

Noteworthy records of freshwater insects in Norway

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For several years the author and colleagues in the foundation Siste Sjanse (BioFokus) have collected freshwater organisms at many localities in Norway. The more interesting of these findings are presented below, focusing mainly on redlisted species and species new to specific geographical regions. Some species are also new to the Norwegian fauna.

Key words: Freshwater insects, Norway, Redlisted species

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INTRODUCTION

These days there is a huge demand for up-to-date information, with accurate geographical data, on all kinds of organisms, particularly with regard to rare and threatened species. This is necessary to better manage the biological diversity of the country or within a certain area. Red lists are due every five years in Norway, and in order to improve them between each edition, new information must be made available.

The presentation below intends to publish records of freshwater insects that meet one or both of the two following criteria: the species is redlisted in at least one of the two most recent Norwegian redlists (Direktoratet for naturforvaltning 1999, Kålås et al. 2006), or it is new to the region in which it is found. Species from the former redlist are included because many of the records presented here were part of the basis when preparing the latest. In general, two publications are the basis for determining whether a species is new to a region or not: Aagaard & Dolmen (1996) and Coulianos (1998). Several later publications have been accounted for, but several have also surely been missed, and therefore some of my records may

not be the first from that region. This has to some extent been avoided by consulting Rødlistebasen (www.artsdatabanken.no) and by letting several experts on different orders check the manuscript prior to submission (see Acknowledgements). The material has been collected over a series of years, but primarily from the years 2002–2007. Most of the collecting has been done as part of field work in projects ran by the foundation Siste Sjanse. The foundation has recently (autumn 2006) changed its name to BioFokus. Many of the records have already been published, but only in reports to our employers (see Table 1 and the reference list), and therefore rather inaccessible. Some of the published records have later proved to be misidentifications, and any previously published records of redlisted species or species claimed to be new to a region that is not in Table 1, must be regarded as such. Also, a few of the records in Table 1 were initially published as other species.

A large number of freshwater localities (about 750) have been visited over the years (see Figure 1), and approximately 8000 entries (i.e. combinations of species/locality/date) have been databased, some 6000 of these being insects. Of

Table 1. List of noteworthy freshwater insects from Norway. The orders are treated in the same sequence as in *Limnofauna norvegica* (Aagaard & Dolmen 1996). Explanation of headings. Species [note]: Numbers in square brackets: see notes. #: total number of specimens, and *status* is present. (O) = observation only. R1 (R2): redlist category in Kårlås et al. (2006) and Direktoratet for naturforvaltning (1999), respectively. County, Strand-region. In accordance with Økland (1981). Note that AK is used to denote Oslo/Akershus, whereas AK denotes Akershus county proper. " = new to the county. *** = new to Norway. EIS: European Invertebrate Survey, see Endrestøl (2005). Initials in the columns 'Leg.', 'Det.' and 'Rev.': AE=Anders Endrestøl, BAS=Bjørn Aar Sagvolden, BG=Dag Gullefos, BN=Bernard Nau, DD=Dag Dolmen, EE=Eva Engelsen, EMO=Esben Moland Olsen, HO=Hans Olsvik, JHS=Jan Henrik Simonsen, KMO=Kjell Magne Olsen, LA=Leif Aanvik, OMMWK=Ola Martin Wergeland Krog, PVL=Peter Wiberg-Larsen, RS=Rune Solvang, SB=Shella Brooke, SL=Sindre Ligeard, SO=Stefan Olberg, SR=Sigvare Reiso, TB=Terje Blindheim, ØH=Øyvind Haland, ØP=Ashtild Ønkv Pedersen.

Species [note]	#	R1 (R2)	County	Municipality	Locality	MGRS _{EU} REF99	EIS	Date	Leg.	Det.	Rev.	Reference
Ephemeroptera												
<i>Ainities muticus</i> (Linnaeus, 1758)	2 juv.	-	HES	Ringsaker	Tokstadbekken	32VPM011524	54	07.VIII.2006	KMO	KMO 2006	-	Olsen & Solvang 2006
[1] <i>Baetis fuscatus</i> (Scambus)	1 juv.F	*AK	Nannestad	Hera		32VPM153830	37	26.IX.2002	KMO	EE 2007	-	-
<i>Baetis rhodani</i> (Pictet, 1844)	3 juv.	*AAY	Birkenes	Bersbækken		32VPM54406575	5	06.IV.2007	KMO	KMO 2007	-	-
<i>Baetis subabitus</i> Bergström, 1917	1 M	*TEI	Tinn	Hordstebekken		32VMM829371	26	14.VIII.2001	KMO	KMO 2007	-	-
<i>Baetis venustus</i> Curtis, 1834	1 juv.	*HES	Ringsaker	Haratbækken		32VNM1686527	54	03.VII.2006	KMO	KMO 2006	EE 2007	Olsen & Solvang 2006
<i>Baetis venustus</i> Curtis, 1834	2 juv.	*VVE	Re	Bersbækken		32VNL701669	19	27.VII.2003	KMO/SR	KMO 2004	-	-
<i>Centroptilium tubedum</i> (O.F. Müller, 1776)	4 juv.	*AAY	Birkenes	Bersbækken		32VNL34406575	5	06.IV.2007	KMO	KMO 2007	-	-
[2] <i>Centroptilium</i> sp.	1 juv.	*AK	Asker	Hulerbækken		32VNM79403418	28	26.VII.2004	KMO	KMO 2004	EE 2004	Olsen & Reiso 2005a
[3] <i>Cloeon inscriptum</i> Bengtsson, 1914	1 juv.	*JAK	Oslo	Gjellumvannet 1		32VNM806294	28	13.VII.2004	KMO	KMO 2005	-	Olsen & Reiso 2005b
[3] <i>Cloeon inscriptum</i> Bengtsson, 1914	1 juv.	*JOS	Oslo	Karusflåten		32VNM826551	36	09.VI.2002	KMO/SR/Agp	EE 2007	-	-
[3] <i>Cloeon inscriptum</i> Bengtsson, 1914	1 juv.	*JOS	Oslo	SW Toistad II		32VNM63910831	27	27.IX.2004	KMO/SR	KMO 2004	-	-
[3] <i>Cloeon inscriptum</i> Bengtsson, 1914	4 juv.	*JOS	Trysil	Bankbækken		33VJU4711144	65	23.VI.2004	KMO	KMO 2004	-	-
[3] <i>Cloeon inscriptum</i> Bengtsson, 1914	1 juv.	*JOS	Hamar	Flagsladelvøen		32VPM146429	46	07.VIII.2006	KMO	KMO 2006	-	-
[3] <i>Cloeon inscriptum</i> Bengtsson, 1914	3 juv.	*JTEI	Sauherad	Gvarholten		32VNL102831	18	03.X.2005	KMO	KMO 2005	-	-
[3] <i>Cloeon inscriptum</i> Bengtsson, 1914	7 juv.	*JTEY	Skien	Børsejø		32VNL354653	18	14.VII.2004	KMO/SR	KMO 2004	-	Olsen & Reiso 2005b
[3] <i>Cloeon inscriptum</i> Bengtsson, 1914	18 juv.	*VVE	Kristiansand	Karusflåten		32VWK38144347	2	25.II.2005	KMO	KMO 2005	-	Bye 2005
[3] <i>Cloeon inscriptum</i> Bengtsson, 1914	1 juv.	*VVE	Re	Snekkestad 2		32VPL208445	12	30.IX.2003	KMO	KMO 2007	-	-
[3] <i>Cloeon inscriptum</i> Bengtsson, 1914	1 juv.	*JAY	Hvaler	S.Kåvika		32VPL208445	12	17.IV.2004	KMO/OMWK	KMO 2004	-	-
[3] <i>Cloeon inscriptum</i> Bengtsson, 1914	5 juv.	*JAY	Arendal	N.Kommund		32VPM3237858	6	17.IV.2004	KMO	KMO 2004	-	-
[3] <i>Cloeon praetextum</i> Bengtsson, 1914	10 juv.	*AK	Etvsvoll	N.Kommund		32VPL027854	20	21.VI.2005	KMO/SR	KMO 2005	EE 2007	Olsen & Reiso 2005d
[3] <i>Cloeon praetextum</i> ? Bengtsson, 1914	1 F	*Ø	Rygge	Bjørnøya, Vannjø		32VPM238923	37	07.IX.2004	KMO/SR	KMO 2005	EE 2007	Olsen & Reiso 2005d
<i>Nicrobeta nigra</i> (Linnaeus, 1761)	1 juv.	*VE	Re	Vergjø 2		32VNL759822	19	16.X.2003	KMO	EE 2007	-	Olsen & Reiso 2005c
<i>Caenis lutulosa</i> Eaton, 1884	5 juv.	*AK	Oslo	Bogstadvann		32VNM905497	28	06.IV.2007	KMO	KMO 2007	-	-
<i>Caenis lutulosa</i> Eaton, 1884	2 juv.	*AAY	Oslo	Bersbækken		32VNM905497	28	28.IX.2004	KMO	KMO 2004	EE 2007	Blindheim & Fris 2006
[5] <i>Serratella ignita</i> f. <i>lactata</i> (Bengtsson, 1909)	3 F+juv.	*AK	Oslo	Lyskerbekken 1		32VNM80954455	28	29.IX.2005	KMO	KMO 2005	EE 2007	-
<i>Serratella ignita</i> f. <i>lactata</i> (Bengtsson, 1909)	1 juv.	*AK	Oslo	Langfjelle		32VNM89205757	36	31.VII.2005	KMO	KMO 2005	EE 2007	-
<i>Epimeria danica</i> Müller, 1764	2 juv.	*AK	Bærum	Lyskerbekken 1		32VNM832474	28	24.III.2007	KMO/SR	KMO 2007	-	Olsen & Reiso 2005d
<i>Epimeria danica</i> Müller, 1764	1 juv.	*AK	Bærum	Lomma 2		32VNM832474	28	01.VII.2004	KMO/SR	KMO 2005	-	-
<i>Epimeria danica</i> Müller, 1764	2 M+F	*OS	Oslo	Stordalselva 2		32VNM832474	28	29.VI.2005	KMO/SR	KMO 2005	-	-
<i>Epimeria danica</i> Müller, 1764	1 juv.	*VE	Re	SW Etvet		32VNM832474	28	29.VI.2005	KMO/SR	KMO 2005	-	-
<i>Epimeria danica</i> Müller, 1764	1 juv.	*AK	Oslo	Bondbækken 2		32VNM817320	28	13.VII.2004	KMO	KMO 2004	-	Olsen & Reiso 2005d
<i>Epimeria danica</i> Müller, 1764	4 M+F+juv.	*AK	Asker	Storøya 1		32VNL666894	19	27.VII.2003	KMO/SR	KMO 2003	-	-
<i>Heptagenia sulphurea</i> (O.F. Müller, 1776)	3 juv.	*AAY	Birkenes	Bersbækken		32VWK54406575	6	06.IV.2007	KMO	KMO 2007	-	Olsen 2005b
<i>Kaibara tuberosa</i> (Reetz, 1783)	1 juv.	*ON	Dovre	N.Funheim		32VNP087777	71	30.VI.2003	KMO	EE 2007	-	Olsen 2005b
<i>Paraleptophlebia submarginata</i> (Stephenson, 1836)	3 juv.	*HES	Ringsaker	Tande		32VPM132495	29	09.IX.2004	KMO	KMO 2005	-	Olsen & Solvang 2006
<i>Siphonurus lacustris</i> Eaton, 1870	6 juv.	-	-	-		32VNM944540	54	03.VII.2006	KMO	KMO 2006	-	-
Plecoptera												
<i>Nemoura avicularis</i> Morton, 1894	1 juv.	*VAY	Kristiansand	Sagbækken		32VWK378414	2	25.I.2005	KMO	EE 2007	-	Bye 2005
[6] <i>Nemoura salibergi</i> Morton, 1896	1 F	*BØ	Lier	Ulvemann		32VNM157321	28	15.V.1993	KMO	KMO 2003	EE 2007	-
<i>Isoperla ciformis</i> (Klapálek, 1909)	1 juv.	*VE	Re	Vergjø 1		32VNL746851	19	16.X.2003	KMO	KMO 2004	-	-
Odonata												
<i>Aeshna cyanea</i> (O.F. Müller, 1764)	2 juv.	*HES	Ringsaker	Herabækken		32VNM98527	54	03.VII.2006	KMO	KMO 2006	-	-
<i>Aeshna cyanea</i> (O.F. Müller, 1764)	3 juv.	*AAY	Rygg og Hommes	SSIV Nybrua		32VNM30920	5	26.VII.2006	KMO	KMO 2006	-	-
<i>Aeshna grandis</i> (Linnaeus, 1758)	1 juv.	*TEY	Nome	Damliken		32VNL171688	18	22.VIII.2002	KMO	KMO 2002	HO 2003	-
<i>Aeshna juncea</i> (Linnaeus, 1758)	1 juv.	*TEY	Nome	Damliken		32VNL171688	18	22.VIII.2002	KMO	KMO 2002	HO 2003	-
[7] <i>Aeshna mixta</i> Latreille, 1805	3 M	*TEY	Skien	Børsejø		32VNL354653	18	10.IX.2004	KMO/SR	KMO/SR 2005	-	Olsen & Reiso 2005b
<i>Brachytron pratense</i> (O.F. Müller, 1764)	x ad. (O)	*NT (R)	AAY	Arendal	Soletjern	32VWK625914	6	28.VI.2003	KMO et al.	DD et al. 2003	-	-
<i>Brachytron pratense</i> (O.F. Müller, 1764)	x juv.	*NT (R)	AAY	Arendal	Ubeholdtjern	32VWK625914	6	28.VI.2003	KMO et al.	DD et al. 2003	-	-
<i>Caopteryx splendens</i> (Harris, 1782)	1 juv.	*EN (E)	VE	Re	Storøya 1	32VNL666894	19	27.VII.2003	KMO/SR	KMO 2003	HO 2004	-
<i>Caopteryx splendens</i> (Harris, 1782)	1 juv.	*EN (E)	VE	Re	Storøya 3	32VNL701669	19	27.VII.2003	KMO/SR	KMO 2003	HO 2004	-
<i>Caopteryx splendens</i> (Harris, 1782)	x M+F	*EN (E)	VE	Re	Storøya 1	32VNL666894	19	14.VII.2004	KMO/SR	KMO/SR 2004	-	-
<i>Coenagrion armatum</i> (Charpentier, 1840)	4 juv.	*AK	Skedsmo	S.Kjeller		32VPM132495	29	09.IX.2004	SR	KMO 2005	-	Olsen & Reiso 2005d
<i>Coenagrion armatum</i> (Charpentier, 1840)	5 M+F	*BØ	Ringerike	Spjollvannet		32VNM1734655	36	05.VII.2003	SR	SR 2005	-	-

