

First Norwegian record of *Dixella naevia* (Peus, 1934) (Diptera, Dixidae), and other interesting records of nematocerous Diptera

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Records of species from the families Dixidae, Ceratopogonidae, Thaumaleidae, Ptychopteridae, and Culicidae are reported, one of which, *Dixella naevia* (Peus, 1934) is new to Norway. The other species are new to different parts of Norway.

Key words: *Dixella naevia*, Dixidae, Ceratopogonidae, Thaumaleidae, Ptychopteridae, Culicidae, new records..

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Introduction

Some orders of insects are more popular among entomologists than others. What used to be called Nematocera is a group where very few papers have been published, at least on the Norwegian fauna. This applies especially to those groups with no obvious economic importance. But also mosquitoes have in Norway been neglected to some degree after the fundamental work of Natvig (1948). Since I have come across a few interesting finds of different species, I will hereby publish them in the hope that others will follow up this very fascinating group of small creatures. All the animals are collected by the author and kept in the author's collection. The material is stored in 70% alcohol.

Dixidae

Thirteen species of Dixidae were recorded from Norway by Håland (1996), and later Olsen (2008) added four more species. With the present record of *Dixella naevia* (Peus, 1934) at least 18 species are known to live in this country. It is possible that one or two more species can be found.

Dixella naevia (Peus, 1934)

Material. HES Ringsaker: Mesnali, (EIS 54 UTMWGS84 32VNN923750) 1 July 2009, about 550 m a.s.l., 11 August 2009, 1♂. Ringsaker: Ring, pool near the pond Persvetjernet, 8 September 2010, (EIS 54, UTMWGS84 32V NN 904637), 1♂. BV Hol: small pond near the eastern end of Ossjøen about 970 m a.s.l. (EIS 34), 6 October 2001, 1♂. The pond is about 18 x 22 m in diameter. Found together with *D. aestivalis* (Meigen, 1818) and *D. borealis* (Martini, 1928). Both the Ringsaker localities were located in shadowful pools in the outskirts of a mire. In the pond near Ossjøen also together with *D. dyari* (Garrett, 1924).

Remarks. New to Norway. The material from Ringsaker was found in very dark and moist forest, pools on the outskirts of a pond surrounded by *Sphagnum* spp. The third one, in Hol, is a single male that probably have flown from a similar darker area, since I've never caught the species there again. The fact that it has been found up to 970 m a.s.l., and also in northern Sweden (Wagner 1978) indicates that it will probably be found many places in Norway. However, such moist forest areas are often drained by the owners of the forest to give better growth to the trees, so

this species may be endangered for that reason.

This species is described from Latvia by Peus (1934) and he later (Peus, 1936) mentioned it from the Kola Peninsula and the Leningrad District of Russia. Wagner (1978) reports it from area 23 of “Limnofauna Europaea”, and from area 9 (Germany) and 24 (Kaukasus), Rozkosny (1990) also mention it from parts of Russia (NET, CET) and Alaska, based on the record by Peters & Cook (1966). Wagner (1997) only mentions *D. naevia* as a possible species for northern Europe. Hirvenoja (2002) and Salmela (2003) recorded it recently from southern Finland.

Dixella serotina (Meigen, 1818)

Material. This species was first reported by Olsen (2002), but without exact locality. Olsen (pers. comm.) have informed me that the specimens are probably lost and that there is no way of associating these animals with localities. I have found it in HES: Stange, Brynitjernet, (EIS 46, UTMWGS84 32VPN243334), 166 m a.s.l., 4 October 2007, 2 larvae; 29 July 2009, 1♂, 3 larvae; 16 September 2009, 3 larvae.

Remarks. New to HES. The pond is quite eutrophic, big and shallow, with emergent vegetation covering almost the entire pond. *Typha latifolia* and *Phragmites communis* are quite common near the edges of the pond. *D. serotina* (Meigen, 1818) was quite common, and was found together with *D. amphibia* (De Geer 1776), *D. aestivalis* and a few *D. borealis*. Recorded by Rozkosny (1990) from most countries in Europe and also from North Africa. Salmela (2002) mentions it from southern Finland.

