

## The Odonata of the Täftean River (Västerbotten Province, Sweden)

Odonata rzeki Täftean (prowincja Västerbotten, Szwecja)

Szymon ŚNIEGULA

Rakowo 32, 78-445 Łubowo; ssniegula81@interia.pl

**Abstract.** This article contains data on dragonfly (Odonata) species recorded on July 16th, 2006 in two localities at the Täftean River. *Calopteryx virgo* and *Cordulegaster boltonii* represent typical lotic species and were recorded in locality 1. *Pyrhosoma nymphula* was previously recorded in 5 localities in the Västerbotten Province. It seems that these are the most northern localities of the species, whose larvae prefer slow flowing and productive rivers. The author recorded *P. nymphula* in locality 2. Two widespread in Sweden *Aeshna* species are usually found in meso- and dystrophic lakes. Both were recorded exclusively in locality 2. *Somatochlora metallica* was a dominant dragonfly in two studied localities. In the Västerbotten Province larvae of this species are found in variety of aquatic habitats.

### Introduction

Although our knowledge of the Swedish dragonfly fauna is fairly good (e.g. DIJSTRA 2006, JOHANSSON 1993, SAHLÉN 1996, SANDHALL 1987, ŚNIEGULA, JOHANSSON 2006a), there are not many scientific papers describing species composition of lotic habitats, especially those situated in northern part of the country.

In the present paper the author gives preliminary list of dragonfly species recorded in two different localities at the Täftean River.



Narrow stretch of Täftean River of mountain character. Wąski fragment rzeki Täftean o charakterze górskim.

The Täftean River is one of a numerous medium-size rivers on an inlet of the Gulf of Bothnia. It takes its tributary from mesotrophic and dystrophic lakes located North from Umea (63°N, 20°E, about 450 km south from the Arctic Circle). It flows directly into the sea, at the latitude 63°50'N, 20°30'E. The Täftean River represents natural aquatic habitat surrounded by boreal coniferous forest and in some places by peat bogs. Occasionally, as it flows from headwaters downstream, it creates wider stretches with slow moving water.

### Methods

Investigation took place on July 16, 2006. Two different localities were studied:

1. Narrow stretch (about 6 m wide) with a high water velocity with bedrock and boulders as a substrate. The locality is surrounded by coniferous forest and is situated 10 km NE from Umea (on the left side of highway E4).

2. Wider part of river (up to 25 m wide) with almost stagnant water. River bed is covered mostly by a thin layer of mud and

detritus; outer edges are overgrown by *Carex* spp., in further distance by coniferous forest. The water surface in some places is covered by *Nymphaea* sp. The locality is situated about 500 m upstream from the locality 1.

Adult dragonflies were observed while flying over or near the river and exuviae occasionally collected from marginal vegetation during one visit (look: Methods). Since there are other aquatic habitats spotted in a close distance to the investigated localities, recorded imago may have little to do with studied water body. Hence, adult dragonflies listed in Table 1 showed a certain behavior (oviposition or reproductive behavior) that confirmed their larval development in Täftean River.

### Results and discussion

A total of 6 dragonfly species were recorded as residents of the Täftean River. This comprises 21% of all Odonata so far recorded in the Västerbotten Province (JOHANSSON 1993; JOHANSSON, IVARSSON 1999; ŚNIEGULA, JOHANSSON 2006a; ŚNIEGULA, JOHANSSON 2006b). 17 exuviae were identified, but this is not good qualitative and/or quantitative data (look: Methods) (Tab. 1).

*Calopteryx virgo* and *Cordulegaster boltonii* are characteristic dragonflies of running

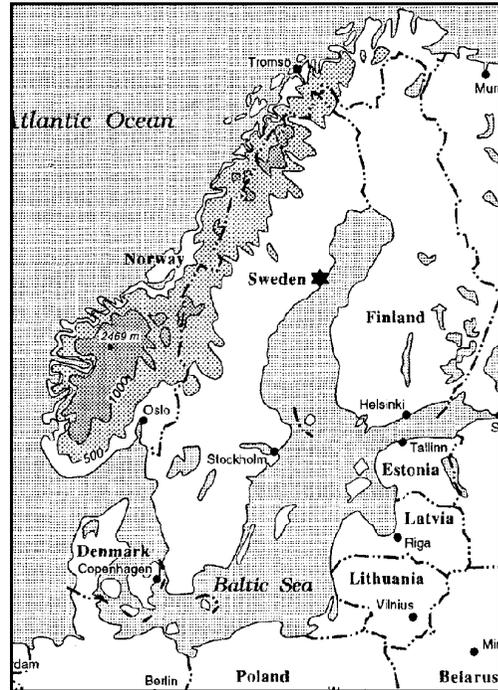


Fig. 1. Localization of study area (asterisk) (after DONNER 1995, modified).

