstikkere i folketroen, et tema som viser at denne gruppen har vært lagt merke til av folk til alle tider og i alle kulturer. De neste 4—5 sidene omhandler innsamling og prepareringsteknikk, dessuten fotografering og feltstudier. De siste to temaene burde kanskje vært fremhevet på bekostning av de to første. Litteraturlisten er kort og sammensetningen virker noe tilfeldig.

Bestemmelsesnøklene fyller ca. 20 sider bakerst i boken. Det er gjennomført billednøkler til alle nivå, meget oversiktlige og med godt markerte detaljer. Slik kan det altså gjøres, nesten uten ord (og faguttrykk), men likevel er denne bestemmelsesnøkkelen kanskje den beste som er laget i (Nord-) Europa til imagines av øyenstikkere. Kombinert med fargebildene gjør den boken til en meget god bestemmelsesbok med gode opplysninger om utbredelsen til alle norske arter. Teksten er noe knapp, men fyller den funksjon den er tildelt. Prisen på boken er ca. 432 SEK, i bokhandel i Stockholm ga jeg 384 SEK over disk. Det er boken verd. En norsk oversettelse er ikke aktuell, den vil i følge forlagsfolk bli for dyr.

*Kaare Aagaard*

**INTERNATIONAL CONGRESS «FUTURE OF BUTTERFLIES IN EUROPE**
**Strategies for Survival»**
**Wageningen, The Netherlands, April 1989.**

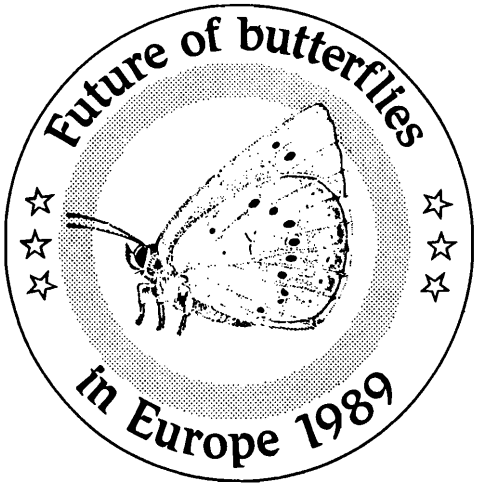
An international congress on the conservation of butterflies in Europe will be held in Wageningen, The Netherlands, from 12 to 15 April 1989.

The meeting will review the current knowledge on butterflies in order to set up a working programme for their conservation in Europe.

The planned themes are: The status of butterflies in Europe; Mapping; Population dynamics; Isolation; Monitoring; Management policy; Perspectives in conservation.

The congress is being organized by the Departement of Nature Conservation of the Wageningen Agricultural University, in cooperation with the Dutch Butterfly Foundation and the Netherlands Emtomological Society.

Requests for further details should be directed to the Congress Building. International Agricultural Centre, P.O.Box 88, 6700 AB Wageningen, The Netherlands.



## GUIDE TO AUTHORS.

FAUNA NORVEGICA Ser. B publishes papers in English, occasionally in Norwegian, with an extensive English abstract. When preparing manuscripts for submission, authors should consult current copies of Fauna norvegica and follow its style as closely as possible. Manuscript not conferring to the guide to authors will be returned for revision.

**Manuscripts** should be submitted to the Editor-in-Chief. Send two copies. Separate sheets should be used for hte following: 1) Title page, with author's name. 2) An abstract, with the name and full postal address of the author underneath. 3) Tables with their headings. 4) Legends to figures.

Dates should be referred to as 10-20 Aug. 1970.

Underline all generic and species names. Approximate position of figures and tables in the text should be indicated in the margin. All Acknowledgements should be given under a single heading in the end of the text, immediately before the references.

**Figures and Tables.** Send two copies. All illustrations should be identified lightly with the author's name and the figure number.

The placing of figures and tables should be indicated in the margin. If the article is in Norwegian, the figures and tables should have both Norwegian and English text. Write Table and Fig. both in running text and over/under tables and figures.

Take care that all text in the figures is *large enough* for a format of column or page width, c. 7 or 14 cm. Never let odd words or numbers go outside the breadth of other elements of the figure. Figures with cross-hatching (bar charts) must not be drawn so large that it is difficult to judge the result of a considerable size reduction. When a dense cross-hatching is greatly reduced it will coalesce and thereby lead to confusion with an entirely black area. Choose contrasting patterns. Authors with access to a machine able to type Latin species names in italics should utilize this in all tables instead of underlining. We will then be more free to photograph tables without the underlining of Latin names detracting from the appearance of the tables.

**Nomenclature.** The first time a binomen is used in the text the name of its author shoul be included. Author names should be written in full, except. L. for Linneaus. Dates can be included when considered necessary, i.e. *Rhyacophila nubila* (Zetterstedt, 1840).

**References.** *In the text:* Black (1979), Black & Blue (1973:100), or «as noted by Green (1978) and Black (1979)». Multiple references should be given in chronological order, i.e. (Black & Blue 1973, Green 1976, 1979, Black 1978).

List of references are to be unnumbered and in international alphabetical order (i.e. Å = AA, Æ and Ä = Ae, Ø and Ö = Oe). Titles of journals should be abbreviated according to the World List of Scientific Periodicals. Do not refer to papers «in prep.» among the references.

Examples:

*Journal:*

Løken,A. 1962. Social wasps in Norway (Hymenoptera, Vespidae). *Norsk ent. Tidsskr. 12:* 191—218.

*Book:*

Mayr, E. 1913. *Animal species and evolution.* Harvard University Press. Cambridge, Mass.

Fittkau,E.J. 1962. Die Tanypodinae (Diptera, Chironomidae). Die Tribus Anatopyniini, Macropeloponi und Pentaneurini. *Abh. Larvalsyst. Insekten* 6: 453 pp.

*Chapter:*

Whitman, I. 1951. The arthropod vectors of yellow fever, pp. 229—298 in: Strode, K. (ed.) *Yellow Fever.* Mc. Graw - Hill, New York & London.

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For at heftene skal komme inn under Postverkets regler for billig serie-utsendelse, forlanges det at heftene i de tre seriene av Fauna norvegica i hvert kalenderår gis fortløpende nummer fra 1 til 5. Det vil kunne bli noe tilfeldig hvilke hefter som blir gitt de respektive nummer på grunn av uregelmessigheter med rekkefølgen i løpet av året.

Referansemessig skal vi *aldri ta hensyn til nummeret i øvre hjørne på omslaget* (inne i firkanten). **Det vi skal ta hensyn til er de oppgitte data for de respektive serier. Det er disse data som gir den korrekte litteraturreferansen,** og det er disse forkortelsene som står oppført i *Abstract* til hver artikkel og på særtrykkene.

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# Content

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