Table 1. continued

Species [note]	#	R1 (R2)	County	Municipality	Locality	MGRS ^{Europe99}	EIS	Date	Leg.	Det.	Rev.	Reference
<i>Coenagrion hastulatum</i> (Charpentier, 1825)	1 juv.	-	*AAI	Evje & Hornnes	Langefjonn	32VMK298919	5	26.VII.2005	KMO	KMO 2005	-	Solvang 2004a
<i>Coenagrion johanssoni</i> (Wallengren, 1894)	1 M	-	(*)FØ	Ser-Varanger	Ødevatnet	35WNS7964	160	05.VIII.1983	KMO	KMO 2006	HO 2007	-
<i>Coenagrion johanssoni</i> (Wallengren, 1894)	1 M	-	*AAI	Evje & Hornnes	S Knuten	32VMK315924	5	26.VII.2005	KMO	KMO 2005	HO 2007	Solvang 2004a
<i>Coenagrion lunulatum</i> (Charpentier, 1840)	1 M	NT (R)	AAY	Froland	Båstienfjern	32VMK652865	6	28.VI.2003	KMO	KMO 2004	-	-
<i>Cordulegaster boltoni</i> (Donovan, 1807)	1 F	(R)	AK	Åsker	E Åsker stadion	32VNM802339	28	29.VII.2004	KMO	KMO 2004	HO 2004	Olsen & Reiso 2005a
<i>Cordulegaster boltoni</i> (Donovan, 1807)	1 juv.	(R)	AK	Lørenskog	Loslyvelva 8	32VPM114397	29	01.VII.2003	SR	KMO 2004	-	Reiso & Olsen 2004a
<i>Cordulegaster boltoni</i> (Donovan, 1807)	1 M	(R)	AK	Lørenskog	Loslyvelva 8	32VPM114397	29	14.VII.2003	SR	KMO 2004	-	Reiso & Olsen 2004a
<i>Cordulegaster boltoni</i> (Donovan, 1807)	1 F (O)	(R)	AK	Nes1	Sagstua 2	32VPM424651	37	03.VII.2003	SR	SR 2003	-	Reiso 2003b
<i>Cordulegaster boltoni</i> (Donovan, 1807)	1 juv.	(R)	AK	Oslo	E Haugen	32VNI895548	36	08.VII.2002	KMO/SR	KMO 2002	HO 2003	Blindheim et al. 2003
<i>Cordulegaster boltoni</i> (Donovan, 1807)	1 juv.	(R)	AK	Oslo	SW Hølet	32VNI894553	36	08.VII.2002	KMO/SR	KMO 2002	HO 2003	Blindheim et al. 2003
<i>Cordulegaster boltoni</i> (Donovan, 1807)	4 juv.	(R)	AK	Oslo	SW Furumokollen	32VNI980569	36	08.VII.2002	KMO/SR	KMO 2002	HO 2003	Blindheim et al. 2003
<i>Cordulegaster boltoni</i> (Donovan, 1807)	1 juv.	(R)	AK	Oslo	E Stienfjell	32VNI983557	36	08.VII.2002	KMO/SR	KMO 2002	HO 2003	Blindheim et al. 2003
<i>Cordulegaster boltoni</i> (Donovan, 1807)	1 juv.	(R)	AK	Oslo	Østre Aurljern E	32VNI948543	36	09.VII.2002	KMO/SR/AØP	KMO 2002	HO 2003	Blindheim et al. 2003
<i>Cordulegaster boltoni</i> (Donovan, 1807)	1 juv.	(R)	AK	Oslo	S Lørenseterfjern	32VNI939548	36	09.VII.2002	KMO/SR/AØP	KMO 2002	HO 2003	Blindheim et al. 2003
<i>Cordulegaster boltoni</i> (Donovan, 1807)	3 juv.	(R)	AK	Oslo	S Nordseter	32VNI973527	36	19.VII.2002	KMO/SR	KMO 2002	HO 2003	Blindheim et al. 2003
<i>Cordulegaster boltoni</i> (Donovan, 1807)	3 juv.	(R)	AK	Oslo	SE Sikersjøgdammen	32VNI963537	36	19.VII.2002	KMO/SR	KMO 2002	HO 2003	Blindheim et al. 2003
<i>Cordulegaster boltoni</i> (Donovan, 1807)	2 F-juv.	(R)	AK	Oslo	Jegersborgdammen	32VNI910496	28	20.IX.2005	KMO	KMO 2005	-	Heggland et al. 2006
<i>Cordulegaster boltoni</i> (Donovan, 1807)	1 M	(R)	HES	Gne	Løvhaugåa	33VUJ640055	47	15.VI.2004	SR	SR 2004	-	Reiso et al. 2005
<i>Cordulegaster boltoni</i> (Donovan, 1807)	1 ad. (O)	(R)	*TEY	Siljan	Siljanveva 2	32VNI403722	18	10.VI.2003	SR	SR 2003	-	Reiso 2003a
<i>Cordulegaster boltoni</i> (Donovan, 1807)	1 juv.	(R)	VAY	Kristiansand	Kvernbecken II	32VMK382419	2	25.I.2005	KMO	KMO 2005	-	Bye 2005
<i>Cordulegaster boltoni</i> (Donovan, 1807)	1 juv.	(R)	AAY	Vegarshel	Vågebekken	32VMI892021	10	29.VI.2003	KMO et al.	KMO 2005	-	Solvang 2004a
<i>Cordulegaster boltoni</i> (Donovan, 1807)	1 juv.	(R)	*AAI	Evje & Hornnes	N Persle	32VMK304911	5	26.VII.2005	KMO	KMO 2005	HO 2003	-
<i>Cordulia aenea</i> (Linnaeus, 1758)	1 juv.	-	*TEY	Skien	WNV Svartfjern	32VNL221551	18	29.VI.2002	KMO	KMO 2002	HO 2003	-
<i>Somatochlora arctica</i> (Zeitstedt, 1840)	1 F	-	*TEY	Name	Damjern	32VNL171688	18	22.VIII.2002	KMO	KMO 2002	HO 2003	-
<i>Gomphus vulgatissimus</i> (Linnaeus, 1758)	3 juv.	EN (E)	AK	Aurskog-Høland	Mjerna 1	32VPM437222	29	15.VI.2004	KMO	KMO 2005	-	Olsen & Reiso 2005d
<i>Oxygomphus forcipatus</i> (Linnaeus, 1758)	2 juv.	EN (V)	AK	Aurskog-Høland	Mjerna 1	32VPM437222	29	15.VI.2004	KMO	KMO 2005	-	Olsen & Reiso 2005d
<i>Oxygomphus forcipatus</i> (Linnaeus, 1758)	3 juv.	EN (V)	AK	Aurskog-Høland	Mjerna 2	32VPM421199	29	15.VI.2004	KMO	KMO 2005	-	Olsen & Reiso 2005d
<i>Oxygomphus forcipatus</i> (Linnaeus, 1758)	2 juv.	EN (V)	AK	Lørenskog	Loslyvelva 8	32VPM114397	29	20.V.2003	SR	KMO 2004	-	Reiso & Olsen 2004a
<i>Oxygomphus forcipatus</i> (Linnaeus, 1758)	5 juv.	EN (V)	AK	Lørenskog	Loslyvelva 9	32VPM114396	29	20.V.2003	SR	SR 2004	-	Reiso & Olsen 2004a
<i>Oxygomphus forcipatus</i> (Linnaeus, 1758)	3 juv.	EN (V)	AK	Lørenskog	Loslyvelva 8	32VPM114397	29	01.VII.2003	SR	KMO 2004	-	Reiso & Olsen 2004a
<i>Oxygomphus forcipatus</i> (Linnaeus, 1758)	2 juv.	EN (V)	AK	Lørenskog	Loslyvelva 9	32VPM114396	29	01.VII.2003	SR	KMO 2004	-	Reiso & Olsen 2004a
<i>Oxygomphus forcipatus</i> (Linnaeus, 1758)	1 M	EN (V)	AK	Lørenskog	Loslyvelva 8	32VPM114397	29	14.VI.2003	SR	KMO 2004	-	Reiso & Olsen 2004a
<i>Oxygomphus forcipatus</i> (Linnaeus, 1758)	2 juv.	EN (V)	AK	Nes1	Kiensmøtjernet E	32VPM365570	37	02.VII.2003	KMO/SR	KMO 2003	-	Reiso & Olsen 2004a
<i>Oxygomphus forcipatus</i> (Linnaeus, 1758)	3 juv.	EN (V)	AK	Nes1	Sagstua 2	32VPM424651	37	03.VII.2003	SR	SR 2003	-	Reiso 2003b
<i>Oxygomphus forcipatus</i> (Linnaeus, 1758)	2 juv.	EN (V)	AK	Oslo	SW Furumokollen	32VNI980569	36	08.VII.2002	KMO/SR	KMO 2002	HO 2003	Blindheim et al. 2003
<i>Oxygomphus forcipatus</i> (Linnaeus, 1758)	1 ad. (O) EN (V)	**TEY	AK	Siljan	Siljanveva 2	32VNI403722	18	10.VI.2003	SR	SR 2003	-	Reiso 2003a
<i>Leucorrhinia albifrons</i> (Burmeister, 1839)	1 ad. (O) NT (V)	AAY	Vegarshel	Vågebekken	32VMI892021	10	29.VI.2003	KMO et al.	DD et al. 2003	-	-	
<i>Leucorrhinia albifrons</i> (Burmeister, 1839)	x ad. (O) NT (V)	AAY	Vegarshel	Vågebekken	32VMI920169	10	29.VI.2003	KMO et al.	DD et al. 2003	-	-	
<i>Leucorrhinia dubia</i> (Vander Linden, 1825)	1 M	-	*ON	Øystre Slidre	SE Grenshovda	32VMI913888	52	18.VI.2003	KMO	KMO 2003	-	Larsen et al. 2003
<i>Leucorrhinia pectoralis</i> (Charpentier, 1825)	3 M	VU (R)	AK	Ski	S Brubåren 1	32VPM076271	28	07.VII.2005	KMO	KMO 2005	-	Blindheim et al. 2006
<i>Leucorrhinia pectoralis</i> (Charpentier, 1825)	x ad. (O) VU (R)	AAY	Arendal	Sølietjern	32VNI825914	6	28.VI.2003	KMO	DD et al. 2003	-	Olsen & Heggland 2005	
<i>Leucorrhinia rubicunda</i> (Linnaeus, 1758)	4 juv.	EN (V)	**AAY	Froland	Koatangen	32VNI093849	18	03.X.2005	KMO	KMO 2005	-	-
<i>Libellula depressa</i> Linnaeus, 1758	4 juv.	EN (V)	AK	Ås	Jurda sløifjernet	32VMI538008	10	18.VI.2003	KMO	KMO 2004	-	-
<i>Libellula depressa</i> Linnaeus, 1758	7 juv.	EN (V)	AK	Ås	SW Sorås	32VNI99671476	28	30.IX.2004	KMO	KMO 2004	-	Blindheim & Olsen 2005a
<i>Libellula depressa</i> Linnaeus, 1758	1 ad. (O)	EN (V)	AK	Ås	ENE Dyster	32VPM02451487	28	30.IX.2004	KMO	KMO 2004	-	Blindheim & Olsen 2005a
<i>Orithium coerulescens</i> (Fabricius, 1798)	1 M	(R)	TEY	Skien	Stavdal	33VUJ79390445	65	22.VI.2004	KMO	KMO 2004	-	-
<i>Orithium coerulescens</i> (Fabricius, 1798)	x F (O)	(R)	AAY	Arendal	Sølietjern	32VMI825914	6	29.VI.2003	KMO et al.	DD et al. 2003	HO 2003	-
<i>Orithium coerulescens</i> (Fabricius, 1798)	1 juv.	(R)	AAY	Vegarshel	Vågebekken	32VMI892021	10	29.VI.2003	KMO et al.	DD et al. 2003	-	-
<i>Sympetrum danae</i> (Sulzer, 1776)	4 M-juv.	-	*AAI	Evje & Hornnes	Bjøråvika	32VMK295914	5	26.VII.2005	KMO	KMO 2005	-	Solvang 2004a
<i>Sympetrum flavolum</i> (Linnaeus, 1758)	2 M+F	(R)	AK	Enebakk	SW Tørgen	32VPM236241	29	25.VIII.2003	KMO/SR	KMO 2003	-	-
<i>Sympetrum flavolum</i> (Linnaeus, 1758)	x ad. (O) (R)	AK	Enebakk	Enebakk	Prestaa inner	32VPM217258	29	26.VIII.2003	KMO/SR	KMO 2003	-	Olsen 2004a

