

Interesting Trichoptera from The Netherlands in the collection of the Zoological Museum Amsterdam

Revision of the pinned Netherlands caddisflies in the collection of the Zoological Museum Amsterdam has led, *inter alia*, to several interesting discoveries. *Hydropsyche (contubernalis) masovica* is a taxon for the first time recorded from The Netherlands. A highly surprising discovery is that of *Stenophylax mitis* from a locality in the province of Gelderland: the species is new for the country's fauna and the record represents the northernmost locality of its distribution area. For some species, like *Oxyethira simplex*, or *Hydropsyche exocellata*, the status as members of the Netherlands' fauna is solidly confirmed (in the first case after a large gap in the sampling record). Identification of recently collected specimens seems to justify optimism concerning the future situation of several species in The Netherlands (*Hydropsyche bulgaromanorum*, *Oectetis testacea*, *O. notata*, *Ernodes articularis*), whereas in the case of *Sericostoma schneideri* rather pessimism seems to be justified. Two cases of anomalous specimens are illustrated in the genera *Ceraclea* and *Notidobia*.

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Introduction

During 2003 and 2004 I have completely revised the pinned Trichoptera from The Netherlands in the collection of the Zoological Museum Amsterdam (ZMA), identifying hundreds of specimens and verifying the identification of other hundreds. For the present paper I have selected interesting species and specimens whose study provides additional information for the knowledge of the caddisfly fauna of this country. I hope that this will be an incentive for renewed faunistic and ecological work on this group of insects of which the study of adults has been rather neglected in recent years.

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Species account

Oxyethira simplex Ris

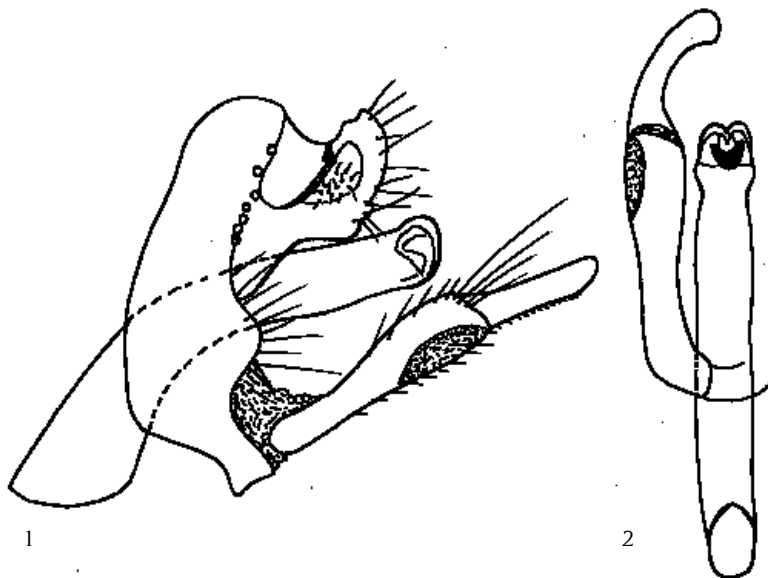
According to Higler (1995: table 1) this species has not been recorded from The Netherlands since 1944. Ten specimens had been collected by F.C.J. Fischer on 18 August 1944, and identified – 'provisional identification!' – by Martin E. Mosely (Fischer 1948: 48). In the ZMA-collection I have identified 16 ♂ and 22 ♀ of this minute hydroptilid from Vlodrop, Limburg. The material was collected on 5 July 1981 by G.E. Langohr.

Hydropsyche bulgaromanorum Malicky

Since Van Urk *et al.* (1992) ascertained *H. bulgaromanorum* as a species new for the fauna of The Netherlands occurring in the river IJssel, several additional specimens have been collected and deposited in the ZMA-collection. I have identified 2 ♂ and 1 ♀ from Wezep, Gelderland, collected on 8 August 1992 by K.J. Huisman, and 1 ♂ from IJzevoorde, Gelderland, collected on 4 June 1992 by J.H.H. Zwier. In both cases it may be supposed that the specimens did not originate from the river IJssel but from some of its tributaries. Higler (1995: table 3) mentions both the IJssel and the Rhine. All these records indicate that this potamobiont is at present firmly established in the country and probably slowly expanding its distribution area.