Rys. 1. Lokalizacja terenu badań (gwiazdka) (wg DONNERA 1995, zmienił).

waters. Both prefer small to medium size streams and rivers, often in forested areas (DIJKSTRA 2006). *C. virgo* is common in the whole Västerbotten Province. The second species is common in the coastal area but rarer further inland (JOHANSSON 1993) where the climate is harsher. Both species were

Table 1. Dragonflies recorded at two localities at Täftean River: "+" – imagines recorded; "-" – imagines not recorded; 1, 3... – number of exuviae found in locality.

Tabela 1. Wykaz ważek stwierdzonych na dwóch stanowiskach na rzece Täftean: "+" – obecność imagines, "-" – brak imagines, 1, 3... – liczba znalezionych wylinek.

Species – Gatunki	Imagines		Exuviae	
	locality 1	locality 2	locality 1	locality 2
1. <i>Calopteryx virgo</i> (L.)	+	-		
2. <i>Pyrrhosoma nymphula</i> (SULZ.)	-	+		
3. <i>Aeshna grandis</i> (L.)	-	+	1	3
4. <i>A. juncea</i> (L.)	-	+		1
5. <i>Cordulegaster boltonii</i> (DONOV.)	+	-		
6. <i>Somatochlora metallica</i> (VANDER L.)	+	+	5	7

represented by strong populations recorded only in locality 1.

There are five other localities of *Pyrrhosoma nymphula* recorded in this part of Sweden (JOHANSSON 1993). The species is found in slow flowing and more productive rivers (Johansson personal com.). Similarly, the author noted several males and one female of *P. nymphula* exclusively in locality 2. It seems that the distribution of this species doesn't go further north. On the other hand, this dragonfly was recorded at higher latitudes in Finland (DIJKSTRA 2006).

*Aeshna juncea* and *A. grandis* are common dragonflies in almost all of Sweden. In Västerbotten Province both species are most often found in mesotrophic and dystrophic lakes (pers. observ.). The author recorded imagines of both hawkers and found exuviae only in locality 2.

*Somatochlora metallica* was the most common dragonfly of suborder Anisoptera in the studied localities. In North Sweden the larvae develops in various standing and flowing waters (pers. observ.), while adults are often active in areas shaded by trees.

Another two lotic species that may be found in Täftean River are *Onychogomphus forcipatus* (LINNAEUS, 1758) and *Ophiogomphus cecilia* (FOURCROY, 1785). The river as a habitat seems to fulfill these two species larval preferences. Even though these dragonflies have never been recorded in Västerbotten Province, the closes populations live in Finland (only about 50 km east across the Gulf of Bothnia) and in the very far north of Sweden (DIJKSTRA 2006).

### References

- DIJKSTRA K.-D.B. (Ed.) 2006: Field Guide to the Dragonflies of Britain and Europe. British Wildlife Publishing.
- DONNER J. 1995. The Quaternary History of Scandinavia. Cambridge University Press, Cambridge.
- JOHANSSON F. 1993: The distribution of Odonata in Västerbotten and South Lapland, northern Sweden. Entomol. Fenn., 4: 165–168.
- JOHANSSON F., IVARSSON T. 1999: Utbredning av ängstrollsländor (*Sympetrum*: Odonata) i mellersta Norrland, Sverige. Nordiskt odonatol. Forum, 5(1): 4–5.
- SAHLÉN G. 1996: Sveriges trollsländor. Fältbiologerna, Stockholm.
- SANDHALL A. 1987: Trollsländor i Europa. Interpublishing, Stockholm
- ŚNIEGULA S., JOHANSSON F. 2006a: Twa nya trollsländor för Västerbotten: *Coenagrion pulchellum* och *Somatochlora flavomaculata*. Naur i Norr, 2: 103–104.
- ŚNIEGULA S., F. JOHANSSON 2006b: Trollsändor i Grössjön naturreservat, Umea. Natur i Norr, 2: 105–106.

### Streszczenie

Artykuł przedstawia skład gatunkowy ważek (Odonata) notowanych 16 lipca 2006 r. na dwóch stanowiskach na rzece Täftean. *Calopteryx virgo* i *Cordulegaster boltonii* to organizmy ściśle przywiązane do siedlisk wód biejących. Notowano je na stanowisku 1. *Pyrrhosoma nymphula* notowana była na obszarze prowincji Västerbotten na 5 siedliskach. Wydaje się, że w Szwecji północna granica jej występowania przebiega przez tą prowincję. Preferując siedliska rzeczne, dodatkowo z żyzniejszą wodą, notowana była na stanowisku 2. Dwa gatunki z rodzaju *Aeshna* najczęściej zasiedlają jeziora mezo- i dystroficzne. Autor notował je wyłącznie na stanowisku 2. Dominantem na obu stanowiskach była *Somatochlora metallica*, gatunek, którego larwy żyją w szerokim spektrum habitatów wodnych.

**Key Words.** Odonata, dragonflies, river, lotic habitat, Sweden, Västerbotten.