Dixa nubilipennis Curtis, 1832

Material. Recorded for the first time in Olsen (2002) from Ringsaker, Byflaten (EIS 54, UTMWGS84 32V PN033559) 13 July 2007.

Remarks. That first male was found near the stream Glestadelva that is about 2 m wide. I've now found another male in the same municipality, by a very different, small stream (EIS 54,

UTMWGS84: 32V PN057544) 23 August 2009, only some 30 cm wide.

Ceratopogonidae

The number of species of Ceratopogonidae in Norway is probably much higher than the number of species recorded, about 70 (Anonymous 2011). In Limnofauna norvegica (Mehl, 1996b), only the genus *Culicoides* Latreille, 1809 was treated. Szadziewski et al. (1997) reported only 17 species of Ceratopogonidae from Norway. Reporting on the investigation of canopy fauna Thunes et al. (2004) were able to report 44 species of Ceratopogonidae new to the Norwegian fauna, two of which were described as new species (Szadziewski & Hagan 200), treated also by Hagan et al. (2000). Krzywinski (1996, 1997) reported two new species of *Palpomyia* Meigen, 1818 from Norway. Many of the species are rather difficult to identify, but some of them are easier to recognize.

Mallochohelea nitida (Macquart, 1826)

Material. Two pupae were found in a small dystrophic pond in HES: Ringsaker, Veldre 22 July 2008 (EIS 54, UTMWGS84 NN994573).

Remarks. New to HES. The pond, which has no name on the map, is about 450 m a.s.l., and about 100 m. across. The pupae were hatched, giving 1♂1♀. The male was mounted in Euparal and a picture of the mounted hypopygium was mailed to Patrycia Dominiak in Poland who identified it, but with some hesitation since the genus *Mallochohelea* Wirth 1962 should be revised. The species has only been recorded once in Norway, in AK (Soot-Ryen 1943). One more species of *Mallochohelea* is recorded from Norway, *M. scandinaviae* (Clastrier, 1962), described by Clastrier (1962) on material collected “between Mo i Rana and Brekkvasselv”, only the female is known (Clastrier, 1962).

***Clinohelea unimaculata* (Macquart, 1826)**

Material. HES Ringsaker: Tjernlitjern (EIS 45, UTMWGS84 32V PN067493), 132 m a.s.l., 20 July 2006, 1♀; 13 July 2007, 1♀.

Remarks. New to HES. Earlier only found in NTI: Skogn. (Soot-Ryen 1943).

***Serromyia femorata* (Meigen, 1804)**

Material. NSY Dønna: Bjørn (EIS 117, UTMED50 33WUP909314), 8 June 1989. Swept from grass and bushes, 3♂♂; Alstahaug: Sandnessjøen, by stream near SIVA (EIS 117, UTMED50 32VUP927228), 23 June 1986, 1♂; same place 5 June 1989, 1♂.

Remarks. New to NSY. Recorded by Soot-Ryen (1943) from AK, ON, STI, NTI, NNØ and TRY, and in Kvam and Sigdal by Thunes et al. (2004).

Thaumaleidae

Four species of Thaumaleidae have been found in Norway, viz. *Thaumalea testacea* Ruthé, 1831, *T. truncata* Edwards, 1929, *T. caudata* Bezzi, 1913, and *T. verralli* Edwards, 1929. *Thaumalea bezzii* Edwards, 1929, has been found in Denmark, and may possibly be found in Norway too. The distribution of these species is poorly known, however, and though Willassen (1996b) gives the distribution of records so far, he does not mention specific localities and has not published any later on (Willassen pers. comm.). Some localities are mentioned in earlier publications (Edwards, 1929; Willassen 1987; Håland, 1990; see map in Andersson, 1977 of the older records).

***Thaumalea testacea* Ruthé, 1831**

Material. BV Uvdal: by a stream between Bjørkeflåta and Imingfjell about 880 m a.s.l., (EIS 34) 29 July 1992, 1♂. ON Nord-Fron: Liadalen Nature Reserve about 360 m a.s.l. (EIS 62, UTMWGS84 32V NP375281), 19 May 2002, 1♂.