Hydropsyche superspecies (*contubernalis*)*masovica* Malicky figures 1-2

Large numbers of specimens of *H. contubernalis* McLachlan have been seen by me during this collection revision, apparently without showing some peculiarity (of course, it would have been impossible to macerate all of them in KOH for a thorough study of the genitalia!). However, 1 ♂ from Meinerswijk, Arnhem, Gelderland, collected on 28 April 1999 by J. Smit (near the Rhine banks; J. Smit pers. comm.) attracted my attention. Careful examination of its genitalia showed that it matches well the taxon described by Malicky (1981) as *H. contubernalis masovica*. The most distinctive character of



Figures 1-2. Genitalia of male *Hydropsyche (contubernalis) masovica*, **1** lateral and **2** phallus with one gonopod, ventral. Specimen from the Rhine, Arnhem, Gelderland. Illustratie: L. Botosaneanu

Genitaliën van mannetje *Hydropsyche (contubernalis) masovica*, **1** lateraal en **2** fallus met een gonopod, ventraal. Exemplaar uit de Rijn, Arnhem.

this taxon is the clearly capitate apex of the phallus, with slightly sinuous margins (to this may be added that, in lateral view, the phallus seems to be slightly less angularly bent than in most *H. (contubernalis) contubernalis*, and that the anteapical swelling of the phallus is very attenuate). *Hydropsyche (c.) masovica* is a taxon new for the fauna of The

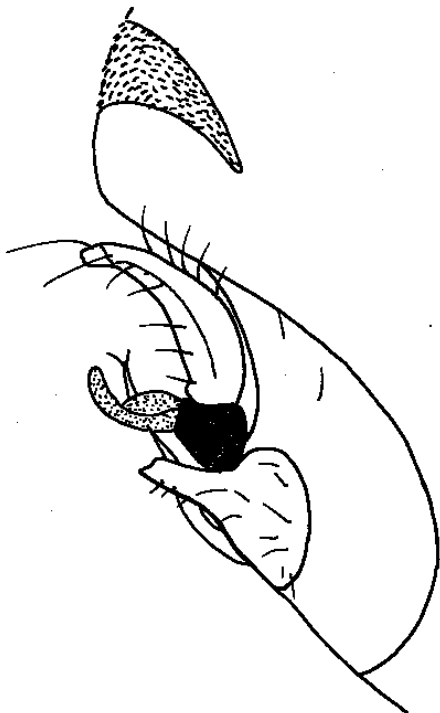


Figure 3. Genitalia of male *Stenophylax mitis*, lateral (abdomen non macerated, which explains a certain distortion). Specimen from Heerde, Gelderland. Illustratie: L. Botosaneanu

Genitaliën van mannetje *Stenophylax mitis*, lateraal (abdomen niet gemacereerd, wat een zekere vervorming verklaart). Exemplaar van Heerde, Gelderland.

Netherlands. This new observation, together with those published earlier (Botosaneanu 1992), represents for me a puzzle concerning the taxonomic status of several taxa of the superspecies *H. contubernalis* in The Netherlands: maybe temporal and spatial fluctuations are involved?

***Hydropsyche exocellata* Dufour**

Although this species has been repeatedly recorded as belonging to the fauna of The Netherlands (Albarda 1889: 354; Fischer 1948: 48; Geijskes & Fischer 1971: 238; Geijskes & Higler 1980: 18), Higler (1995: table 2) states, rather surprisingly, that it is 'almost certainly not Netherlands'. In the ZMA-collection I have found 7 ♂ indubitably belonging to *H. exocellata* and collected at Maas-tricht, Limburg, on 11 September 1915 by McGillavry. Unfortunately, there are no more recently collected specimens in the collection.