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Table 1. continued

Species [note]	#	R1	(R2)	County	Municipality	Locality	MGRSeurEF99	EIS	Date	Leg.	Det.	Rev.	Reference	
<i>Sympetrum flavellum</i> (Linnaeus, 1758)	1 M	(R)		AK	Enebakk	W Torshov	32VPM236276	29	26.VIII.2003	KMO/SR	KMO 2003	-	-	
<i>Sympetrum flavellum</i> (Linnaeus, 1758)	1 M (O)	(R)		AK	Enebakk	N Bakk	32VPM236281	29	26.VIII.2003	KMO/SR	KMO 2003	-	Olsen 2004a	
<i>Sympetrum flavellum</i> (Linnaeus, 1758)	1 M	(R)		AK	Fet	Bergebøkken 4	32VPM190466	29	27.VIII.2004	KMO	KMO 2004	-	Olsen & Reiso 2005d	
<i>Sympetrum flavellum</i> (Linnaeus, 1758)	1 M (O)	(R)		AK	Fet	Varaa	32VPM210461	29	28.IX.2004	KMO/SR	SR 2004	-	Olsen & Reiso 2005d	
<i>Sympetrum flavellum</i> (Linnaeus, 1758)	3 M+ F	(R)		AK	Lørenskog	Langlemet S	32VPM0975425	28	28.VIII.2003	KMO/SR	KMO 2004	-	Reiso & Olsen 2004a	
<i>Sympetrum flavellum</i> (Linnaeus, 1758)	1 M	(R)		AK	Lørenskog	Langlemet N	32VPM031463	28	28.VIII.2003	KMO/SR	KMO 2004	-	-	
<i>Sympetrum flavellum</i> (Linnaeus, 1758)	3 M+ F	(R)		AK	Lørenskog	Fjellhamar st. S	32VPM12464	28	25.VII.1999	KMO	KMO 1999	-	Reiso 2003b	
<i>Sympetrum flavellum</i> (Linnaeus, 1758)	1 M	(R)		AK	Nes1	E Øvre Frislad	32VPM3265723	37	03.IX.2003	KMO/SR	KMO 2003	-	Olsen & Reiso 2005d	
<i>Sympetrum flavellum</i> (Linnaeus, 1758)	1 M	(R)		AK	Ski	Kapelldammen	32VPM0343274	28	06.IX.2005	KMO	KMO 2005	-	Olsen & Reiso 2005d	
<i>Sympetrum flavellum</i> (Linnaeus, 1758)	1 M	(R)		AK	Skeiemo	S Kjeller	32VPM132495	29	09.IX.2004	SR	KMO 2005	-	-	
<i>Sympetrum flavellum</i> (Linnaeus, 1758)	1 M	(R)		AK	Serum	Tangen II	32VPM235609	37	28.IX.2004	KMO/SR	KMO/SR 2004	-	-	
<i>Sympetrum flavellum</i> (Linnaeus, 1758)	1 M	(R)		AK	Serum	SV Døsgården	32VNM986522	36	14.VI.2003	SR	KMO 2004	-	-	
<i>Sympetrum flavellum</i> (Linnaeus, 1758)	2 F	(R)		AK	Oslo	A Kireby	32VNM986522	36	14.VI.2003	SR	SR 2004	-	Olsen & Reiso 2004	
<i>Sympetrum flavellum</i> (Linnaeus, 1758)	2 M+ F	(R)		AK	Oslo	Edelstov	32VNM986522	36	01.IX.2003	SR	SR 2004	-	Olsen & Reiso 2004	
<i>Sympetrum flavellum</i> (Linnaeus, 1758)	2 F	(R)		AK	Oslo	Aldersveien W	32VNM18395	28	11.IX.2003	KMO	KMO 2004	-	Olsen & Reiso 2004	
<i>Sympetrum flavellum</i> (Linnaeus, 1758)	2 F	(R)		BØ	Ringerike	Sjøvollengen	32VNM746655	36	05.VI.2003	SR	SR 2005	-	-	
<i>Sympetrum flavellum</i> (Linnaeus, 1758)	1 M	(R)		TEY	Sillan	N Auen	32VNL486668	18	10.VI.2003	SR	SR 2004	-	-	
<i>Sympetrum flavellum</i> (Linnaeus, 1758)	1 M (O)	(R)		Ø	Hvaler	NW Diekasa	32VPL076539	20	15.VIII.2006	KMO/OMWK	KMO 2006	-	-	
<i>Sympetrum flavellum</i> (Linnaeus, 1758)	2 M+ F	(R)		Ø	Hvaler	N Sandvika	32VPL08055410	20	15.VIII.2006	KMO/OMWK	KMO 2006	-	-	
<i>Sympetrum flavellum</i> (Linnaeus, 1758)	1 M	(R)		Ø	Hvaler	Storengen	32VPL120885177	20	16.VIII.2006	KMO/OMWK	KMO 2006	-	-	
<i>Sympetrum flavellum</i> (Linnaeus, 1758)	1 M	(R)		Ø	Hvaler	E Stavsengen	32VPL187500	20	17.VIII.2006	KMO/OMWK	KMO 2006	-	-	
<i>Sympetrum flavellum</i> (Linnaeus, 1758)	1 M	(R)		Ø	Nes1	S Strøm	32VPM34176459	37	02.IX.2003	KMO/SR	KMO 2003	-	-	
<i>Sympetrum flavellum</i> (Linnaeus, 1758)	5 M+ F	(R)		**Oslo	Ausloug-Høland	Bogstadovann	32VNM905497	28	06.IX.2004	KMO/SR	KMO 2005	HO 2005	Olsen & Reiso 2005c	
<i>Sympetrum sanguineum</i> (O.F. Müller, 1764)	1 M	(R)		EN (V)	Bærum	Bergsvannet	32VPM397238	29	24.VIII.2004	KMO	KMO 2004	-	Olsen & Reiso 2005d	
<i>Sympetrum sanguineum</i> (O.F. Müller, 1764)	6 M+ F	(R)		EN (V)	Bærum	S Langdølvien	32VNM900397	28	06.IX.2006	KMO	KMO 2006	-	Blindheim & Olsen 2006	
<i>Sympetrum sanguineum</i> (O.F. Müller, 1764)	1 ad. (O)	(R)		EN (V)	Enebakk	SW Tangen	32VPM238241	29	25.VIII.2003	KMO/SR	KMO 2003	-	-	
<i>Sympetrum sanguineum</i> (O.F. Müller, 1764)	1 M	(R)		EN (V)	Fet	Siljåvika	32VPM241216	29	25.VIII.2003	KMO/SR	KMO 2003	-	Olsen 2004a	
<i>Sympetrum sanguineum</i> (O.F. Müller, 1764)	1 M	(R)		EN (V)	Fet	Varaa	32VPM210461	29	28.VIII.2003	KMO/SR	KMO 2004	-	Olsen & Reiso 2005d	
<i>Sympetrum sanguineum</i> (O.F. Müller, 1764)	1 M	(R)		EN (V)	Lørenskog	Langlemet S	32VPM0975425	28	28.VIII.2003	KMO/SR	KMO 2004	-	Reiso & Olsen 2004a	
<i>Sympetrum sanguineum</i> (O.F. Müller, 1764)	1 M	(R)		EN (V)	Lørenskog	Langlemet N	32VPM031463	28	28.VIII.2003	KMO/SR	KMO 2004	-	Reiso & Olsen 2004a	
<i>Sympetrum sanguineum</i> (O.F. Müller, 1764)	1 M	(R)		EN (V)	Nes1	SW Tveiten	32VPM3278169	37	02.IX.2003	KMO/SR	KMO 2003	-	Reiso 2003b	
<i>Sympetrum sanguineum</i> (O.F. Müller, 1764)	2 M+ F	(R)		EN (V)	Nes1	E Berg	32VPM32166274	37	02.IX.2003	KMO/SR	KMO 2003	-	Reiso 2003b	
<i>Sympetrum sanguineum</i> (O.F. Müller, 1764)	3 M+ F	(R)		EN (V)	Nes1	S Strøm	32VPM34176459	28	12.VII.2005	KMO	KMO 2005	-	Reiso 2003b	
<i>Sympetrum sanguineum</i> (O.F. Müller, 1764)	2 M	(R)		EN (V)	Ski	N Bogstadvann	32VPM0359265	28	09.IX.2005	KMO	KMO 2005	-	Blindheim et al. 2006	
<i>Sympetrum sanguineum</i> (O.F. Müller, 1764)	1 M	(R)		EN (V)	Ski	S Øverrud nordre	32VPM0739397	28	09.IX.2005	KMO	KMO 2005	-	Blindheim et al. 2006	
<i>Sympetrum sanguineum</i> (O.F. Müller, 1764)	1 M	(R)		EN (V)	Ski	E Snippegjernet	32VPM03193981	28	09.IX.2005	KMO	KMO 2005	-	Blindheim et al. 2006	
<i>Sympetrum sanguineum</i> (O.F. Müller, 1764)	3 M	(R)		EN (V)	Ski	Høleten	32VPM072296	28	09.IX.2005	KMO/SR	KMO 2005	-	Blindheim et al. 2006	
<i>Sympetrum sanguineum</i> (O.F. Müller, 1764)	3 M	(R)		EN (V)	Ski	S Kjeller	32VPM132495	29	09.IX.2004	SR	KMO 2005	-	Olsen & Reiso 2005d	
<i>Sympetrum sanguineum</i> (O.F. Müller, 1764)	2 M	(R)		EN (V)	Serum	Tangen II	32VPM235509	37	28.IX.2004	KMO/SR	KMO/SR 2004	-	Olsen & Reiso 2005d	
<i>Sympetrum sanguineum</i> (O.F. Müller, 1764)	1 F	(R)		EN (V)	As	SW Fjøsner	32VNM4771472	28	23.IX.2004	KMO	KMO 2004	-	Blindheim & Olsen 2005a	
<i>Sympetrum sanguineum</i> (O.F. Müller, 1764)	2 M	(R)		EN (V)	Oslo	Bogstadvann	32VNM905497	28	06.IX.2004	KMO/SR	KMO 2005	-	Olsen & Reiso 2005c	
<i>Sympetrum sanguineum</i> (O.F. Müller, 1764)	1 M	(R)		EN (V)	Oslo	Flåstadvann	32VNM9325420	28	08.VIII.2006	KMO	KMO 2006	-	Endrestøl et al. 2006	
<i>Sympetrum sanguineum</i> (O.F. Müller, 1764)	1 M	(R)		**HES	Hamar	Flåstadvann	32VPM148429	46	07.VIII.2006	KMO	KMO 2006	-	Olsen & Solvang 2006	
<i>Sympetrum sanguineum</i> (O.F. Müller, 1764)	1 ad.	(R)		EN (V)	TEY	Børsjø	32VNL354653	18	14.VII.2004	KMO/SR	KMO/SR 2004	-	Olsen & Reiso 2005b	
<i>Sympetrum sanguineum</i> (O.F. Müller, 1764)	5 M+ F	(R)		EN (V)	TEY	Skien	32VNL354653	18	15.VII.2004	KMO/SR	KMO 2005	-	Olsen & Reiso 2005b	
<i>Sympetrum sanguineum</i> (O.F. Müller, 1764)	3 juv.	(R)		EN (V)	TEY	Børsjø	32VNL354653	18	10.IX.2004	KMO/SR	KMO/SR 2000	-	Olsen & Reiso 2005b	
<i>Sympetrum sanguineum</i> (O.F. Müller, 1764)	1 M	(R)		EN (V)	VE	Paulerfjell	32VNL54224767	19	25.VII.2005	KMO	KMO 2005	-	-	
<i>Sympetrum sanguineum</i> (O.F. Müller, 1764)	1 M	(R)		EN (V)	Re	Revovanet 1	32VNL664923	19	27.VIII.2003	KMO/SR	KMO 2004	-	-	
<i>Sympetrum sanguineum</i> (O.F. Müller, 1764)	1 M	(R)		EN (V)	Re	Revovanet 2	32VNL670904	19	27.VIII.2003	KMO/SR	KMO 2004	-	-	
<i>Sympetrum sanguineum</i> (O.F. Müller, 1764)	1 M	(R)		EN (V)	Ø	Tvedalen	32VPL068537	20	15.VIII.2006	KMO/OMWK	KMO 2006	-	-	
<i>Sympetrum sanguineum</i> (O.F. Müller, 1764)	1 M	(R)		EN (V)	Ø	N Sandvika	32VPL08055410	20	16.VIII.2006	KMO/OMWK	KMO 2006	-	-	
<i>Sympetrum sanguineum</i> (O.F. Müller, 1764)	1 M	(R)		EN (V)	Ø	Hvaler	32VPL084466	12	15.VIII.2006	KMO/OMWK	KMO 2006	-	-	
<i>Sympetrum sanguineum</i> (O.F. Müller, 1764)	1 M	(R)		EN (V)	Ø	Hvaler	N Tangbukta	32VPL200453	12	17.VIII.2006	KMO/OMWK	KMO 2006	-	-
<i>Sympetrum sanguineum</i> (O.F. Müller, 1764)	2 M	(R)		EN (V)	Ø	Hvaler	Kåven	32VPM200453	12	26.VIII.2004	KMO/OMWK	KMO 2004	-	Olsen & Reiso 2005a
<i>Sympetrum vulgatum</i> (Linnaeus, 1758)	1 F (O)	(R)		VU (R)	Åsker	Vettra gård	32VNM62593286	28	16.IX.2004	KMO	KMO 2004	-	Blindheim et al. 2005	
<i>Sympetrum vulgatum</i> (Linnaeus, 1758)	1 F	(R)		VU (R)	Fet	Bergebøkken 4	32VPM190466	29	27.VIII.2004	KMO	KMO 2004	-	Olsen & Reiso 2005d	

Table 1. continued

Species [note]	#	R1 (R2)	County	Municipality	Locality	MGRSequences	EIS	Date	Leg.	Det.	Rev.	Reference
<i>Sympetrum vulgatum</i> (Linnaeus, 1758)	2 M	VU (R)	AK	Fet	Varå	32VPM210461	29	28.IX.2004	KMO/SR	KMO 2004	-	Olsen & Reiso 2005d
<i>Sympetrum vulgatum</i> (Linnaeus, 1758)	3 M+F	VU (R)	AK	Lørenskog	Langlemet S	32VPM0975425	28	28.VIII.2003	KMO/SR	KMO 2004	-	Reiso & Olsen 2004a
<i>Sympetrum vulgatum</i> (Linnaeus, 1758)	2 M	VU (R)	AK	Ski	Øg søndre	32VPM04671912	28	01.IX.2005	KMO	KMO 2005	-	Blindheim et al. 2006
<i>Sympetrum vulgatum</i> (Linnaeus, 1758)	x M	VU (R)	AK	Ski	Kraksdøvegen 18	32VPM0352073	28	06.IX.2005	KMO	KMO 2005	-	Blindheim et al. 2006
<i>Sympetrum vulgatum</i> (Linnaeus, 1758)	1 M	VU (R)	AK	Ski	Kaldelammen	32VPM03432214	28	06.IX.2005	KMO	KMO 2005	-	Blindheim et al. 2006
<i>Sympetrum vulgatum</i> (Linnaeus, 1758)	2 M	VU (R)	AK	Ski	E Snepelømet	32VPM03103081	28	09.IX.2005	KMO	KMO 2005	-	Blindheim et al. 2006
<i>Sympetrum vulgatum</i> (Linnaeus, 1758)	xx M+F	VU (R)	AK	Ski	Dalsbøekken 1	32VPM053232	28	12.IX.2005	KMO	KMO 2005	-	Blindheim et al. 2006
<i>Sympetrum vulgatum</i> (Linnaeus, 1758)	x M+F	VU (R)	AK	Ski	Dalsbøekken 2	32VPM024246	28	16.IX.2005	KMO	KMO 2005	-	Blindheim et al. 2006
<i>Sympetrum vulgatum</i> (Linnaeus, 1758)	x ad. (O)	VU (R)	AK	Ski	Dalsbøekken 3	32VPM019256	28	16.IX.2005	KMO	KMO 2005	-	Blindheim et al. 2006
<i>Sympetrum vulgatum</i> (Linnaeus, 1758)	x M	VU (R)	AK	Ski	Bindingsvann	32VPM109287	29	19.IX.2005	KMO/SR	KMO 2005	-	Blindheim et al. 2006
<i>Sympetrum vulgatum</i> (Linnaeus, 1758)	x ad. (O)	VU (R)	AK	Ski	Bindingsvann NE	32VPM096295	28	19.IX.2005	KMO/SR	KMO 2005	-	Blindheim et al. 2006
<i>Sympetrum vulgatum</i> (Linnaeus, 1758)	6 M+F	VU (R)	AK	Skeidsmo	S Kjeller	32VPM132495	29	09.IX.2004	SR	KMO 2005	-	Olsen & Reiso 2005d
<i>Sympetrum vulgatum</i> (Linnaeus, 1758)	2 M	VU (R)	AK	Sorrum	Tangen II	32VPM235509	37	28.IX.2004	KMO/SR	KMO/SR 2004	-	Olsen & Reiso 2005d
<i>Sympetrum vulgatum</i> (Linnaeus, 1758)	x ad. (O)	VU (R)	AK	As	Rustad III	32VPM6921547	28	22.IX.2004	KMO	KMO 2004	-	Blindheim & Olsen 2005a
<i>Sympetrum vulgatum</i> (Linnaeus, 1758)	2 M	VU (R)	AK	As	Hølstad nordre	32VNM9574190	28	22.IX.2004	KMO	KMO 2004	-	Blindheim & Olsen 2005a
<i>Sympetrum vulgatum</i> (Linnaeus, 1758)	1 M	VU (R)	AK	As	Venersgårds nordre	32VNM9351419	28	22.IX.2004	KMO	KMO 2004	-	Blindheim & Olsen 2005a
<i>Sympetrum vulgatum</i> (Linnaeus, 1758)	x ad. (O)	VU (R)	AK	As	Skefstad	32VNM95471437	28	23.IX.2004	KMO	KMO 2004	-	Blindheim & Olsen 2005a
<i>Sympetrum vulgatum</i> (Linnaeus, 1758)	2 M	VU (R)	AK	As	WNV Kinn	32VNM94971360	28	23.IX.2004	KMO	KMO 2004	-	Blindheim & Olsen 2005a
<i>Sympetrum vulgatum</i> (Linnaeus, 1758)	1 M	VU (R)	AK	As	SW Fjæser	32VNM84771472	28	23.IX.2004	KMO	KMO 2004	-	Blindheim & Olsen 2005a
<i>Sympetrum vulgatum</i> (Linnaeus, 1758)	x ad. (O)	VU (R)	AK	As	NW Klemmestein	32VNM94561478	28	23.IX.2004	KMO	KMO 2004	-	Blindheim & Olsen 2005a
<i>Sympetrum vulgatum</i> (Linnaeus, 1758)	3 M+F	VU (R)	AK	As	Snedtobøekken 2	32VNM98291660	28	30.IX.2004	KMO	KMO 2004	-	Blindheim & Olsen 2005a
<i>Sympetrum vulgatum</i> (Linnaeus, 1758)	4 M	VU (R)	AK	Oslo	Bogstadvann	32VNM9509497	28	06.IX.2004	KMO/SR	KMO 2005	-	Olsen & Reiso 2005c
<i>Sympetrum vulgatum</i> (Linnaeus, 1758)	1 M	VU (R)	AK	Oslo	Bogstadvann	32VNM9505497	28	18.VII.-06.IX.2004	KMO/SR	KMO 2005	-	Olsen & Reiso 2005c
<i>Sympetrum vulgatum</i> (Linnaeus, 1758)	1 M	VU (R)	AK	Oslo	Halsenjetnet	32VNM93254270	28	08.VIII.2006	KMO	KMO 2006	-	Endrestøl et al. 2006
<i>Sympetrum vulgatum</i> (Linnaeus, 1758)	2 M+F	VU (R)	AK	Oslo	Lindøya, pond	32VNM955403	28	29.IX.2006	KMO	KMO 2006	-	Endrestøl et al. 2006
<i>Sympetrum vulgatum</i> (Linnaeus, 1758)	3 F	VU (R)	BØ	Ringerike	Sjøvollangen	32VNM724655	36	05.VII.2003	SR	KMO 2005	-	Olsen & Solvang 2006
<i>Sympetrum vulgatum</i> (Linnaeus, 1758)	1 M	VU (R)	HES	Hamar	W Rådabu	32VPM150426	46	10.X.2006	KMO/SR	KMO 2006	-	Olsen & Reiso 2005b
<i>Sympetrum vulgatum</i> (Linnaeus, 1758)	1 M	VU (R)	**TEY	Skien	Børsejø	32VNL354663	18	14.VII.2004	KMO/SR	KMO 2005	-	Olsen & Reiso 2005b
<i>Sympetrum vulgatum</i> (Linnaeus, 1758)	1 M	VU (R)	TEY	Skien	Børsejø	32VNL354653	18	15.VII.2004	KMO/SR	KMO 2005	-	Olsen & Reiso 2005b
<i>Sympetrum vulgatum</i> (Linnaeus, 1758)	xx M+F	VU (R)	TEY	Skien	Børsejø	32VNL354653	18	14.VII.-19.VIII.2004	KMO/SR	SR 2005	-	Olsen & Reiso 2005b
<i>Sympetrum vulgatum</i> (Linnaeus, 1758)	7 M+F	VU (R)	TEY	Skien	Børsejø	32VNL354653	18	10.IX.2004	KMO/SR	KMO 2005	-	Olsen & Reiso 2005b
<i>Sympetrum vulgatum</i> (Linnaeus, 1758)	3 M+juv.	VU (R)	VE	Re	Revovannet 1	32VNL664923	19	27.VIII.2003	KMO/SR	KMO 2004	-	Olsen & Reiso 2005b
<i>Sympetrum vulgatum</i> (Linnaeus, 1758)	1 F	VU (R)	VE	Re	Revovannet 2	32VNL670904	19	27.VIII.2003	KMO/SR	KMO 2004	-	Olsen & Reiso 2005b
<i>Sympetrum vulgatum</i> (Linnaeus, 1758)	1 M	VU (R)	Ø	Hvaler	Sjøvollangen	32VPL068552	20	15.VIII.2006	KMO/OMWK	KMO 2006	-	-
<i>Sympetrum vulgatum</i> (Linnaeus, 1758)	1 M	VU (R)	Ø	Hvaler	NW Dukaas	32VPL076539	20	15.VIII.2006	KMO/OMWK	KMO 2006	-	-
<i>Sympetrum vulgatum</i> (Linnaeus, 1758)	1 M	VU (R)	Ø	Hvaler	Nesklein SE	32VPL078535	20	15.VIII.2006	KMO/OMWK	KMO 2006	-	-
<i>Sympetrum vulgatum</i> (Linnaeus, 1758)	1 M	VU (R)	Ø	Hvaler	S Kavika	32VPL208445	12	17.VIII.2006	KMO/OMWK	KMO 2006	-	-
<i>Platycnemis pennipes</i> (Pallas, 1771)	8 M+F+juv.	NT (R)	AK	Aurskog-Høland	Mjerna 1	32VPM437222	29	15.VI.2004	KMO	KMO 2005	-	Olsen & Reiso 2005d
<i>Platycnemis pennipes</i> (Pallas, 1771)	3 M+F+juv.	NT (R)	AK	Aurskog-Høland	Mjerna 2	32VPM421199	29	15.VI.2004	KMO	KMO 2005	-	Olsen & Reiso 2005d
<i>Platycnemis pennipes</i> (Pallas, 1771)	1 juv.	NT (R)	AK	Aurskog-Høland	Hølandselva 2	32VPM416195	29	15.VI.2004	KMO	KMO 2005	-	Olsen & Reiso 2005d
<i>Platycnemis pennipes</i> (Pallas, 1771)	2 juv.	NT (R)	AK	Aurskog-Høland	Hølandselva 1	32VPM393308	29	24.VIII.2004	KMO	KMO 2005	-	Olsen & Reiso 2005d
<i>Platycnemis pennipes</i> (Pallas, 1771)	4 juv.	NT (R)	AK	Lørenskog	Fjellhamar W	32VPM10104545	29	28.VIII.2003	KMO/SR	KMO 2004	-	Reiso & Olsen 2004a
<i>Platycnemis pennipes</i> (Pallas, 1771)	2 M	NT (R)	AK	Lørenskog	Fjellhamar S	32VPM112464	29	28.VIII.1999	KMO	KMO 1999	-	-
<i>Platycnemis pennipes</i> (Pallas, 1771)	1 ad. (O)	NT (R)	AK	Lørenskog	Langlemet S	32VPM0975425	28	25.VII.1999	KMO	KMO 1999	-	HO 2003
<i>Platycnemis pennipes</i> (Pallas, 1771)	1 M	NT (R)	AK	Nes1	Kjensmøtjernet E	32VPM365570	37	02.VII.2003	KMO/SR	KMO 2003	-	Reiso 2003b
<i>Platycnemis pennipes</i> (Pallas, 1771)	1 M	NT (R)	AK	Nes1	Støra	32VPM3425638	37	02.VII.2003	KMO/SR	KMO 2003	-	Reiso 2003b
<i>Platycnemis pennipes</i> (Pallas, 1771)	1 M	NT (R)	AK	Sorrum	Fossåa 2	32VPM296517	37	12.VII.2004	SR	SR 2005	-	Olsen & Reiso 2005d
<i>Platycnemis pennipes</i> (Pallas, 1771)	4 M+F	NT (R)	AK	Sorrum	Fossåa 3	32VPM280530	37	12.VII.2004	SR	SR 2005	-	Olsen & Reiso 2005d
Hemiptera												
<i>Apneobrotis aestivale</i> (Fabricius, 1794)	13 ad.+juv.	NT (V*)	AAY	Bikenes	Børsbøekken	32VMK54406575	6	06.IV.2007	KMO	KMO 2007	-	-
<i>Acrocoris carinata</i> (C.R. Sahlberg, 1819)	5 M+F+juv.	-	*TEY	Kragere	Stråhønen	32VNL370289	11	12.-13.VII.2006	KMO	KMO 2006	-	-
<i>Callicorixa praeusta</i> (Feber, 1848)	1 M	-	**VAY	Farsund	Lomssandøen	32VNL698382	1	03.IV.2007	KMO	KMO 2007	-	SBEN 2007
<i>Callicorixa praeusta</i> (Feber, 1848)	1 M	-	*TEY	Kragere	Stråhønen	32VNL370289	11	12.-13.VII.2006	KMO	KMO 2006	-	-