HES Ringsaker: Byflaten by Glestadelva (EIS 54, UTMWGS84 32V PN033559), 320 m a. s. l., 29 July 2004, 1♀.

Remarks. New to BV and HES. A specific locality is not given in Willassen (1996b) from the northern part of Oppland.

***Thaumalea truncata* Edwards, 1929**

Material. BV Hol: Dagali, along Kulteбекken (EIS UTMWGS84 32V) 12 September 1994, 1♂. ON Nord-Fron: Vinstra, by the stream Golobekken (EIS 62, UTMWGS84 32V NP370247), 690 m a.s.l., 17 September 1997, 1♂. Nord-Fron: Vinstra, Byreбекken (EIS 62, UTMWGS84 32VNP398309), ca. 400 m a.s.l., 6 September 1996, 5♂♂6♀♀. Sør-Fron: Harpefoss (EIS 62, UTMWGS84 32VNP453271), 8 September 2001, 1♂. Ringeбу: by a waterfall about 2 km north of Ringeбу center (EIS 63, UTMWGS84 32V NP587232) 9 September 1997, 1♂. HEN Tolga: Vingelen, ditch in a clear-cut area of a forest, between Vingelen and Tolga center (EIS 81), almost stagnant water, 18 September 2003, 2♂♂. HES Ringsaker: Steinshølet by Næra, along a small stream (EIS 54, UTMWGS84 32V NN943654, 23 July 2006. 1♂.

Remarks. New to HES, ON and BV. Common in most small rushing streams that flow over boulders and stones. I have observed the larvae living in the wet area of stones just above the water surface, where bubbles made by a small waterfall were crushed against the stones, making them even more wet. The larvae could be seen as tiny silver threads moving across the stones.

Ptychopteridae

Seven species of *Ptychoptera* Meigen, 1803 has been found in Norway, none of them in Hedmark (Willassen 1996a).

***Ptychoptera minuta* Tonnoir, 1919**

Material. Found in HES Ringsaker on

several occasions: at a svamp near Tjernlitjern south of Brumunddal, (EIS 45, UTMWGS84 32VPN067493) 132 m a.s.l., 24 May 2004, 1♂; 31 May 2007, 1♂; 13 June 2003, 1♂, 13 July 2007, 1♀; near a small stream at Pellervika, (EIS 54, UTMWGS84 32VPN037515), 19 July 2007, 1♂; at Mesnali in a wet swamp near Syljuberget (EIS 54 UTMWGS84 32VNN923750), 26 June 2007 1♂, and 5 July 2008 1♂. Also found in **BV** Nore og Uvdal: Jønndalen, Solheimstultjørne (EIS 34, UTMED50 32VMM-643855), 8 July 2010, 1♂; **HEN** Stor-Elvdal: Koppang, Kjemsjøen, (EIS 64, UTMED50 32VPP115278), 21 July 2008, 1♀; and Tynset: Tyllidalen, near small tarn by Søndre Haugsetra, (EIS 72 UTMWGS84 32VNP-917940) 680 m a.s.l., 24 June 2001, 3♂♂1♀.

Remarks. New to HES, HEN and BV. *P. minuta* was not even known from southern Norway before (Willassen 1996a). Tjeder (1968) says that *T. minuta* is the most common of the species without wing markings in Scandinavia.

Culicidae

The more detailed distribution of Culicidae is far from known from Norway. I have mostly identified larvae, using the key of Utrio (1976), supplemented with Natvig (1948) and Mohrig (1969). The hypopygia of some of the adult males have been mounted on microscopic slides.