***Ironoquia dubia* (Stephens)**

Higler (1995: table 3) mentions Haarlem, Achterhoek and Noord-Brabant for records more recent than 1950, whereas an older record – in several publications by F.C.J. Fischer – is from a locality in the province of Overijssel. A single ♂ in the ZMA-collection – correctly identified by D.C. Geijskes – has been collected at Valkenisse on 4 October 1972 by B. van Aartsen and represents the first record of *I. dubia* from the province of Zeeland.

***Stenophylax mitis* McLachlan** figures 3-4

A surprise was the discovery of 1 ♂ of *Stenophylax mitis*, collected at Heerde, Gelderland, on 6 October 1978 by J.B. Wolschrijn and identified by me. From the collector I have received the following additional information: the specimen had been caught with artificial light, the light-trap being operated between 1973 and 1982 in the neighbourhood of Hoorn of Heerde, with the aim of attracting Microlepidoptera. Only very selectively also quite a few Trichoptera-specimens had been preserved. Mr. Wolschrijn enumerates several aquatic habitats not very far from the place where the lamp had been operated; one of them could be the habitat of *S. mitis*. It is described as follows by Mr. Wolschrijn: 'To the south, at a distance of a few hundreds of meters, small brooks fed by sprengen (i.e., partly artificial springs) flow into the Canal of Apeldoorn'. Mr. Wolschrijn remembers having seen several specimens of this species at the above mentioned site.

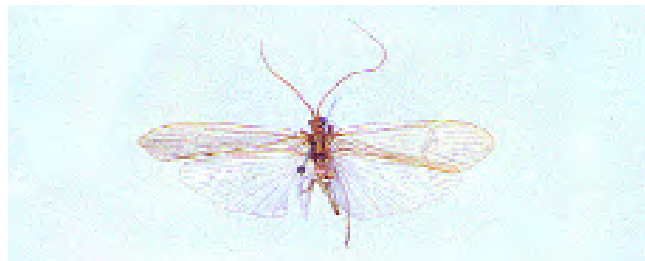


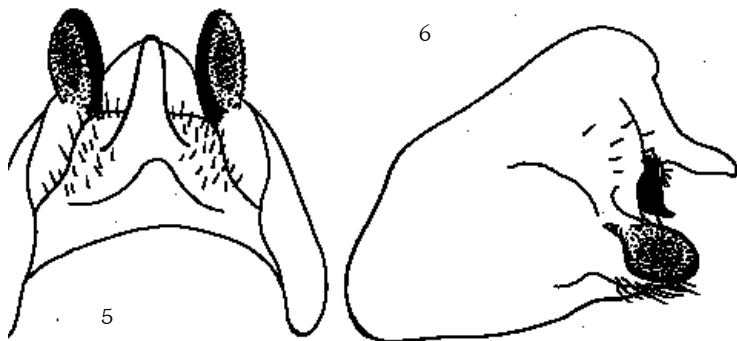
Figure 4. Male *Stenophylax mitis* from Heerde, Gelderland. Photo: Rob de Vos
Stenophylax mitis (mannetje) van Heerde, Gelderland.

The discovery of *S. mitis* in The Netherlands is highly interesting: it is not only new for the country's fauna, but the locality is definitely the most septentrional one in the distribution area of this species with northern African and southern and Central-European distribution (Botosaneanu & Malicky 1978). It should be noted that *S. mitis* has never been recorded from zone 14 of *Limnofauna Europaea* – to which The Netherlands north of the river Rhine belong. It is absent from the fauna of Belgium (Stroot 1987) and has been recently recorded as sporadically found in Germany in Baden-Württemberg, Rheinland-Pfalz, Saarland and Hessen, these localities considered as being '...mit Abstand am nördlichsten gelegenen Fundorte der Art in Europa' (Robert 2001: 128, 133).