Olsen: Noteworthy records of freshwater insects in Norway

Table 1. continued

Species [note]	#	R1 (R2)	County	Municipality	Locality	MGRSeUR99	EIS	Date	Leg.	Det.	Rev.	Reference
[10]Callinota wollastoni (Douglas & Scott, 1865)	2 M+F	-	*AK	Nes1	S Nedre Våstad	32VPM2969787	37	03.IX.2003	KMO/SR	KMO 2003	SBEN 2007	-
[10]Callinota wollastoni (Douglas & Scott, 1865)	5 M+F	-	**Oslo	Ringsaker	Voisenkølvveien30	32VNM92704938	28	21.IX.2004	KMO	KMO 2004	-	-
Corixa dentipes Thomson, 1869	1F	-	*HES	Sauherad	Tande	32VNN944540	54	03.VII.2006	KMO	KMO 2006	-	Olsen & Solvang 2006
Corixa dentipes Thomson, 1869	4 M+F	-	**TEI	Sauherad	Gvarnhølen	32VNL102831	18	03.X.2005	KMO	KMO 2005	-	Olsen & Heggland 2005
Corixa panzeri Fieber, 1848	1F	VU	*AY	Arendal	N Drevik	32VMM907796	6	17.V.2005	KMO	KMO 2007	-	-
Corixa punctata (Illiger, 1807)	1 juv.	-	**TEY	Kragerø	Strandhøen	32VNL370289	11	12.-13.VII.2006	KMO	KMO 2006	SBEN 2007	-
Corixa punctata (Illiger, 1807)	16 M+F	-	**VAY	Farsund	Kuljø 3	32VNL653498	1	03.IV.2007	KMO	KMO 2007	-	-
Cymatia bondorffii (C.R. Sanberg, 1819)	6 M+F-juv.	-	**ON	Øystre Sidre	SE Grønholvoda	32VMM913888	52	18.VI.2003	KMO	KMO 2003	-	Larsen et al. 2003
Hesperocorixa castanea (Thomson, 1869)	2 M+F	-	*TEI	Sauherad	Gvarnhølen	32VNL102831	18	03.X.2005	KMO	KMO 2005	-	Olsen & Heggland 2005
Hesperocorixa castanea (Thomson, 1869)	9 M+F	-	*AK	Sk	Myrer østre	32VPM09291537	23	01.IX.2005	KMO	KMO 2005	-	Blindheim et al. 2006
Hesperocorixa immai (Fieber, 1848)	4 M+F	-	*HES	Hamar	W Riddabu	32VNL733881	19	30.IX.2003	KMO	KMO 2004	-	Olsen & Solvang 2006
Hesperocorixa immai (Fieber, 1848)	xx M+F	-	*TEI	Sauherad	Bogstl	32VNL093856	18	03.X.2005	KMO/SR	KMO 2006	-	Olsen & Heggland 2005
Hesperocorixa sahnbergi (Fieber, 1848)	4 juv.	-	**HES	Ringsaker	Bogstl	32VNN925234	54	03.VII.2006	KMO	KMO 2006	-	Olsen & Heggland 2006
Hesperocorixa sahnbergi (Fieber, 1848)	2 M+F	-	*AAI	Evje og Hommes	N Ferstie	32VMM3309411	5	26.VI.2005	KMO	KMO 2005	-	Solvang 2004a
Paracornix concinna (Fieber, 1848)	1F	NT (V)	AK	Bærum	Ropemøhlen	32VNM89390	28	12.IX.2005	KMO	KMO 2006	-	Blindheim & Olsen 2006
Paracornix concinna (Fieber, 1848)	1M	NT (V)	AK	Sk	E Snipelømet	32VPM03193081	28	09.IX.2005	KMO	KMO 2005	-	Blindheim et al. 2006
Paracornix concinna (Fieber, 1848)	1F	NT (V)	AK	Ås	SW Fjøsner	32VMM4771472	28	23.IX.2004	KMO	KMO 2004	-	Blindheim & Olsen 2005a
Paracornix concinna (Fieber, 1848)	3F	NT (V)	**Oslo	Oslo	Øvre Frognerdam	32VNM952444	28	10.VI.2003	KMO	KMO 2003	JHS 2004	Olsen & Reiso 2004
Paracornix concinna (Fieber, 1848)	10 M+F	-	NT (V)	AK	N Grinddammen	32VMM8122472	28	22.IX.2004	KMO	KMO 2004	-	Blindheim & Fris 2006
Paracornix concinna (Fieber, 1848)	1F	NT (V)	RY	Hå	Sahlåna	32VLL00701032	7	03.IV.2007	KMO	KMO 2007	-	-
Paracornix concinna (Fieber, 1848)	2F	NT (V)	**RY	Klepp	W Nygard	32VLL006169	7	03.IV.2007	KMO	KMO 2007	-	-
Paracornix concinna (Fieber, 1848)	3 M+F	NT (V)	RY	Klepp	Ergravatnet	32VLL0081543	7	03.IV.2007	KMO	KMO 2007	-	-
Paracornix concinna (Fieber, 1848)	1M	NT (V)	Ø	Hvaler	Sauholmen 1	32VPI07374914	12	26.VIII.2005	KMO	KMO 2005	-	Heggland & Blindheim 2005
Paracornix concinna (Fieber, 1848)	4 M+F	-	**HES	Ringsaker	Daali	32VPM99475	45	03.VII.2006	KMO	KMO 2006	-	Olsen & Solvang 2006
Paracornix concinna (Fieber, 1848)	5 M+F	-	*TEI	Sauherad	Gvarnhølen	32VNL102831	18	03.X.2005	KMO	KMO 2005	-	Olsen & Heggland 2005
Paracornix concinna (Fieber, 1848)	4F	-	*HES	Hamar	W Riddabu	32VPM150426	46	10.X.2006	KMO/SR	KMO 2006	-	Olsen & Solvang 2006
[11]Sigara dorsalis strata	1F	-	*TEI	Sauherad	Gvarnhølen	32VNL102831	18	03.X.2005	KMO	KMO 2005	SBEN 2007	-
[11]Sigara dorsalis strata	1F	-	*TEI	Sauherad	Gvarnhølen	32VNL102831	18	03.X.2005	KMO	KMO 2005	-	Olsen & Heggland 2005
Sigara fahleri (Fieber, 1848)	1F	-	*HEN	Trysil	Ystergene	33VUJ519024	65	23.VI.2004	KMO/SR	KMO 2004	-	-
Sigara fossanum (Leach, 1817)	3 M+F	-	*TEI	Sauherad	Gvarnhølen	32VNL102831	18	03.X.2005	KMO	KMO 2005	-	Olsen & Heggland 2005
Sigara fossanum (Leach, 1817)	1F	-	*AAI	Evje og Hommes	Bjøravika	32VMM295914	5	26.VI.2005	KMO	KMO 2005	-	Solvang 2004a
[12]Sigara hellensis (C.R. Sanberg, 1819)	5 M+F	EN (ExC)	AK	Edsvoll	W Jøndal	32VPM267671	37	07.IX.2004	KMO/SR	KMO 2004	-	Olsen & Reiso 2005d
Sigara lateralis (Leach, 1817)	1M	-	*AK	Ås	WNV Kim	32VMM94971360	28	23.IX.2004	KMO	KMO 2004	-	Olsen & Reiso 2004
Sigara lateralis (Leach, 1817)	1M	-	**Oslo	Oslo	Øvre Frognerdam	32VNM952444	28	10.VI.2003	KMO	KMO 2003	-	-
Sigara lateralis (Leach, 1817)	9 M+F	-	*VE	Re	Helan	32VNL723797	19	01.X.2003	KMO	KMO 2003	-	Olsen & Reiso 2004
Sigara lateralis (Leach, 1817)	3 M+F	(DM)	AK	Gjerdum	Serum	32VPM161605	37	20.VI.2004	KMO	KMO 2004	SBEN 2007	Blindheim & Olsen 2005b
Sigara limitata (Fieber, 1848)	1F	(DM)	AK	Nannestad	Breen	32VPM108811	37	01.X.2002	KMO	KMO 2002	KMO 2005	-
Sigara limitata (Fieber, 1848)	1M	(DM)	AK	Oslo	Lindvya, pond	32VNM956403	28	29.IX.2006	KMO	KMO 2006	SBEN 2007	Endrestøl et al. 2006
Sigara limitata (Fieber, 1848)	1F	(DM)	HES	Hamar	Flagsjødelven	32VPM148429	46	07.VIII.2006	KMO	KMO 2006	SBEN 2007	-
Sigara limitata (Fieber, 1848)	1F	(DM)	**HES	Ringsaker	Tande	32VNM944540	54	03.VII.2006	KMO	SBEN 2007	-	Olsen & Solvang 2006
Sigara nigrolineata (Fieber, 1848)	1M	-	*HEN	Trysil	Storøken	33VUJ474128	65	23.VI.2004	KMO	KMO 2004	-	-
Sigara seministrata (Fieber, 1848)	1M	-	**TEY	Kragerø	Strandhøen	32VNL370289	11	12.-13.VII.2006	KMO	KMO 2006	-	-
Sigara seministrata (Fieber, 1848)	3 juv.	-	*AAI	Evje og Hommes	SSW Nybrua	32VMM309520	5	26.VI.2005	KMO	KMO 2006	-	Olsen & Reiso 2005b
Sigara strata (Lmaeus, 1758)	2 juv.	-	**TEY	Skien	Børsejø	32VNL354653	18	14.VI.2004	KMO/SR	KMO 2005	-	-
Aquatris paludum (Fabricius, 1794)	1 ad.	-	**TEY	Skien	W Solheim	32VNL230533	18	29.VI.2002	KMO	KMO 2002	-	-
Gerris lateralis Schummel, 1832	1F	-	*VE	Larvik	Stavem festn. 2	32VNL596397	19	06.VI.2003	KMO	KMO 2003	-	-
Gerris odonogaster (Zetterstedt, 1828)	1M	-	*AAI	Evje og Hommes	Langeløym	32VMM298919	5	26.VI.2005	KMO	KMO 2005	-	Solvang 2004a
Gerris thoracicus Schummel, 1832	3 M+juv.	-	**TEY	Kragerø	Strandhøen	32VNL370289	11	12.-13.VII.2006	KMO	KMO 2006	-	Olsen 2007a
Gerris thoracicus Schummel, 1832	2 M	-	*VE	Larvik	Stavem festn. 4	32VNL595402	19	06.VI.2003	KMO	KMO 2003	-	Solvang 2004a
Limnopyma rufocollatum (Latreille, 1807)	1 ad.	-	*TEY	Skien	Igfjøen	32VNL211527	18	28.VI.2002	KMO	KMO 2003	-	-
Hydrometra gracientia Hovath, 1899	2 M	(DM)	AK	Aurskog-Holand	Holandselva 1	32VPM393308	29	24.VIII.2004	KMO	KMO 2004	-	Olsen & Reiso 2005d
Hydrometra gracientia Hovath, 1899	2 M	(DM)	AK	Asker	Gjellummet 1	32VNM866294	28	13.VI.2004	KMO	KMO 2005	-	Olsen & Reiso 2005
Hydrometra gracientia Hovath, 1899	1 ad.	(DM)	AK	Asker	Gjellummet 2	32VNM869286	28	13.VI.2004	KMO	KMO 2004	-	Olsen & Reiso 2005d
Hydrometra gracientia Hovath, 1899	2 M+juv.	(DM)	AK	Asker	Sem bro 1	32VNM7962357	28	26.VIII.2004	KMO	KMO 2004	-	Olsen & Reiso 2005a

