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***Dendrocoelum romanodanubiale* in the Rhine delta: first records from The Netherlands**

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With 2 figures and 1 table

Schlagwörter: *Dendrocoelum*, Tricladida, Turbellaria, Rhein, Rheindelta, Niederlande, Erstfund
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The Ponto-Caspian species *Dendrocoelum romanodanubiale* (CODREANU 1949) now has reached the Rhine delta via the Upper Danube and the Main-Danube Canal.

1 Introduction

The triclad *Dendrocoelum romanodanubiale* (CODREANU 1949) is one of the Ponto-Caspian macroinvertebrate species that recently colonised the Rhine basin via the Main-Danube Canal. Before its migration through that canal range extension was observed in the River Danube in the 1990's. The species was found for the first time in the upper Danube (in Germany) in 1994 (WEINZIERL & SEITZ 1994). In August 1997 and July 1998 *D. romanodanubiale* was found in the River Rhine (SCHÖLL & BEHRING 1998) and its tributary the River Main (SCHLEUTER & SCHLEUTER 1998) respectively. Further colonisation of the River Rhine was expected, but it took about three years before the species was found in the Rhine delta.

2 Methods

Macroinvertebrates in the Lower Rhine (location 1, Fig. 1) have been sampled on a regularly basis six times a year with a standardised artificial substrate, consisting of glass marbles (DE PAUW & al. 1994). The substrate was placed on the river bottom and sampled after a colonisation period of four weeks. Stones in the littoral zone in the Rhine delta (locations 2-10, Fig. 1) were collected with a polyp grab and sampled by brushing off the attached material. Each sample was rinsed on a 0,5 mm mesh sieve before preservation with ethanol. *D. romanodanubiale* (fig. 2) was identified with a description according to SCHÖLL & BEHRING (1998).

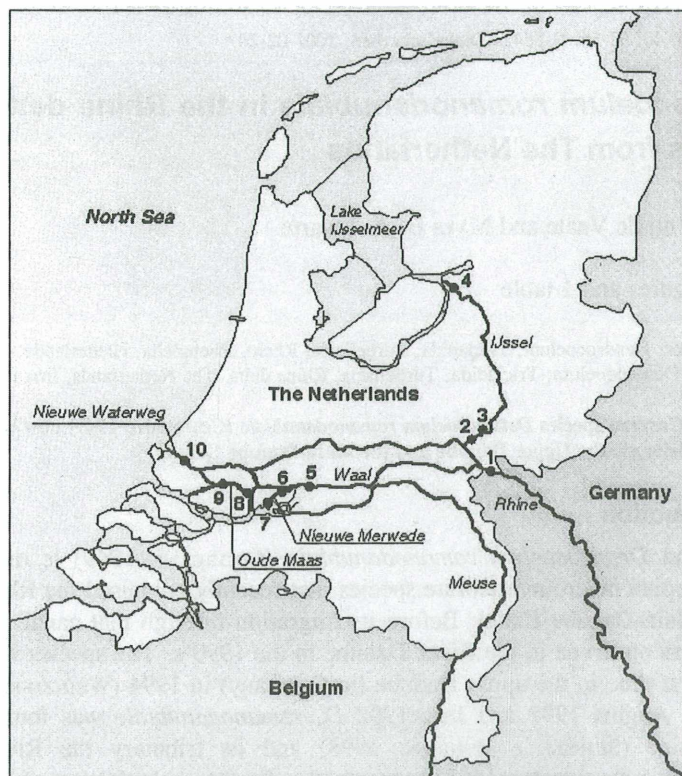


Fig. 1: Locations in the Lower Rhine and the Rhine delta where *D. romanodanubiale* was found in the period September-October 1999

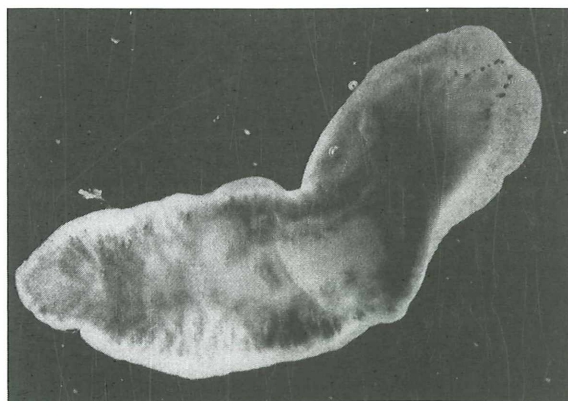


Fig. 2: Habitus of *Dendrocoelum romanodanubiale*

3 Results and discussion

D. romanodanubiale was found in several macroinvertebrate samples taken in the Lower Rhine and Rhine delta (Tab. 1, Fig. 1) in the framework of the national biological monitoring programme (GILDE & al. 1999).

Tab. 1: Number of *D. romanodanubiale* found in samples taken in the period September-October 1999 in the Lower Rhine and the Rhine delta

Location	River km	Number
Rhine (1)	863	1
IJssel (2)	885	313
IJssel (3)	896	79
IJssel (4)	1001	10
Waal (5)	951	1
Nieuwe Merwede (6)	964	8
Nieuwe Merwede (7)	970	1
Oude Maas (8)	983	2
Oude Maas (9)	990	3
Nieuwe Waterweg (10)	1020	1

The observations of the species in September and October 1999 were the first in The Netherlands. After its record from the middle section of the river in 1997 (SCHÖLL & BEHRING 1998), colonisation in downstream direction could be expected. Other Ponto-Caspian macroinvertebrate species, that recently entered the Rhine basin via the Main-Danube Canal showed comparable migration patterns: e.g. the gammarid *Dikerogammarus haemobaphes* (SCHLEUTER & al. 1994; SCHÖLL & al. 1995, TITIZER 1996), the mysid *Limnomysis benedeni* (WITTMANN 1995, REINHOLD & TITIZER 1998, KELLEHER & al. 1999, KETELAAR & al. 1999), the amphipod *Jaera istri* (SCHLEUTER & SCHLEUTER 1995, SCHÖLL & BANNING 1996, TITIZER 1996a), and the polychaete *Hypania invalida* (KOTHÉ 1968, TITIZER 1996b, KLINK & BIJ DE VAATE 1996; SCHMIDT & al., 1998). As the result of water management in the Main-Danube Canal and shipping activity other Ponto-Caspian species are expected to colonise the Rhine basin in the near future.

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