Ceraclea dissimilis (Stephens)

figures 5-6

A ♀ specimen with aberrant genitalia has been caught at the Vrakelberg, Limburg, on 22 July 1983 by G.E. Langohr. It shows an odd, well-developed median appendage from segment X tergum.



Figures 5-6. Genitalia of an anomalous female specimen of *Ceraclea dissimilis*, dorsal and lateral. Illustratie: L. Botosaneanu
Genitaliën van een abnormaal vrouwtje van *Ceraclea dissimilis*, dorsaal en lateraal.

Ceraclea annulicornis (Stephens), ***C. riparia*** (Albarda), ***Oecetis tripunctata*** (Fabricius)

For these three leptocerids, Higler (1995: table 1) mentions that they have not been recorded for The Netherlands ('in large rivers') since 1889. If I include them in the present publication this is, first, to emphasize how interesting it would be to try to find, by intensive collecting, if they have recently reappeared in the country's large rivers, as a result of the improved quality of the environment (like in the case, for instance, of *Hydropsyche bulgaromanorum*); and, second, because the ZMA-collection includes a few specimens of all three. 1 ♂ of *C. annulicornis* is from Venlo, Limburg, captured on 8 June (year not indicated) by Van den Brandt and correctly identified by H. Albarda in 1880. Of *C. riparia* the collection includes 1 ♂ from Venlo, captured on 13 July [year not indicated] by Van den Brandt and correctly identified by H. Albarda in 1878. *Oecetis tripunctata* is represented by 3 ♂, two of them from Venlo collected on 1 August [year not indicated] by Van den Brandt, the third one being from the same locality and by the same collector, but captured on 20 July. Two of these specimens were correctly identified by H. Albarda in 1873 (but one of them as ♀), the third one by F.C.J. Fischer.

Oecetis notata (Rambur)

This species had been rather often sampled from various parts of the country (see for references prior to 1960: Fischer 1966: 126-128; Fischer 1972: 146). The ZMA-collection includes two old specimens (♂, ♀) from Venlo. Higler (1995: table 3) indicates that after 1950 it has been sampled in The Netherlands only from 'Maas Limburg' (undoubtedly this refers to Fischer (1955) where we find records from Swalmen (Lempke) and St. Pietersberg (Museum Leiden)). Of some interest is the fact that I have identified in the ZMA-collection two ♂ specimens – caught in recent years – which may be an indication of an improving situation. These specimens are from Rotterdam, Zuid-Holland, and were caught on 3 August 1990 by J. Lucas, and from IJzevoorde, Gelderland, caught on 20 June 1998 by J.H.H. Zwier.

Oecetis testacea (Curtis)

In Higler (1995: table 3) we find that after 1950 *O. testacea* has been observed in The Netherlands from the 'Rhine and IJssel'. I have identified in the ZMA-collection 1 ♀ from Schinveld, Limburg, caught on 6 June 1987 by G.E. Langohr. The locality lies in the river basin of the Meuse. It should be mentioned that Higler (1995) omits the discovery of a flourishing population of *O. testacea* in the Veluwe, Gelderland (Botosaneanu *et al.* 1989).

Ylodes simulans (Tjeder)

5 ♂ from Waalre in the province of Noord-Brabant, collected on 5 or 6 June 1932 by F. Fischer, carried an identification label by F.C.J. Fischer with the name *Trienodes conspersa* Curt. I identified the specimens as *Y. simulans*. It is likely that specimens from The Netherlands identified in publications as *T. conspersus* (Albarda 1889: 349; Fischer 1934: 188-189; see also Higler 1995: table 2) will prove to be *Y. simulans* (see Geijskes 1969).

Ernodes articularis (Pictet)

There are several specimens in the ZMA-collection, sampled by G.E. Langohr between 1971-1985, from several localities of South Limburg (Geulle, Ravensbos, Cottessen, Vijlen) and identified by me. This means that this crenobiont has firmly maintained itself in suitable localities in the south of this province (in Higler 1995: table 3, we read that it has not been recorded after 1961).