Table 1. continued

Species [note]	#	Rt (R2)	County	Municipality	Locality	MGRS	EIS	Date	Leg.	Det.	Rev.	Reference
<i>Hydrometra gracilenta</i> Hovath, 1899	2 ad.	(DM)	AK	Asker	Bondvannet	32VM60313296	28	26.VIII.2004	KMO	KMO 2004	-	Olsen & Reiso 2005a
<i>Hydrometra gracilenta</i> Hovath, 1899	2 M	(DM)	AK	Bærum	Lomma 3	32VM6832423	28	01.VI.2004	KMO/SR	KMO 2005	-	Olsen & Reiso 2005d
<i>Hydrometra gracilenta</i> Hovath, 1899	2 M+juv.	(DM)	AK	Eidsvoll	Jondalsåla 2	32VPM271877	37	07.IX.2004	KMO/SR	KMO 2004	-	Olsen & Reiso 2005d
<i>Hydrometra gracilenta</i> Hovath, 1899	6 M+F	(DM)	AK	Enebakk	Holtfremt	32VPM201242	29	08.IX.2003	KMO	KMO 2003	-	-
<i>Hydrometra gracilenta</i> Hovath, 1899	1 F	(DM)	AK	Enebakk	Knattentjelm	32VPM203224	29	08.IX.2003	KMO	KMO 2003	-	-
<i>Hydrometra gracilenta</i> Hovath, 1899	1 F	(DM)	AK	Enebakk	Boneretva 1	32VPM197270	29	05.VI.2004	KMO	KMO 2004	-	Olsen & Reiso 2005d
<i>Hydrometra gracilenta</i> Hovath, 1899	1 juv.	(DM)	AK	Enebakk	Boneretva 2	32VPM208266	29	06.VI.2004	KMO	KMO 2005	-	Olsen & Reiso 2005d
<i>Hydrometra gracilenta</i> Hovath, 1899	2 M	(DM)	AK	Fet	S Stætersand	32VPM212481	29	28.IX.2004	KMO/SR	KMO 2004	-	Olsen & Reiso 2005d
<i>Hydrometra gracilenta</i> Hovath, 1899	1 M	(DM)	AK	Fet	Varåa	32VPM210461	29	28.IX.2004	KMO/SR	KMO 2005	-	Olsen & Reiso 2005d
<i>Hydrometra gracilenta</i> Hovath, 1899	1 M	(DM)	AK	Fet	Teigsåa	32VPM268280	29	28.IX.2004	KMO/SR	KMO 2004	-	Olsen & Reiso 2005d
<i>Hydrometra gracilenta</i> Hovath, 1899	1 F	(DM)	AK	Hurdal	N i Asand	32VPM1460027	46	05.IX.2003	KMO	KMO 2004	-	Larsen et al. 2004
<i>Hydrometra gracilenta</i> Hovath, 1899	1 F	(DM)	AK	Nes1	Sagstua 1	32VPM417663	37	03.VII.2003	Sr	Sr 2003	-	Reiso 2003b
<i>Hydrometra gracilenta</i> Hovath, 1899	1 M	(DM)	AK	Ski	Brusgaa	32VPM068200	28	07.VI.2005	KMO	KMO 2005	-	Blindheim et al. 2006
<i>Hydrometra gracilenta</i> Hovath, 1899	x M+F	(DM)	AK	Ski	Kapelldammen	32VPM0332214	28	06.IX.2005	KMO	KMO 2005	-	Blindheim et al. 2006
<i>Hydrometra gracilenta</i> Hovath, 1899	x ad.	(DM)	AK	Ski	Bondaldasen	32VPM078262	28	08.IX.2005	KMO	KMO 2005	-	Blindheim et al. 2006
<i>Hydrometra gracilenta</i> Hovath, 1899	1 M	(DM)	AK	Ski	Taralrudhyla	32VPM0330304	28	09.IX.2005	KMO	KMO 2005	-	Blindheim et al. 2006
<i>Hydrometra gracilenta</i> Hovath, 1899	3 M+F+juv.	(DM)	AK	Ski	Dalsbekken 1	32VPM053232	28	12.IX.2005	KMO	KMO 2005	-	Blindheim et al. 2006
<i>Hydrometra gracilenta</i> Hovath, 1899	1 F	(DM)	AK	Ski	Holejelm	32VPM072296	28	19.IX.2005	KMO/SR	KMO 2005	-	Blindheim et al. 2006
<i>Hydrometra gracilenta</i> Hovath, 1899	1 F	(DM)	AK	Ås	Polevamsstøkken2	32VM6762275	28	08.VI.2004	KMO	KMO 2005	-	Olsen & Reiso 2005d
<i>Hydrometra gracilenta</i> Hovath, 1899	x ad. (O)	(DM)	AK	Ås	NW Klomnesten	32VM694561478	28	23.IX.2004	KMO	KMO 2004	-	-
<i>Hydrometra gracilenta</i> Hovath, 1899	1 juv.	(DM)	**Oslo	Oslo	Skrapertudjelm	32VPM036382	28	21.VI.2004	KMO	KMO 2004	-	Olsen & Reiso 2005c
<i>Hydrometra gracilenta</i> Hovath, 1899	7 M+F	(DM)	AK	Oslo	Bogstadvatn	32VM6905497	28	06.IX.2004	KMO/SR	KMO 2005	-	Olsen & Reiso 2005c
<i>Hydrometra gracilenta</i> Hovath, 1899	1 F	(DM)	AK	Oslo	Bygdø kongsgård	32VM6938426	28	09.VI.2006	KMO	KMO 2006	-	Endrestøl et al. 2006
<i>Hydrometra gracilenta</i> Hovath, 1899	4 M+F	(DM)	HES	Hamar	E Kulle	32VPM145433	46	10.X.2006	KMO	KMO 2006	-	Olsen & Solvang 2006
<i>Hydrometra gracilenta</i> Hovath, 1899	1 M	(DM)	**HES	Ringsaker	Delli	32VPM089475	45	03.VI.2006	KMO	KMO 2006	-	Olsen & Solvang 2006
<i>Hydrometra gracilenta</i> Hovath, 1899	1 F	(DM)	TEI	Sauherad	Gvanholen	32VNL102831	18	03.X.2005	KMO	KMO 2005	-	Olsen & Heggland 2005
<i>Hydrometra gracilenta</i> Hovath, 1899	2 F	(DM)	**TEY	Nome	Damjern	32VNL171688	18	22.VIII.2002	KMO	KMO 2002	-	Solvang 2003a
<i>Hydrometra gracilenta</i> Hovath, 1899	1 F	(DM)	TEY	Skien	Fjæretken inner	32VNL311610	18	30.VII.2002	KMO	KMO 2002	-	Solvang 2003a
<i>Hydrometra gracilenta</i> Hovath, 1899	4 M+F	(DM)	TEY	Skien	Børsesjø	32VNL354653	18	03.VI.2004	KMO/SR	KMO 2005	-	Olsen & Reiso 2005b
<i>Hydrometra gracilenta</i> Hovath, 1899	1 M	(DM)	TEY	Skien	Børsesjø	32VNL354653	18	14.VI.2004	KMO/SR	KMO 2005	-	Olsen & Reiso 2005b
<i>Hydrometra gracilenta</i> Hovath, 1899	2 M+F	(DM)	TEY	Skien	Børsesjø	32VNL354653	18	14.VI.2004	KMO/SR	KMO 2004	-	Olsen & Reiso 2005b
<i>Hydrometra gracilenta</i> Hovath, 1899	1 F	(DM)	TEY	Skien	Børsesjø	32VNL354653	18	15.VI.2004	KMO/SR	KMO 2004	-	Olsen & Reiso 2005b
<i>Hydrometra gracilenta</i> Hovath, 1899	3 M+juv.	(DM)	TEY	Skien	Børsesjø	32VNL354653	18	19.VIII.2004	KMO	KMO 2005	-	Olsen & Reiso 2005b
<i>Hydrometra gracilenta</i> Hovath, 1899	x ad.	(DM)	TEY	Skien	Mørumtjern	32VNL222614	18	31.VIII.2004	KMO	KMO 2004	-	-
<i>Hydrometra gracilenta</i> Hovath, 1899	x ad.	(DM)	TEY	Skien	Ramsåsjøtjerna	32VNL411586	18	13.IX.2004	KMO	KMO 2004	-	-
<i>Hydrometra gracilenta</i> Hovath, 1899	1 ad.	(DM)	TEY	Skien	Skyer nordre	32VNL30986228	18	14.IX.2004	KMO	KMO 2004	-	-
<i>Hydrometra gracilenta</i> Hovath, 1899	x ad.	(DM)	TEY	Skien	Kikutjern	32VNL370677	18	14.IX.2004	KMO	KMO 2004	-	-
<i>Hydrometra gracilenta</i> Hovath, 1899	x ad.	(DM)	**VE	Re	Revovannt 1	32VNL664923	19	27.VIII.2003	KMO/SR	KMO 2004	-	Solvang 2003b
<i>Hydrometra gracilenta</i> Hovath, 1899	2 M+juv.	(DM)	AAY	Froland	Jomastjern	32VMK784949	6	18.VIII.2002	KMO	KMO 2002	-	Olsen & Reiso 2005b
<i>Hydrometra gracilenta</i> Hovath, 1899	2 F+juv.	(DM)	**TEY	Skien	Børsesjø	32VNL354653	18	15.VI.2004	KMO/SR	KMO 2005	-	Olsen & Reiso 2005b
<i>Mesovella furcata</i> Mulsant & Rey, 1852	1 ad.	-	**AAI	Evje og Hommes	Bjøravika	32VMK295914	5	26.VI.2005	KMO	KMO 2005	-	Solvang 2004a
<i>Nepa cinerea</i> Linnaeus, 1758	1 ad.	-	**TEI	Sauherad	Torshol	32VNL075853	18	03.X.2005	KMO	KMO 2005	-	Olsen & Heggland 2005
<i>Nepa cinerea</i> Linnaeus, 1758	2 juv.	-	**AAI	Evje og Hommes	Bjøravika	32VMK295914	5	26.VI.2005	KMO	KMO 2005	-	Solvang 2004a
<i>Nobnetica glacialis</i> Linnaeus, 1758	1 M	-	**TEI	Sauherad	Gvanvåhlen	32VNL102831	18	03.X.2005	KMO	KMO 2005	-	Olsen & Heggland 2005
<i>Nobnetica lutea</i> O.F. Müller, 1776	2 F	-	**AAI	Sauherad	Evju	32VNL093856	18	03.X.2005	KMO	KMO 2005	-	Olsen & Heggland 2005
<i>Nobnetica lutea</i> O.F. Müller, 1776	1 F	-	**AAI	Evje og Hommes	S Knuten	32VMK315924	5	26.VI.2005	KMO	KMO 2005	-	Olsen & Heggland 2005
<i>Nobnetica lutea</i> O.F. Müller, 1776	3 F	-	**AAY	Froland	Jomastjern	32VMK784949	6	18.VIII.2002	KMO	KMO 2002	-	Solvang 2004a
<i>Microvelia reticulata</i> (Burmeister, 1835)	4 ad.	-	**ON	Dovre	Angardtjernet S	32VNP128706	71	29.VI.2003	KMO	KMO 2003	-	Olsen 2005b
<i>Microvelia reticulata</i> (Burmeister, 1835)	2 ad.+juv.	-	**AAI	Evje og Hommes	Bjøravika	32VMK295914	5	26.VII.2005	KMO	KMO 2005	-	Solvang 2004a
Coleoptera												
<i>Donacia bicolor</i> Zschach, 1788	1 ad.	-	**TEY	Skien	Børsesjø	32VNL354653	18	15.VI.2004	KMO/SR	SO 2005	-	Olsen & Reiso 2005b
<i>Aclipsis cancellatus</i> (Nicolai, 1822)	2 M	-	*ON	Dovre	Angardtjernet N	32VNP128711	71	29.VI.2003	KMO	KMO 2003	-	Olsen 2005b
<i>Aclipsis cancellatus</i> (Nicolai, 1822)	1 F	-	**TEY	Nome	Damjern	32VNL171688	18	22.VIII.2002	KMO	KMO 2002	-	-
[13] <i>Agabius congener</i> (Thunberg, 1794)	2 M+F	-	*Ak	Hurdal	Gjødingelva 2	32VPM128986	37	05.IX.2003	KMO	SL 2004	-	-

Olsen: Noteworthy records of freshwater insects in Norway

Table 1. continued

Species [note]	#	R1 (R2)	County	Municipality	Locality	MGRSeurE99	EIS	Date	Leg.	Det.	Rev.	Reference
[13]Agabus congener (Thunberg, 1794)	2 M+F	-	**Oslo	Oslo	NNE Øvre Lyse	32VNM6635482	36	30.VIII.2005	KMO	KMO 2005	-	-
[13]Agabus congener (Thunberg, 1794)	1 F	-	**BØ	Lier	Gullaugodden	32VNM725230	28	26.V.2004	KMO/RS	SL 2007	-	-
[13]Agabus congener (Thunberg, 1794)	2 M+F	-	**HEN	Trysil	Blankloken	33VUJ4771144	65	23.VI.2004	KMO/SR	SL 2006	-	-
[13]Agabus congener (Thunberg, 1794)	1 M	-	**AAY	Froland	Jurdalsheis S	32VNL539003	10	11.V.2004	KMO	SL 2006	-	-
Dytiscus circumcinctus Ahrens, 1811	1 M	-	**TEY	Skien	Dyrkolliem	32VNL309721	18	31.VIII.2004	KMO/SR	KMO 2004	SL 2007	Olsen & Reiso 2005b
Hydraticus seminiger (De Geer, 1774)	1 M	-	**TEY	Skien	Børsejø	32VNL354653	18	14.VI.2004	KMO/SR	KMO 2005	-	-
[14]Hydrophorus geniculatus Thomson, 1856	1 F	-	**HEN	Trysil	Storøken	33VUJ474128	65	23.VI.2004	KMO	SL 2006	-	-
Hydrophorus strolia (Gyllenhal, 1826)	6 M+F	-	**AAY	Froland	Bjermasjøen	32VNL6523889	6	08.IV.2004	KMO	KMO 2004	-	-
Hygrobia impressopunctatus (Schaller, 1783)	1 F	-	**TEI	Sauherød	Evju	32VNL093856	18	03.X.2005	KMO	KMO 2005	-	Olsen & Heggland 2005
Hygrobia parallelogrammus (Ahrens, 1812)	3 M+F	VU (DC)	Ø	Hvaler	Finnegutten ste	32VPL17374175	45	24.VIII.2005	KMO/TBOMMK	KMO 2005	SL 2004	Heggland & Blindheim 2005
Ilvius picipes (Köby, 1837)	2 M+F	-	**AK	Hurdal	Damhytta	32VPM7000730	42	24.VI.2005	KMO	KMO 2004	-	-
Laccophilus poecilus Sharp, 1882	1 M	VU (V)	**VE	Lanrik	Poulsfjell	32VNL54224767	19	25.VII.2005	KMO	KMO 2005	-	-
Oreodytes smaragdii (C.R. Sahlberg, 1826)	1 M	-	**HES	Ringsaker	Skanselva	32VPM037513	54	07.VIII.2006	KMO	KMO 2006	-	Olsen & Solvang 2006
Rhantus exsolitus (Forster, 1771)	1 M	-	**TEI	Sauherød	Gravholjen	32VNL102831	18	03.X.2005	KMO	KMO 2005	-	Olsen & Heggland 2005
Rhantus frontalis (Marsham, 1802)	1 M	(DC)	AK	Berum	Ufskivveien 3/5	32VNM905430	28	11.VI.2005	KMO	KMO 2005	-	Blindheim et al. 2005b
Rhantus frontalis (Marsham, 1802)	1 M	(DC)	AK	Berum	Fornbu v/ Telenor	32VNM9094155	28	06.IX.2006	KMO	KMO 2006	-	Blindheim & Olsen 2006
Rhantus frontalis (Marsham, 1802)	4 M+F	(DC)	AK	Berum	S Langgoddveien	32VNM900397	28	06.IX.2006	KMO	KMO 2006	-	Blindheim & Olsen 2006
Rhantus frontalis (Marsham, 1802)	1 M	(DC)	AK	Berum	Reperveien	32VNM898390	28	12.IX.2006	KMO	KMO 2006	-	Blindheim & Olsen 2006
Rhantus frontalis (Marsham, 1802)	1 F	(DC)	AK	Hurdal	W Lundby 1	32VPM1265940	37	19.VI.2003	KMO	KMO 2004	SL 2004	-
Rhantus frontalis (Marsham, 1802)	1 M	(DC)	AK	Berum	Stromsengveien 1	32VNM60703901	28	12.IX.2006	KMO	KMO 2006	-	Blindheim & Olsen 2006
Rhantus frontalis (Marsham, 1802)	1 M	(DC)	HES	Ringsaker	Døli	32VPM698475	45	03.VI.2006	KMO	KMO 2006	-	Olsen & Solvang 2006
Rhantus frontalis (Marsham, 1802)	1 M	(DC)	TEY	Kragerø	Stråholmen	32VNL370289	11	12.-13.VII.2006	KMO	KMO 2006	-	Olsen 2007a
Rhantus frontalis (Marsham, 1802)	2 M+F	(DC)	Ø	Hvaler	Finnegutten ste	32VPL17374175	12	24.VIII.2005	KMO/TBOMMK	KMO 2005	SL 2006	Heggland & Blindheim 2005
Rhantus frontalis (Marsham, 1802)	1 M	(DC)	Ø	Hvaler	Kollholmen E	32VPL077546	20	15.VIII.2006	KMO/OMMK	KMO 2006	-	-
Rhantus frontalis (Marsham, 1802)	1 M	(DC)	Ø	Vestby	Kolas	32VNM953005	28	09.X.2002	KMO	KMO 2002	KMO 2007	-
Rhantus suturalis (W.S. MacLeay, 1825)	1 F	NT (DC)	AK	Oslo	Halsentjernet	32VNL370289	28	27.IV.2006	KMO/AE/ISO	KMO 2006	-	Endrestøl et al. 2006
Rhantus suturalis (W.S. MacLeay, 1825)	3 M	NT (DC)	TEY	Kragerø	Stråholmen	32VNL370289	11	12.-13.VII.2006	KMO	KMO 2006	-	Olsen 2007a
Rhantus suturalis (W.S. MacLeay, 1825)	1 M	NT (DC)	Ø	Hvaler	Hensgardslammen	32VPL08434913	12	26.VIII.2005	KMO	KMO 2005	-	Heggland & Blindheim 2005
Rhantus suturalis (W.S. MacLeay, 1825)	2 F	NT (DC)	Ø	Hvaler	Sjølytangen	32VPL069552	20	15.VIII.2006	KMO/OMMK	KMO 2006	-	-
Rhantus suturalis (W.S. MacLeay, 1825)	1 M	NT (DC)	Ø	Hvaler	Kollholmen E	32VPL077546	20	15.VIII.2006	KMO/OMMK	KMO 2006	-	-
Stictolarus diodecimpustulatus (Fabricius, 1792)	1 F	(DC)	**VE	Re	Storelv 2	32VNL172837	19	27.VIII.2003	KMO/SR	KMO 2004	-	-
Stictolarus griseostriatus (De Geer, 1774)	3 M	-	**ON	Dovre	N Funheim	32VNP087777	71	30.VII.2003	KMO	KMO 2003	SL 2003	Olsen 2005b
Hydrophilus pusillus (Fabricius, 1781)	5 ad.	-	**TEY	Kragerø	Stråholmen	32VNL370289	11	12.-13.VII.2006	KMO	KMO 2006	-	Olsen 2007a
Elmis aenea (P.W.J. Müller, 1806)	1 juv.	-	**ON	Øystre Slidre	Raudtøla 1	32VNM90886	52	18.VI.2003	KMO	KMO 2003	-	Larsen et al. 2003
Elmis aenea (P.W.J. Müller, 1806)	1 ad.	-	**VE	Re	SW Ektvet	32VNL643834	19	27.VIII.2003	KMO/SR	KMO 2004	-	-
Limnius volkmari (Panzer, 1793)	1 ad.	-	**VE	Re	SW Ektvet	32VNL643834	19	27.VIII.2003	KMO/SR	KMO 2004	-	-
Oulimus tuberculatus (Müller, 1806)	1 juv.	-	**AK	Ullensaker	Risa 1	32VPM202798	37	12.VI.2004	KMO	KMO 2005	-	Olsen & Reiso 2005d
Gyrinus caspius Ménétries, 1832	1 F	DD (V)	AAY	Arendal	Fleåvig	32VMK910800	6	18.V.2007	KMO	KMO 2007	-	-
Gyrinus distinctus Aubé, 1836	1 M	NT (DC)	AK	Fet	Teigsåa	32VPM268280	29	28.IX.2004	KMO/SR	KMO 2004	-	Olsen & Reiso 2005d
Gyrinus substriatus Stephens, 1829	3 M+F	-	**AAI	Evje og Hommes	N Persie	32VMK304911	5	26.VI.2005	KMO	KMO 2005	-	Solvang 2004a
[15]Gyrinus suffriani Scriba, 1855	5 M+F	NT (DC)	AAY	Arendal	Fleåvig	32VMK910800	6	18.V.2007	KMO	KMO 2007	-	-
Oreochilus villosus (O.F. Müller, 1776)	1 F	-	**AAY	Vegårshei	Vågebekken	32VML892021	10	29.VI.2003	KMO et al.	KMO 2004	-	-
Haliplus heydeni Wehncke, 1875	4 M+F	-	**HES	Ringsaker	torste	32VNM944540	54	03.VI.2006	KMO	KMO 2006	-	Olsen & Solvang 2006
Haliplus heydeni Wehncke, 1875	2 F	-	**TEI	Sauherød	Torsøl	32VNL075853	18	03.X.2005	KMO	KMO 2005	-	Olsen & Heggland 2005
Haliplus heydeni Wehncke, 1875	2 M+F	-	**VE	Re	SW Ektvet	32VNL643834	19	27.VIII.2003	KMO/SR	KMO 2004	SL 2007	-
Haliplus immaculatus Gerhardt, 1877	6 M	-	**HES	Ringsaker	Døli	32VPM098475	45	03.VI.2006	KMO	KMO 2006	-	Olsen & Solvang 2006
Haliplus ruficollis (De Geer, 1774)	1 ad.	-	**AAI	Evje og Hommes	Bjøravika	32VMK295914	5	26.VI.2005	KMO	SL 2006	-	-
Haliplus wehnckei Gerhardt, 1877	1 F	-	**AK	Serum	Rema 4	32VPM233525	37	12.VII.2004	KMO	SL 2006	BAS 2007	-
Haliplus wehnckei Gerhardt, 1877	1 F	-	**Oslo	Oslo	SSE Møllum	33VUJ474128	65	20.IX.2005	KMO	KMO/ISO 2005	-	-
Haliplus wehnckei Gerhardt, 1877	4 M+F	-	**HEN	Trysil	Storøken	33VUJ474128	65	23.VI.2004	KMO	KMO 2004	SL 2006	-
Ecnobius melanocephalus (Olivier, 1792)	1 F	NT (DC)	AK	As	Vannersgard N	32VNM96351419	28	22.IX.2004	KMO	KMO 2004	-	Blindheim & Olsen 2005a
Ecnobius melanocephalus (Olivier, 1792)	1 F	NT (DC)	AK	Oslo	Halsentjernet	32VNM83254270	46	08.VIII.2006	KMO	KMO 2006	-	Endrestøl et al. 2006
Ecnobius melanocephalus (Olivier, 1792)	1 F	NT (DC)	AK	Hamar	W Riabu	32VPM150426	46	10.X.2006	KMO/SR	KMO 2006	-	Olsen & Solvang 2006
Ecnobius testaceus (Fabricius, 1801)	1 F	(DC)	AK	Aurskog-Høland	Bergsjovannet	32VPM397238	29	24.VIII.2004	KMO	KMO 2005	-	Olsen & Reiso 2005d
Ecnobius testaceus (Fabricius, 1801)	1 ad.	(DC)	AK	Enebakk	Bøterelva 2	32VPM208266	29	06.VII.2004	KMO	KMO 2005	-	Olsen & Reiso 2005d