Culiseta morsitans (Theobald, 1901)

Material. **HES** Ringsaker: Buttekværn Nature Reserve in Brumunddal (EIS 54, UTMWGS84 32VPN061508) 23 May 2007, 1 larva; Tjernlitjern just south of Brumunddal (EIS 45, UTMWGS84 32VPN067493) 26 September 2008, 3 larvae, 28 October 2008, 3 larvae, 30 April 2008, 6 larvae, 11 May 2008, 2 larvae. **VE** Hof: Eikenesvannet (EIS19, UTMED50: 32VNL622945) 1 October 1983, 3 larvae. Andebu: Stålerødvannet (EIS 19, UTMED50 32VNL640737), 2 October 1983, 4 larvae.

Remarks. This species spend the winter in the larval stage and hatch in late May in Brumunddal.

Not previously recorded from Hedmark according to Mehl (1996).

Culiseta bergrothi (Edwards, 1921)

Material. **NSY** Dønna: Breidvika, (EIS 117, UTMED50 33WUP820293), 23 July 1986, 5♀♀ ex. larva et pupa, 1 larva; Alstahaug: Sandnessjøen, small pools (EIS 117, UTMED50 33WUP955248), 10 August 1986, 1 larva; Alstahaug: Botn, (EIS 117, UTMED50 33WUP914199) 13 August 1986, 4♀♀ ex. larva et pupa, 1 pupa, 10 pupal pelts, 4 larvae; Alstahaug: Sandnessjøen, ditch, (EIS 117, UTMED50 33WUP933239), 20 August 1986, 2 larval pelts, 2♂♂4♀♀, ex larva et pupa. Bindal: Terråk, (EIS 110, UTMED50 33WUN751191), 3 September 1986, , 4♂♂3♀♀, ex larva et pupa, 1 larva, **NSI** Grane: Ca. 3 km. north of Majavatn, (EIS 111), 27 July 1985, 2 larval pelts.

Remarks. New for NSY and NSI.

Coquillettidia richiardii (Ficalbi, 1889)

Material. **HES** Stange: Brynitjernet, (EIS46, UTMWGS84 32VPN243334), 166 m.a.s.l., 18 September 2001, 1 larva; Ringsaker, Brumunddal: Tjernlitjern, (EIS 45, UTMWGS84 32VPN067493), 132 m a.s.l., 14 May 2010, 1 larva.

Remarks. This species has only been reported once before, in Østfold by Moresi and Mehl (1990), but Mehl (pers. comm.) has informed me that it has since been found in two other places in Østfold (Tomb agricultural school) and Oslo (Østensjøvannet). The species has a very peculiar biology (cf. Wesenberg-Lund 1921, Frey 1946) since both larvae and pupae are able to tap the air-channels in certain water plants, and because of that they have no need to visit the water surface. Possibly because of that it is seldom caught by collectors looking for Culicidae. It is distributed over most of Europe (Ramsdale & Snow 2001).

According to Mehl (1996) not recorded from Hedmark before. These are also the northernmost records of this species in Norway.

***Aedes vexans* (Meigen, 1830)**

Material. HES Hamar: Åkersvika (EIS 45, UTMWGS84 32VPN147430) about 130 m a.s.l., 16 July 2007, 2♂♂.

Remarks. New for HES.

***Ochlerotatus diantaeus* (Howard, Dyar & Knab, 1912)**

Material. HES Ringsaker: Veldre, temporary pool near Åsen, (EIS 54, UTMWGS84 32VPN017957), 31 May 2003, 5 larvae. **ON** Nord-Fron: Tverrbygda, temporary pool, (EIS 62, UTMWGS84 32VNP253250), 2 June 2002, 4 larvae.

Remarks. New for HES and ON.

***Ochlerotatus cantans* (Meigen, 1818)**

Material. HES Ringsaker: Brumunddal. Very common in the Buttekvern Nature Reserve within the town, ca. 150 m a.s.l. (EIS 46, UTMWGS84 32VPN061508), and also by Tjernlitjern 132 m a.s.l., (EIS 45, UTMWGS84 32VPN067493), just south of the town. In my collection are these samples: 12 May 2007, 3 larvae, 3 pupae; 21 May 2007, 1 larva; 23 May 2007, 5 larvae; 16 June 2006, 2♂♂4♀♀ 2 larvae.

Remarks. New to HES.

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