Sericostoma schneideri Kolenati

figure 7

The specific name *schneideri* has to replace *flavicornis* Schneider (Botosaneanu 2001). It seems that the situation of this species is opposite to that of *Ernodes articularis*: all spe-



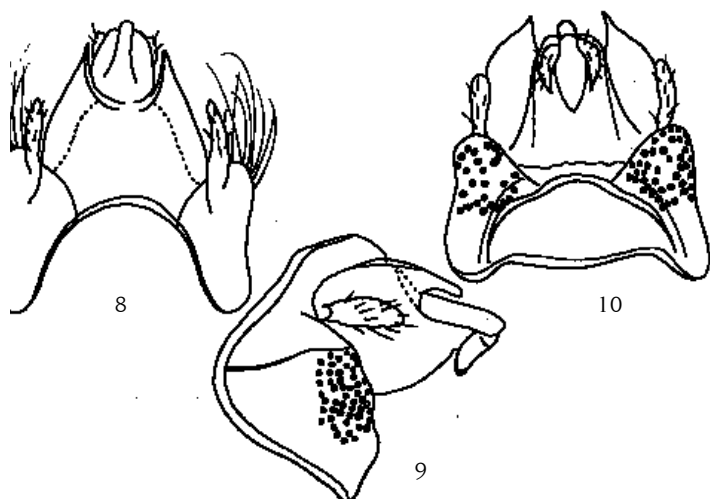
Figure 7. Female *Sericostoma schneideri* from Cottessen, Limburg. Photo: Rob de Vos
Sericostoma schneideri (vrouwtje) van Cottessen, Limburg.

cimens in the ZMA-collection (all from South-Limburg; some of them incorrectly identified as *S. personatum* Spencer) were sampled between 1919-1923. Higler (1955: table 1) states that the species (*sub S. flavicorne*) has not been observed in The Netherlands after 1934, which suggests that it could not maintain itself in its only Netherlands locations: the crenal habitats of South Limburg.

Notidobia ciliaris (L.)

figures 8-10

A strangely anomalous specimen is labelled 'Wass.[enaar], 5, Per [in]'. Its genitalia, apparently of a ♂, are devoid of medio-ventral appendages, of gonopods, and of a phallus. This explains why F.C.J. Fischer had identified it as ♀.



Figures 8-10. Genitalia of anomalous specimen of *Notidobia ciliaris*, **8** dorsal, **9** lateral and **10** ventral. Illustratie: L. Botosaneanu
Genitaliën van een abnormaal mannetje van *Notidobia ciliaris*, **8** dorsaal, **9** lateraal en **10** ventraal.

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Samenvatting

Interessante Trichoptera uit Nederland in de verzameling van het Zoölogisch Museum Amsterdam

Tijdens revisie van de collectie van droge Nederlandse Trichoptera in het Zoölogisch Museum Amsterdam (ZMA) zijn enkele interessante ontdekkingen gedaan. *Hydropsyche (contubernalis) masovica* is een taxon nieuw voor de Nederlandse fauna. De ontdekking van *Stenophylax mitis* op een locatie in Gelderland is een echte verrassing: de soort is nieuw voor de fauna van Nederland en de locatie is duidelijk de meest noordelijke van zijn verspreidingsgebied. Voor sommige soorten, zoals *Oxyethira simplex* of *Hydropsyche exocellata*, is de status van Nederlandse soorten bevestigd (in het eerste geval na een lange tijd zonder vangsten). Identificatie van recent gevangen exemplaren rechtvaardigt optimalisme met betrekking tot de toekomstige situatie van meerdere soorten in Nederland (*Hydropsyche bulgaromanorum*, *Oecetis testacea*, *O. notata*, *Ernodes articularis*), terwijl in het geval van *Sericostoma schneideri* er eerder sprake is van pessimisme. Twee interessante gevallen van teratologische exemplaren (in de genera *Ceraclea* en *Notidobia*) worden geïllustreerd.