Table 1. continued

Species [note]	#	Rt (R2)	County	Municipality	Locality	MGRS	EIS	Date	Leg.	Det.	Rev.	Reference	
<i>Enochlus testaceus</i> (Fabricius, 1801)	2 M	(DC)	AK	Fet	S Skiersands	32VPM212481	29	28.IX.2004	KMO/SR	KMO 2005	-	Olsen & Reiso 2005d	
<i>Enochlus testaceus</i> (Fabricius, 1801)	2 ad.	(DC)	AK	Skedsmo	S Kjeller	32VPM132495	29	09.IX.2004	KMO 2005	KMO 2005	-	Olsen & Reiso 2005d	
<i>Enochlus testaceus</i> (Fabricius, 1801)	2 M+F	(DC)	TEI	Sauherød	Evju	32VNL093856	18	03.X.2005	KMO	KMO 2005	-	Olsen & Hegglund 2005	
<i>Enochlus testaceus</i> (Fabricius, 1801)	1 F	(DC)	**TEY	Skien	Børsesjø	32VNL354653	18	14.VII.2004	KMO/SR	KMO 2005	-	Olsen & Reiso 2005b	
<i>Enochlus testaceus</i> (Fabricius, 1801)	1 M	(DC)	**TEY	Skien	Børsesjø	32VNL354653	18	14.VI.2004	KMO/SR	SO 2006	-	Olsen & Reiso 2005b	
<i>Enochlus testaceus</i> (Fabricius, 1801)	1 F	(DC)	TEY	Skien	Børsesjø	32VNL354653	18	10.IX.2004	KMO/SR	KMO 2005	-	Olsen & Reiso 2005b	
<i>Enochlus testaceus</i> (Fabricius, 1801)	2 M+F	(DC)	Ø	Hvaler	Finnefjellsstø	32VPL17374175	12	24.VIII.2005	KMO/TBO/OMWK	KMO 2005	-	Hegglund & Bindheim 2005	
<i>Enochlus testaceus</i> (Fabricius, 1801)	1 ad.	(DC)	Ø	Hvaler	Storengen	32VPL120863177	20	16.VIII.2006	KMO/OMWK	KMO 2006	-	Solvang 2004a	
<i>Enochlus testaceus</i> (Fabricius, 1801)	1 ad.	(DC)	Ø	Hvaler	Bjørnøya, Vansjø	32VPL027854	20	21.VI.2005	KMO/RS/OMWK	KMO 2005	-	Solvang 2004a	
<i>Enochlus testaceus</i> (Fabricius, 1801)	1 ad.	(DC)	Ø	Råde	SE Viteberget	32VPL02988325	20	21.VI.2005	KMO/RS/OMWK	KMO 2005	-	Solvang 2004a	
<i>Laccobus minutus</i> (Linnaeus, 1758)	1 ad.	-	**AAL	Evje og Hommes	Bjøravika	32VNM295914	5	26.VI.2005	KMO	SL 2006	-	-	
<i>Helophorus brevipalpis</i> Bedel, 1881	1 ad.	-	**AAY	Froland	Jurdalshellemet	32VNM1538008	10	18.IV.2003	KMO	KMO 2003	-	-	
<i>Helophorus strigifrons</i> Thomson, 1868	1 ad.	-	**AAL	Evje og Hommes	Bjøravikangen	32VNM236910	5	26.VI.2005	KMO	SL 2006	-	-	
<i>Helophorus strigifrons</i> Thomson, 1868	5 M+F	-	**AAY	Arendal	Sandsumpen	32VNM1632816	6	17.IV.2004	KMO	KMO 2004	SL 2006	-	-
<i>Nolens crassicornis</i> (O.F. Müller, 1776)	2 F	-	**TEI	Sauherød	Gvarvheien	32VNL102831	18	03.X.2005	KMO	KMO 2005	-	-	
<i>Cyphon kongsbergensis</i> Munster, 1924	x ad.	-	**TEY	Skien	Børsesjø	32VNL354653	18	03.VI.-10.IX.2004	KMO/SR	SO 2005	-	Olsen & Reiso 2005b	
<i>Cyphon laevispinis</i> Tournier, 1868	x ad.	-	**TEY	Skien	Børsesjø	32VNL354653	18	03.VI.-10.IX.2004	KMO/SR	SO 2005	-	Olsen & Reiso 2005b	
<i>Microcara testacea</i> (Linnaeus, 1767)	5 juv.	-	**BØ	Lier	Gullaugodden	32VNM725230	28	26.V.2004	KMO/RS	KMO 2004	-	-	
Megaloptera													
<i>Stalis fuliginosa</i> Pictet, 1836	1 juv.	-	**BØ	Lier	Grobneuka 4	32VNM752317	28	29.VIII.2005	KMO	KMO 2005	-	Olsen 2005a	
<i>Stalis fuliginosa</i> Pictet, 1836	1 juv.	-	**VE	Re	SV Ektvet	32VNL643634	19	27.VIII.2003	KMO/SR	KMO 2004	-	-	
Trichoptera													
<i>Beraeodes minutus</i> (Linnaeus, 1761)	1 juv.	NT (V)	AK	Asker	E Askerbakken	32VNM802341	28	29.VII.2004	KMO	KMO 2004	-	Olsen & Reiso 2005a	
<i>Beraeodes minutus</i> (Linnaeus, 1761)	1 juv.	NT (V)	AK	Asker	E Blirudveien	32VNM801345	28	29.VI.2004	KMO	KMO 2004	-	Olsen & Reiso 2005a	
<i>Beraeodes minutus</i> (Linnaeus, 1761)	1 juv.	NT (V)	AK	Asker	Neslva 1	32VNM827380	28	08.IX.2004	KMO/SR	KMO 2005	-	Olsen & Reiso 2005d	
<i>Beraeodes minutus</i> (Linnaeus, 1761)	1 juv.	NT (V)	AK	Hurdal	Gjordingebråten	32VPM12119956	37	25.VI.2003	KMO	KMO 2004	-	Larsen et al. 2004	
<i>Beraeodes minutus</i> (Linnaeus, 1761)	3 juv.	NT (V)	AK	Sorrum	Fossåa 3	32VPM280530	37	12.VII.2004	SR	KMO 2004	PWL 2004	-	
<i>Beraeodes minutus</i> (Linnaeus, 1761)	1 juv.	NT (V)	**BØ	Lier	Grobneuka 1	32VNM7462324	28	29.VIII.2005	KMO	KMO 2005	-	-	
<i>Beraeodes minutus</i> (Linnaeus, 1761)	1 juv.	NT (V)	TEY	Skien	NE Tulle	32VNL33576797	18	13.IX.2004	KMO	KMO 2004	-	-	
<i>Beraeodes minutus</i> (Linnaeus, 1761)	1 juv.	NT (V)	**AAY	Arendal	Sandsumpen	32VNM932816	6	17.IV.2004	KMO	KMO 2004	-	-	
<i>Enomus tenellus</i> (Rambur, 1842)	8 M+F	-	*AK	Oslo	Nesbukta N2	32VNM994522	36	30.VI.-14.VI.2003	KMO/SR	SR 2004	KMO 2004	Olsen & Reiso 2004	
<i>Agraylea sexmaculata</i> Curtis, 1834	3 M	CR (R)	AK	Bærum	Fomebu v/Teonor	32VNM60974155	28	06.IX.2006	KMO	KMO 2006	-	Blindeheim & Olsen 2006	
<i>Agraylea sexmaculata</i> Curtis, 1834	1 M	CR (R)	AK	Lørenskog	Losby golfbane 2	32VPM11294077	29	20.V.2003	KMO	KMO 2004	-	Reiso & Olsen 2004b	
<i>Agraylea sexmaculata</i> Curtis, 1834	1 juv.	CR (R)	TEY	Skien	Børsesjø	32VNL354653	18	17.VI.-02.VII.2004	KMO/SR	SR 2005	-	Olsen & Reiso 2005b	
<i>Agraylea sexmaculata</i> Curtis, 1834	1 M	CR (R)	TEY	Skien	Børsesjø	32VNL354653	18	14.VI.2004	KMO/SR	KMO 2004	-	Olsen & Reiso 2005b	
<i>Agraylea sexmaculata</i> Curtis, 1834	1 juv.	CR (R)	TEY	Skien	Børsesjø	32VNL354653	18	19.VIII.2004	KMO	PWL 2005	-	Olsen & Reiso 2005b	
<i>Agraylea sexmaculata</i> Curtis, 1834	1 M	CR (R)	TEY	Skien	Børsesjø	32VNL354653	18	14.VII.-19.VIII.2004	KMO/SR	SR 2005	-	Olsen & Reiso 2005b	
[16] <i>Oribothrix tagettii</i> Moseley, 1930	4 M+F	-	**AK	Oslo	Groslodvann	32VNM905497	28	28.VI.-18.VIII.2004	KMO/SR	KMO 2005	PWL 2005	Olsen & Reiso 2005c	
[17] <i>Caradea excisa</i> (Morton, 1904)	2 juv.	NT (R)	VAY	Kristiansand	Fiskbakken	32VPM379438	2	25.I.2005	KMO	KMO 2005	-	Bye 2005	
<i>Ceradea tuxa</i> (Rambur, 1842)	1 M	-	**AK	Ullensaker	Risa 1	32VPM202798	37	12.VII.2004	KMO	PWL 2007	-	Olsen & Reiso 2005b	
[18] <i>Ectoceta ballica</i> McLachlan, 1877	1 juv.	CR (DC)	**Oslo	Oslo	Børsesjø	32VNL354653	18	15.VI.2004	KMO/SR	KMO 2005	-	Olsen & Reiso 2005b	
[19] <i>Leptocerus lineiformis</i> Curtis, 1834	xx M+F	CR (DC)	TEY	Skien	Gersrudjeirn	32VPM033342	28	06.VI.2004	KMO	SR 2005	PWL 2007	Olsen & Reiso 2005c	
[19] <i>Leptocerus lineiformis</i> Curtis, 1834	11 M+F	CR (DC)	**TEY	Skien	Børsesjø	32VNL354653	18	17.VI.-02.VII.2004	KMO/SR	SR 2005	-	Olsen & Reiso 2005b	
[19] <i>Leptocerus lineiformis</i> Curtis, 1834	1 F	CR (DC)	TEY	Skien	Børsesjø	32VNL354653	18	14.VI.2004	KMO/SR	KMO 2004	-	Olsen & Reiso 2005b	
[19] <i>Leptocerus lineiformis</i> Curtis, 1834	xx M+F	CR (DC)	TEY	Skien	Børsesjø	32VNL354653	18	02.-14.VII.2004	KMO/SR	SR 2005	-	Olsen & Reiso 2005b	
[19] <i>Leptocerus lineiformis</i> Curtis, 1834	6 M+F	CR (DC)	TEY	Skien	Børsesjø	32VNL354653	18	15.VII.2004	KMO/SR	KMO 2005	-	Olsen & Reiso 2005b	
[19] <i>Leptocerus lineiformis</i> Curtis, 1834	xx M+F	CR (DC)	TEY	Skien	Børsesjø	32VNL354653	18	15.VI.-19.VIII.2004	KMO/SR	KMO 2005	-	Olsen & Reiso 2005b	
[19] <i>Leptocerus lineiformis</i> Curtis, 1834	3 juv.	CR (DC)	TEY	Skien	Børsesjø	32VNL354653	18	14.VI.-19.VIII.2004	KMO/SR	SR 2005	-	Olsen & Reiso 2005b	
[20] <i>Triaenodes unanimitis</i> McLachlan, 1877	2 M	CR (DC)	*AK	Oslo	Nesbukta N2	32VNM994522	36	14.VI.-01.VIII.2003	KMO/SR	SR 2004	-	Olsen & Reiso 2004	
<i>Ylodes simulans</i> (Tjeder, 1929)	14 ad.	NT (DC)	*AK	Oslo	Dausjøen N	32VNM997541	36	23.-29.VI.2002	SR	SR 2003	-	-	

Table 1. continued

Species [note]	#	R1 (R2)	County	Municipality	Locality	MGRSeurEF99	EIS	Date	Leg.	Det.	Rev.	Reference
<i>Yloides simulans</i> (Tjeder, 1929)	24 ad.	NT (DC)	AK	Oslo	Karusputten	32VNM926551	36	12.VIII.-16.IX.2002	KMO/SR	SR 2003	-	-
<i>Yloides simulans</i> (Tjeder, 1929)	1 M	NT (DC)	AK	Oslo	Nesbukta N2	32VNM994522	36	14.VI.-01.VIII.2003	KMO/SR	SR 2004	KMO 2004	Olsen & Reiso 2004
<i>Anabolia nervosa</i> (Curtis, 1834)	1 juv.	-	**HES	Hamar	Flossgaedølvn	32VNP148429	46	07.VIII.2006	KMO	KMO 2006	-	Olsen & Solvang 2006
[21]Chaetopteryx sahlbergi McLachlan, 1876	1 juv.	-	**TEY	Skien	Bergsjø	32VNL354653	18	14.VI.2004	KMO/SR	PWL 2005	-	Olsen & Reiso 2005b
<i>Colopatus incisus</i> (Curtis, 1834)	1 juv.	EN (V)	**AK	Bærum	Lomma 2	32VNM832474	28	01.VI.2004	KMO/SR	PWL 2007	-	Blindheim et al. 2005b
<i>Grammatolus nigricornis</i> (Reizius, 1783)	1 M	-	**AK	Bærum	Ergensheim E1	32VNM866142	28	22.-30.VI.2005	KMO	KMO 2005	-	-
<i>Haesus digitatus</i> (Schrank, 1781)	2 juv.	-	**HEN	Trysil	Ystergrenn	33VUJ519024	65	23.VI.2004	KMO/SR	KMO 2004	-	-
<i>Hydatophylax rufumulus</i> (McLachlan, 1865)	3 juv.	-	**AK	Hurdal	Gjodingbråten	32VPM1219958	37	25.VI.2003	KMO	KMO 2004	-	-
<i>Limnephilus auriculus</i> Curtis, 1834	1 juv.	-	**AK	Bærum	Lomma 2	32VNM832474	28	01.VI.2004	KMO/SR	KMO 2005	-	Olsen & Reiso 2005d
[22]Limnephilus bipunctatus Curtis, 1834	2 juv.	-	**AAY	Arendal	Sandåsumpen	32VNM932816	6	17.IV.2004	KMO	KMO 2004	-	-
[22]Limnephilus bipunctatus Curtis, 1834	5 juv.	CR (V)	HEN	Trysil	E Trollsøen	33VUJ4771144	65	23.VI.2004	KMO/SR	KMO 2004	-	Reiso 2005
<i>Limnephilus decipiens</i> (Kolenati, 1848)	1 juv.	CR (V)	**AV	Kristiansand	W Riddabu	32VNM378417	2	25.I.2005	KMO	KMO 2005	EE 2005	Bye 2005
[23]Limnephilus extensus Hagen, 1861	2 F	-	**HES	Hamar	Finnerud	32VPM150426	46	10.X.2006	KMO/SR	BG 2007	-	-
<i>Limnephilus vittatus</i> (Fabricius, 1798)	1 F	CR	**AK	Oslo	Blanktøken	32VNM913959	36	23.IX.2005	KMO/TB	BG 2007	-	-
<i>Parachanna picicornis</i> (Fictet, 1834)	1 juv.	-	**HEN	Trysil	Blanktøken	33VUJ4771144	65	23.VI.2004	KMO/SR	KMO 2004	-	-
<i>Polomphylax latipennis</i> (Curtis, 1834)	1 F	EN (R)	**AK	Asker	Askerelven	32VNM802340	28	01.VI.2004	KMO/SR	BG 2007	-	-
<i>Chimarra marginata</i> (Linnaeus, 1759)	1 juv.	NT (DC)	AK	Lørenskog	Losbyelva 9	32VPM1153960	29	20.V.2003	SR	KMO 2004	-	Reiso & Olsen 2004a
<i>Chimarra marginata</i> (Linnaeus, 1759)	2 juv.	NT (DC)	AK	Lørenskog	Losbyelva 9	32VPM1153960	29	01.VI.2003	SR	KMO 2004	-	Reiso & Olsen 2004a
<i>Chimarra marginata</i> (Linnaeus, 1759)	1 F	NT (DC)	AK	Oslo	Dausjøen N	32VNM997541	36	23.-29.VI.2002	SR	SR 2003	-	-
<i>Agrypnia picta</i> Kolenati, 1848	1 juv.	-	**VE	Re	Søndre Sjøby	32VNL733881	19	30.IX.2003	KMO	KMO 2004	-	-
<i>Hagenella clathrata</i> (Kolenati, 1848)	1 M	CR (R)	**AK	Oslo	Dausjøen N	32VNM997541	36	23.-29.VI.2002	SR	SR 2003	-	-
<i>Hagenella clathrata</i> (Kolenati, 1848)	3 F	CR (R)	AK	Oslo	Karusputten	32VNM926551	36	12.VIII.-16.IX.2002	KMO/SR	KMO 2005	-	-
<i>Hagenella clathrata</i> (Kolenati, 1848)	1 juv.	CR (R)	VE	Tjøme	Grepan	32VNL81074819	19	17.IX.2004	KMO/SR	KMO 2005	-	-
<i>Oligotrichia striata</i> (Linnaeus, 1759)	1 juv.	-	*Ø	Hvaler	SE Velen	32VPL091882088	20	16.VIII.2006	KMO/OMWK	KMO 2006	-	Rude 2004
<i>Phryganea bipunctata</i> Reizius, 1783	4 juv.	-	**TEY	Skien	Børsesjø	32VNL354653	18	15.VI.2004	KMO/SR	KMO 2005	-	Olsen & Reiso 2005d
<i>Cyrtus creatinomis</i> (Kolenati, 1859)	1 juv.	NT (DC)	**AK	Ullensaker	Risa 1	32VPM202708	37	12.VI.2004	KMO/SR	KMO 2005	-	Olsen & Reiso 2005b
<i>Hobocentrus insignis</i> Martynov, 1924	1 M	DD	**AK	Oslo	Bogstadvann	32VNM905497	28	28.VI.-18.VIII.2004	KMO/SR	KMO 2005	-	Olsen & Reiso 2005c
<i>Rhyacophila fasciata</i> Hagen, 1859	1 juv.	CR (DC)	VE	Re	Verpølva 2	32VNL750822	19	16.X.2003	KMO	KMO 2004	-	-
<i>Rhyacophila fasciata</i> Hagen, 1859	x juv.	NT	AK	Ski	Dalsbekken 2	32VPM024246	28	16.IX.2005	KMO	KMO 2005	-	Blindheim et al. 2006
<i>Rhyacophila fasciata</i> Hagen, 1859	1 juv.	NT	AK	Ullensaker	Romma 1	32VPM273742	37	12.VI.2004	KMO	KMO 2005	-	-
<i>Rhyacophila fasciata</i> Hagen, 1859	1 juv.	NT	AK	As	Kråkstadelva 2	32VPM065095	28	27.VIII.2004	KMO	KMO 2005	-	Olsen & Reiso 2005d
<i>Rhyacophila fasciata</i> Hagen, 1859	1 juv.	NT	BØ	Lier	Grobneelva 3	32VNM74813184	28	29.VI.2005	KMO	KMO 2005	-	Olsen 2005a
<i>Rhyacophila fasciata</i> Hagen, 1859	2 juv.	NT	BØ	Lier	Grobneelva 4	32VNM752317	28	29.VI.2005	KMO	KMO 2005	-	Olsen 2005a
<i>Rhyacophila fasciata</i> Hagen, 1859	2 juv.	NT	VE	Re	Verpølva 3	32VNL757780	19	16.X.2003	KMO	KMO 2004	-	-
Lepidoptera												
<i>Catalocysta lematata</i> (Linnaeus, 1758)	3 ad.	-	**TEY	Skien	Børsesjø	32VNL354653	18	17.VI.-02.VII.2004	KMO/SR	KMO 2005	-	Olsen & Reiso 2005b
<i>Paratopynia stratiolata</i> (Linnaeus, 1758)	1 M	VU (R)	**TEY	Skien	Børsesjø	32VNL354653	18	19.VIII.2004	KMO	KMO 2005	-	Olsen & Reiso 2005b
Diptera												
[25]Chaoborus crystallinus (De Geer, 1776)	2 juv.	-	**AK	Nannestad	Hvamsaga	32VPM171812	37	19.IX.2002	KMO	KMO 2003	-	-
<i>Chaoborus crystallinus</i> (De Geer, 1776)	10 juv.	-	**Oslo	Oslo	Bleikøy, pond	32VNM975404	28	24.V.2003	KMO	KMO 2004	-	Olsen & Reiso 2004
<i>Chaoborus crystallinus</i> (De Geer, 1776)	5 juv.	-	*BØ	Lier	Skuggeløken	32VNM700393	28	14.V.2003	SR	KMO 2005	-	-
<i>Chaoborus crystallinus</i> (De Geer, 1776)	2 juv.	-	**HEN	Hamar	W Riddabu	32VNP150426	46	10.X.2006	KMO/SR	KMO 2006	-	-
<i>Chaoborus crystallinus</i> (De Geer, 1776)	3 juv.	-	*ON	Dovre	Angardtjørnet S	32VNP128706	71	29.VI.2003	KMO	KMO 2003	-	Olsen 2005b
<i>Chaoborus crystallinus</i> (De Geer, 1776)	6 juv.	-	**TEI	Sauherd	Evju	32VNL093856	18	03.X.2005	KMO	KMO 2005	-	-
<i>Chaoborus crystallinus</i> (De Geer, 1776)	1 juv.	-	**TEY	Skien	Reumy NW	32VNL189633	18	31.VIII.2004	KMO	KMO 2004	-	-
<i>Chaoborus crystallinus</i> (De Geer, 1776)	4 juv.	-	**AAI	Mess	Kongshavnj. pond W	32VNL938965	19	24.VI.2003	KMO	KMO 2003	-	-
<i>Chaoborus crystallinus</i> (De Geer, 1776)	4 juv.	-	**AAI	Erje og Hommes	SSV Nydura	32VNM309920	5	26.VII.2005	KMO	KMO 2003	-	-
<i>Chaoborus flavicans</i> (Mögelin, 1830)	1 juv.	-	**HES	Ringsaker	Harabekken	32VNM995527	54	03.VI.2006	KMO	KMO 2006	-	-
<i>Chaoborus nyblæi</i> (Zetterstedt, 1838)	9 juv.	-	**HEN	Trysil	Blanktøken	33VUJ4771144	65	23.VI.2004	KMO/SR	KMO 2004	-	-
<i>Chaoborus obscuripes</i> (van der Wulp, 1859)	14 juv.	-	**HES	Ringsaker	Dæli	32VPM089475	45	03.VI.2006	KMO	KMO 2006	-	-
<i>Chaoborus obscuripes</i> (van der Wulp, 1859)	9 juv.	-	**MRY	Giske	W Merranaset	32VLO2153603	76	30.X.2006	KMO	KMO 2006	-	-
<i>Chaoborus obscuripes</i> (van der Wulp, 1859)	6 juv.	-	*ON	Øystre Slidre	SE Grønhovda	32VNM913888	52	18.VII.2003	KMO	KMO 2003	-	Larsen et al. 2003

Table 1. continued

Species [note]	#	R1 (R2)	County	Municipality	Locality	MGRS	Eurefer99	EIS	Date	Leg.	Det.	Rev.	Reference
<i>Chadonax obscuripes</i> (van der Wulp, 1859)	7 juv.	-	Ø	Hvaler	NE Sandberg	32VPL08375431		20	15.VIII.2006	KMO	KMO 2006	-	-
<i>Chadonax obscuripes</i> (van der Wulp, 1859)	8 juv.	-	*AAI	Eveje og Hommes	Langfjellgø	32VMK298919		5	26.VII.2005	KMO	KMO 2005	-	Blindheim et al. 2006
<i>Chadonax pallidus</i> (Fabricius, 1781)	1 juv.	-	*Ak	Ski	Koppen	32VPM0732772		28	09.IX.2005	KMO	KMO 2005	-	Olsen & Abel 2003
<i>Chadonax pallidus</i> (Fabricius, 1781)	3 juv.	-	**Ø	Moss	Korgshavtili, pond W	32VNL938965		19	24.IV.2003	KMO	KMO 2003	-	-
<i>Mechionyx fuliginosus</i> (Felt, 1905)	1 juv.	-	*Ak	Hurdal	Damhytta	32VPM0700730		45	24.VI.2003	KMO	KMO 2004	-	ØH 2007
<i>Mechionyx velutinus</i> (Ruthe, 1831)	6 juv.	-	*Ak	Vestby	NE Huserjølet	32VNL963992		19	26.V.2003	KMO/IB	KMO 2005	-	ØH 2007
<i>[27]Dixa nebulosa</i> (Meigen, 1830)	12 juv.	-	**HES	Ringsaker	Tokstadberken	32VPM071524		54	07.VIII.2006	KMO	KMO 2006	-	Olsen & Solvang 2006
<i>Dixella aestivalis</i> (Meigen, 1818)	3 juv.	-	**AAI	Eveje og Hommes	N Persse	32VMK304911		6	26.VII.2005	KMO	KMO 2005	-	Solvang 2004a
<i>Dixella aestivalis</i> (Meigen, 1818)	4 juv.	-	*AAI	Arendal	Krognespollen	32VMK892813		5	04.VIII.2004	KMO	KMO 2007	-	-
<i>Dixella amphibia</i> (De Geer, 1776)	4 juv.	-	*BØ	Lier	Grobhuelva 2	32VMK7433218		28	29.VIII.2005	KMO	KMO 2005	-	Olsen 2005a
<i>Dixella amphibia</i> (De Geer, 1776)	1 juv.	-	*TEI	Sauherød	Eviu	32VNL093856		18	03.X.2005	KMO	KMO 2005	-	Olsen & Heggland 2005
<i>Dixella amphibia</i> (De Geer, 1776)	1 juv.	-	**TEY	Skien	Dyrkalljelm	32VNL309721		18	31.VIII.2004	KMO	KMO 2004	-	-
<i>Dixella obscura</i> (Loew, 1849)	1 juv.	-	*Ak	Hurdal	Damhytta	32VPM0700730		45	24.VI.2003	KMO	KMO 2004	-	-
<i>Dixella obscura</i> (Loew, 1849)	2 juv.	-	**ON	Øystre Slidre	Lykkjelsetnet	32MM969904		52	18.VII.2003	KMO	KMO 2003	-	Larsen et al. 2003
<i>[28]Ephedra riparia</i> Fallén, 1813	4 juv.	-	(*)TEY	Kragerø	Stråhømen	32VNL370289		11	12.-13.VII.2006	KMO	KMO 2006	-	Reiso & Olsen 2004a
<i>[29]Hydromyza livens</i> (Fabricius, 1794)	x juv. (O)	-	(*)AK	Lørenskog	Langlielmen S	32VPM09754525		28	28.VII.2003	KMO/SR	KMO 2003	-	Olsen & Reiso 2005c
<i>[29]Hydromyza livens</i> (Fabricius, 1794)	x juv. (O)	-	(*)Oslo	Oslo	Bogstadvann	32VNM905497		28	28.VII.2004	KMO	KMO 2004	-	Olsen & Abel 2003
<i>Psychoptera minuta</i> Tommoir, 1919	1 juv.	-	Ø	Moss	Korgshavtili, swamp	32VNL938965		19	24.IV.2003	KMO	KMO 2003	-	-

these, 493 are presented below (Table 1). In a few instances, mainly concerning adult dragonflies, an observation constitute the record (these are marked in Table 1). In many instances, there are several records of the same species from a new area, but invariably only one (the first) of these are included in Table 1. Some additional records are, however, mentioned in the notes.

Parts of the material is in the author's reference collection, the rest is preserved in the alcohol collection of the Natural History Museum in Oslo.

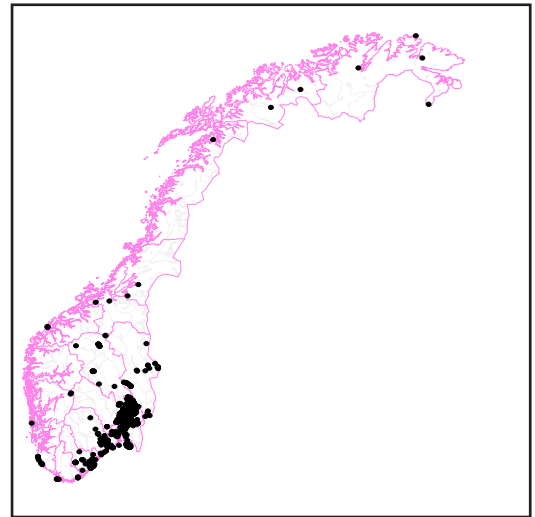


Figure 1. Map showing all localities where freshwater insects have been sampled by the author or his colleagues. A map plotting the records in Table 1 would look very similar.

NOTES

Ephemeroptera

1. *Baetis fuscatius* (Linnaeus, 1761)/*B. scambus* Eaton, 1870. Due to wide variation in Scandinavian material of *Baetis fuscatius* and *B. scambus*, it is as of now impossible to separate the two (E. Engblom pers. comm.). Neither of them are known from the counties of Akershus and/or Oslo previously (Strand-region AK), and

one record of the species couple is included here even though the specimen is not determined to species.

2. *Centroptilum*. Engblom (1996, 2001) includes a second, hitherto unpublished, species of *Centroptilum* from Sweden, called *Centroptilum* sp. It is presumably species no. 24a in Engblom (2001), and thus has a rather wide distribution in Sweden. Four specimens that agree with this taxon have been found by the author, all larvae and all from two localities in Asker municipality, Akershus county. One is in Table 1, the other record is three specimens from Skitthegga (NM800278) on 28.VIII.2006. Both samples have been checked by Engblom.

3. *Cloëon*. According to, amongst others, Brittain et al. (1996) and Aagaard et al. (2002), the only Norwegian *Cloëon* species are *C. dipterum* (Linnaeus, 1758) and *C. simile* Eaton, 1870 (even though Brekke (1938) included, in addition to *C. dipterum*, both *C. inscriptum* Bengtsson, 1914 and *C. praetextum* Bengtsson, 1914). Many authors have regarded *inscriptum* and *praetextum* as synonyms of *dipterum* and *simile*, respectively. There has even been some, albeit unpublished, doubts about the presence of *C. dipterum* and *C. simile* in Norway (E. Engblom pers. comm.). The author has collected *Cloëon*-specimens on approximately 160 occasions in southeastern Norway, and of these, about 150 have concerned *C. inscriptum*. Only a single female has tentatively been assigned to *C. dipterum*. Hence, there is little doubt that what is called *C. dipterum* in recent literature, including the two above mentioned, either totally or predominantly is *C. inscriptum* (see Engblom 1996). Nevertheless, all four species have with certainty been collected in Norway in recent years (pers. obs., G. Kjærstad pers. comm.). A thorough revision of this group in Norway is highly desirable. In Table 1, one record from each Strand-region is presented; further details will hopefully follow in a separate paper.

4. *Serratella*. Whether *Serratella lactata* (Bengtsson, 1909) is a species separate from *S. ignita* (Poda, 1761), or merely a form or a

subspecies of the latter is still open to debate. Engblom (1996) treated it as a form, but later (Engblom 2001) it was treated as a distinct species. Both taxa are known from Norway (an old record of *lactata* from Stjørdalselva, Stjørdal municipality, Nord-Trøndelag county, E. Engblom pers. comm.), but no records have been published.

5. *Electrogena affinis* (Eaton, 1883). The first mention from Norway is in Olsen og Reiso (2005d), based on the record in Table 1. Subsequent records include specimens from five stations in Askerelven, Asker municipality, Akershus county in July and August 2004 (Olsen og Reiso 2005a), and from two localities in Ski municipality, also Akershus county: Kråkstadelva (PM062146) on 27.VIII.2004 (part of the project reported in Olsen & Reiso 2005d, but not verified at that time and not mentioned in the report) and Dalsbekken (PM024246) on 16.IX.2005 (Blindheim et al. 2006). A handful of records are known from Sweden (Engblom 2001, E. Engblom pers. comm.). It is not known from Finland or, surprisingly, Denmark, but it is known from Great Britain, Germany and Poland (Blackburn et al. 1998, Belfiore et al. 1999). The species may be a late immigrant, possibly due to climatic changes, presumably having arrived in Sweden in the 1970ies and later spread northwards (E. Engblom 2001). As it is now found in localities more than 30 km apart in Norway, it has clearly been here for some years.

Plecoptera

6. *Nemoura sahlbergi* Morton, 1896. So far known only from northern Norway, viz. the counties of Nordland, Troms and Finnmark (Solem 1996). A record from Buskerud county is thus somewhat surprising, more so as it also in Sweden and Finland is known only from a handful of localities far north (Lillehammer 1988).

Odonata

7. *Aeshna mixta* Latreille, 1805. The first Norwegian record is reported in Olsen og Reiso

(2005b). Later it has been found on several occasions in several counties (H. Olsvik pers. comm.), including resightings in Børsesjø in autumn 2006 (F. Haga pers. comm.). A separate paper will be published to summarize the Norwegian records.

8. *Sympetrum nigrescens* Lucas, 1912. Also in this species-group there is some debate as to whether *nigrescens* should be regarded as a taxon separate from *S. striolatum* or not (see e.g. Nielsen 1998, Askew 2004). On the Continent it is usually regarded as an ecological variety, typically found in coastal areas of northwestern Europe, including the British Isles. In Britain and Scandinavia, where both forms occur, it is more often regarded as a separate species, or at least a subspecies, although specimens with intermediate characters are found. Typical *nigrescens* are more common in western and central Norway. If it turns out to be a separate species, Norway will probably have a major part of the population, and thus a responsibility to conserve the taxon. It is therefore included in Table 1 with one record from each of the two counties Akershus and Oslo, from where it is not previously reported (Olsvik 1999).

Hemiptera

9. *Aphelocheirus aestivalis* (Fabricius, 1794). This species is stated to be found in three localities in Norway (Rødlistebasen), but upon further investigation the number must be reduced to two, viz. Bersebekken in Birkenes and Nidelva in Froland, both in Aust-Agder county (Warloe 1922, 1925, Sættem 1986). The species was first collected in those localities in 1921 and 1983, respectively. Both localities have later been revisited, but only in the latter specimens were found (D. Dolmen pers. comm.). At the author's visit to Bersebekken in 2007, several tens of specimens were observed, along the greater part of the rivulet, from its outlet in Flakksvann and up to where the old road crosses, some 200 m upstream. This fits well with Warloe's (1922) description, presumably based on information from Münster (the collector), with the possible exception that there today is less vegetation in the rivulet. The

information in Rødlistebasen, stating that the species is confined to deep water, does not apply to the locality in Birkenes, where specimens were caught at depths of 0.2 to 1 metre.

10. *Callicorixa wollastoni* (Douglas & Scott, 1865). In Coulianos (1998) there is a questionmark for Akershus county, based on records of larvae presented in Jastrej (1979). In addition to the records in Table 1, three more localities in Akershus county are known to the author.

11. *Sigara dorsalis* (Leach, 1817)/*S. striata* (Linnaeus, 1758). Females of these two species can hardly be distinguished (Savage 1989). Neither of them were known from Hedmark county or the inner parts of Telemark (TEI) previously, and records of the species couple are recorded here even though they are not determined to species.

12. *Sigara hellensii* (C.R. Sahlberg, 1819). Two older records of this species are known from Norway, viz. river Risa in Eidsvoll municipality



Figure 2. *Sigara hellensii* (Photo: Karsten Sund, Natural History Museum, Oslo).

on 04.VIII.1918 (one specimen) and at Eidsverk, Aurskog-Høland municipality in June 1922 (two specimens), both in Akershus county (Coulianos 1998). It was rediscovered in an eddy by the outlet of river Jøndalsåa in Eidsvoll municipality on 07.IX.2004 (five specimens preserved, but certainly many more were present, see Figure 2) (Olsen & Reiso 2005d). The species is generally associated with running water (Damgaard 2005), but the specimens from 2004 were caught among grasses and herbs in the innermost part of the eddy, at depths of 0–20 cm, where the water was perfectly still.

Coleoptera

13. *Agabus congener* (Thunberg, 1794). This species is included in the list due to the recent splitting from *A. lapponicus* (Thomson, 1867) (Nilsson 1987, Nilsson et al. 1988). In Ødegaard et al. (1996), only one record of *A. congener* from southern Norway is presented (HOI), whereas the species complex *congener/lapponicus* is known from most Strand-regions in Norway, including all presented in Table 1. Subsequently, Cuppen & Foster (2005) have published *A. congener* from AAI and VAY and *A. lapponicus* from AAI. In addition to the records in Table 1, only one additional record from Oslo has been made by the author.

14. *Hydroporus geniculatus* Thomson, 1856. This species is included in the list due to the recent splitting from *H. nigellus* (Nilsson 1994). In Ødegaard et al. (1996), only one record of *H. geniculatus* from southern or eastern Norway is presented (ON), whereas the species complex *nigellus/geniculatus* is known from most Strand-regions in this area, including HEN. *H. geniculatus* seems to be the more common of the two species (F. Ødegaard pers. comm.), and it is probably this species that has previously been recorded from HEN. A thorough revision of museum material is needed.

15. *Gyrinus suffriani* Scriba, 1855. Known previously from two localities in Norway, one in Aust-Agder county, Risør municipality (leg.

G. Hagenlund 01.IX.1979 (Hagenlund 1984, Holmen 1987, Zoological Museum of Oslo)) and one in Vestfold county, Tjøme municipality (leg. S. Ligaard 1993 (Rødlistebasen, F. Ødegaard pers. comm.)). It is assumed to be overlooked in Norway, as its preferred habitat is still rather common.

Trichoptera

16. *Oxyethira tragetti* Mosely, 1930. This species was presented as new to Norway in Olsen & Reiso (2005c), based on the four specimens included in Table 1. The larvae of this species is still unknown (P. Wiberg-Larsen pers. comm.), and it is desirable to search for these in the locality. The species is not yet known from Demnark (P. Wiberg-Larsen pers. comm), and only from Skåne and Uppsala in Sweden, both far from the Norwegian border (www.sef.nu/insektsguiden).

17. *Ceraclea excisa* (Morton, 1904). New to Norway. This specimen has not previously been published, but the locality is included in Olsen & Reiso (2005d). It is otherwise known from, i.a., Sweden (only in a handful of northern counties; B. Gullefors pers. comm.), Finland (widespread; J. Salokannel pers. comm.), China and North-America.

18. *Erotasis baltica* McLachlan, 1877. Only one previous record of an adult male in Norway (Aurskog Høland municipality, Akershus county) (Andersen et al. 1993a, Rødlistebasen). In addition to the larva presented in Table 1, an empty case was found in the same locality.

19. *Leptocerus tineiformis* Curtis, 1834. Only one previous record of an adult male in Norway (VE) (Andersen 1995, Rødlistebasen). In Børsesjø it was found on many occasions and in large numbers during the summer of 2004 (a minimum of 50 specimens preserved, including four larvae).

20. *Trienodes unanimitis* McLachlan, 1877. Two previous records of females from Norway (VE and TEY), both from light traps (Andersen

& Søli 1992, Rødlistebasen). Both localities were later revisited, but the species was not rediscovered. The two males from Table 1 were caught in a Malaise trap at the northern shore of Lake Maridalsvann.

21. *Chaetopteryx sahlbergi* McLachlan, 1876. Only known from Finnmark (Pasvik) previously (Solem & Andersen 1996, Rødlistebasen). In Waringer & Graf (1997), *C. sahlbergi* is not included in the key, and the present specimen keys out as *C. major*, a species not known from Norway. According to P. Wiberg-Larsen, who has determined the specimen, it perfectly matches illustrations of *C. sahlbergi* in Lepneva (1970).

22. *Limnephilus bipunctatus* Curtis, 1834. Probably, the first mentioning of this species from our area is in Wallengren (1884), although specific finds from Norway are not mentioned ("although not as common as the previous species [*L. bimaculatus*], this species is found over the entire peninsula, even in the most northern provinces", Wallengren writes). Brekke (1946) does not acknowledge the statement, and would not include it in his list until new and more precise records were made. He is not citing Stainer (1937), and both he and later authors may thus have overlooked a record from Lebesby, Finnmark county, reported there. By 1975, apparently no new records were made, and the species is still absent from the Norwegian list (Svensson & Tjeder 1975). Next, Aagaard & Hågvar (1987) mention records from Oppdal municipality, Sør-Trøndelag county, with reference to Solem (1985), where, however, the species is not mentioned. Still, in Vitenskapsmuseet, NTNU, there are many specimens of *L. bipunctatus* from the area described in Solem (1985) (T. Andersen in litt.). Solem & Andersen (1996) also include Hedmark county in their distributional list, but with no apparent reference. The record from Finnmark was not included, even though it is highlighted by Stokkeland (1988). In Sweden, the species is found in a large number of counties (län) in the southern part (Gullefors 2002).

23. *Limnephilus externus* Hagen, 1861. Previously, only males have been recorded in three different localities in the counties of Østfold and Vestfold (Andersen 1975, Andersen et al. 1993a, Rødlistebasen). The specimen from Finnerud represents the first female. It was caught in a meadow with no immediate connection to water.

24. *Lype reducta* (Hagen, 1868). Only one previous record of an adult male in Norway (BØ) (Andersen et al. 1993b, Rødlistebasen). The record in Table 1 thus represents the first larva from Norway.

Diptera

25. Chaoboridae. In Sæther (1996) records are presented on a very coarse scale. Hence, in an attempt to give information sufficient for a more elaborate table the next time a similar publication is to be published, I here include one record from each Strand-region, taking into account the records in Sæther (1967a,b, 1970), Nilssen (1974), Hongve (1975), Håland (2005), Dolmen et al. (2005), Aagaard & Dolmen (2006) and O.A. Sæther (pers. comm.: *C. flavicans* (Meigen, 1830) and *C. obscuripes* (van der Wulp, 1859) from HOY). The record of *C. crystallinus* (De Geer, 1776) from Nordland county in Sæther (1996) is probably a confusion with *C. obscuripes* (O.A. Sæther pers. comm.). The origin of information about *C. nyblaei* (Zetterstedt, 1838) from 'TF' in Sæther (1996) is Zetterstedt (1840; 'Lapponia Norvegia'). The question marks connected to regions 'ØL' and 'TR' are of unknown origin, but probably based on larvae tentatively assigned to this species (but with possibilities of being *C. obscuripes*) (O.A. Sæther pers. comm.). It is hereby confirmed from 'ØL' (Table 1).

26. *Chaoborus pallidus* (Fabricius, 1781). This species was reported new to Norway in Olsen & Abel (2003), based on finds from two adjacent localities on Jeløya, Moss municipality, Østfold county. One is presented in Table 1, the other is from Lake Kongshavntjern proper, only some 200 m to the east. Later, it has been found on three occasions: at Koppen (PM07732772)

and south of Greverud nordre (PM07852837), both in Ski municipality on 09.IX.2005 and at Ropernveien (NM898390), Bærum municipality on 12.IX.2006, all in Akershus county (Blindheim et al. 2006, Blindheim & Olsen 2006). It is also found in Denmark (www.faunaeur.org), Sweden (Liungman 2005) and Finland (Sæther 1997).

27. Dixidae. At the moment, a collection of nine samples of dixids have been sent to Dr. R. Wagner in Germany. Tentative results of his investigation have been returned, but not the specimens themselves. Therefore, in addition to the records in Table 1, it shall only be mentioned here that three species new to the Norwegian fauna are included in the material, viz. *Dixella attica* (Pandazis, 1933), *D. serotina* (Meigen, 1818) and *D. martinii* (Peus, 1934). Further details will eventually be published. Also, Ø. Håland has allowed the mention here of yet another species new to Norway, viz. *Dixa nubilipennis* Curtis, 1832, collected (one male) by a brook near Byflaten, Ringsaker municipality, Oppland county on 12.VII.2007 (Ø. Håland in litt.)

28. Ephydra riparia Fallén, 1794. Rognes (1996a) present records only on a very coarse scale ('ØL' meaning (south)eastern Norway). The record in Table 1 is from within this region, but is included here in order to improve the list in future publications.

29. Hydromyza livens (Fabricius, 1794). This species was not known from Norway at the time of Rognes (1996b), but has later been published by Johanson & Ervik (1997). All records reported here are based on observations of traces from larval feeding in leaves of the yellow water-lily *Nuphar lutea* (Table 1). These gnaws are quite commonly observed in eastern Norway, and the species is probably not a recent immigrant.

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