

Nais stolci Hrabě, 1981: a new oligochaete (Annelida: Clitellata: Naididae) species for Turkey

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Received: 01.06.2009

Abstract: As a result of sampling made in the Dicle (Tigris) River, southeastern Anatolia, Turkey, between March 2008 and April 2009, *Nais stolci* is reported as a new species for the Turkish fauna.

Key words: Oligochaeta, *Nais stolci*, Dicle River, Turkey, Fauna

Nais stolci Hrabě, 1981: Türkiye için yeni bir Oligoket (Annelida, Oligochaeta) türü

Özet: Mart 2008-Nisan 2009 yılları arasında Dicle Nehri'nden (Güneydoğu Anadolu, Türkiye) yapılan örneklemeler sonucu, *Nais stolci* Hrabě, 1981 türü Türkiye Oligoket faunası için yeni bir tür olarak rapor edilmiştir.

Anahtar sözcükler: Oligochaeta, *Nais stolci*, Dicle Nehri, Türkiye, Fauna

The family Naididae (now-expanded oligochaete family) (Erséus et al., 2008) is one of the most important groups of aquatic Oligochaeta. A large part of the freshwater naidids are members of the subfamily Naididae, most species of which are cosmopolitan, occurring throughout the world (Wetzel et al., 2000); *Nais stolci* is yet only recorded from Europe. The family comprises 582 freshwater species (Martin et al., 2008), of which approximately 30 belong to the genus *Nais*. Ninety-five species of Naididae have been reported from Turkey so far with

9 of them belonging to the genus *Nais* (*N. communis*, *N. variabilis*, *N. simplex*, *N. bretscheri*, *N. pardalis*, *N. elinguis*, *N. barbata*, *N. pseudobtusa* and *N. christinae*) (Arslan, 2006; Yıldız and Balık, 2006; Arslan et al., 2007; Yıldız et al., 2007; Yıldız and Balık, 2010). *Nais stolci* Hrabě, 1981 is new to the Turkish fauna. Apart from new information on the species, the present record also contributes to the knowledge on the distribution of the species by extending the distribution area to the Turkish part of Asia, which was previously known only from Europe.

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We collected mud and water samples monthly from 9 different stations at the Dicle River and its catchment area in southeastern Turkey between March 2008 and April 2009 in order to determine the Oligochaeta fauna. Samples were taken by a hand-net with a mesh size of 180 µm, disturbing the substrate for 3 min, and fixed on-site with 4% formaldehyde. Fixed material was again sieved with a 500 µm sieve in laboratory. After sorting the material, oligochaete specimens were preserved in 70% alcohol and prepared for identification as permanent mounts on slides using CMCP 10 solution. The key by Timm and Veldhuijzen van Zanten (2002) was used for species identification. The photographs of the species were taken by a digital camera (Olympus, Camedia, C-7070) attached to stereo and compound microscopes. All figures were drawn using a camera lucida. The specimens were deposited in the Museum of the Faculty of Fisheries, Ege University (ESFM) as a permanent whole mount. In the following description, Roman numerals mean segmental numbers.

***Nais stolci* Hrabě, 1981**

Material examined: 11 specimens. They were

found only at 2 stations (station 6: Dicle River – downstream of Hasankeyf; 37°42'58" N, 41°22'59" E, and station 8: Botan Stream in Siirt 37°53'49" N, 41°59'11" E) in the study area.

Description. Transparent worm. Total length = 1.5-2.5 mm. Number of segments = 22-37. Dorsal setal bundles beginning in VI, including 1 hair setae 107.5-137.5 µm long and 1 needle setae about 62.5 µm long, with long teeth (Figure 1). In II-V ventral setae by 3-5, 85-95 µm long and 1.4-1.7 µm thick, with parallel teeth, upper tooth twice as long as the lower. From VI on, 2-3 enlarged setae per bundle (the biggest usually in VIII) 82.5-110 µm long and about 4-5 µm thick, upper tooth up to 4 times as long as the lower one (Figure 2); in about X their number increases to 4-5, while length decreases to 72.5-88 µm, the ratio of the teeth gradually decreasing to 2 again (Figure 3). Stomachal dilatation gradual.

Habitat: Hard substratum with stony-sandy areas at station 6, with great stones and sand at station 8. Each station had a sandy-muddy bank.

Distribution: Europe (Timm and Veldhuijzen van Zanten, 2002; Timm and Giani, 2007). New record for Turkey and Asia.

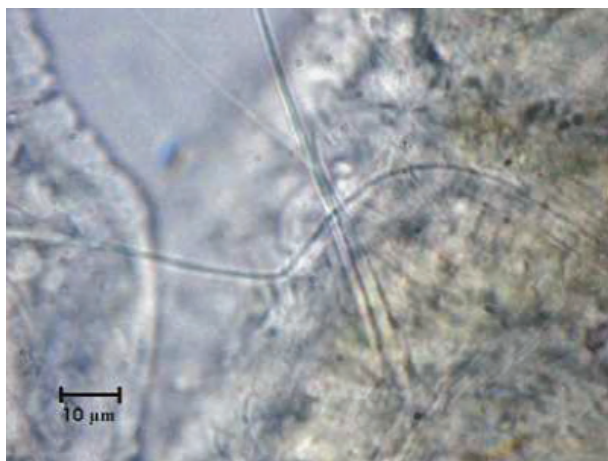


Figure 1. Dorsal setal bundle of *Nais stolci* (1 hair and 1 needle seta).



Figure 2. Enlarged ventral setal bundles of *Nais stolci* (upper tooth up to 4 times as long as lower one).

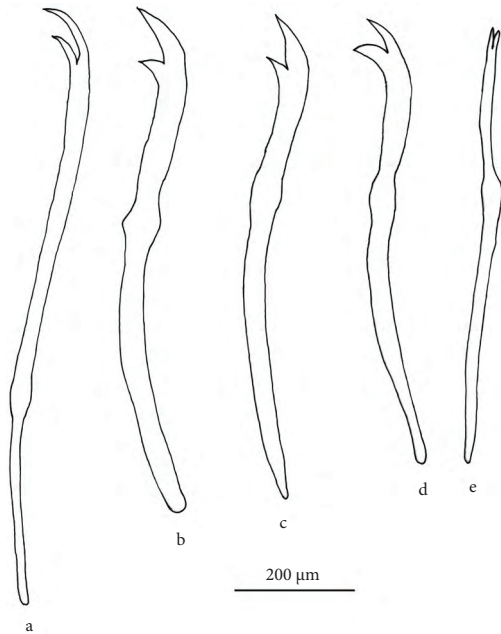


Figure 3. Ventral setae from different segments (a. II, b. VIII, c. XV, d. posterior and e. dorsal needle).

Discussion: Hrabě (1981) described the length of setae in Czech specimens as follows: anterior ventrals 3-5 in II, in III 4-5, in IV to V 3-4, in VI 2-3, posterior ventrals 4-5. Starting in segment X, 4-5 ventral setae. In segment II to VI, setae are 90-107 µm long, in VI and VII 81-107 µm long, in segment VIII 86-113 µm long, in segment X 80-102 µm long, in segment XV 70-85 µm long. Hair setae are 147-212 µm long, needle setae 65 µm long. Although the form and numbers of setae in the Dicle River (Turkey specimens) samples closely agree with Hrabě's description, the length of all setae in the present samples is shorter. Brinkhurst and Wetzel (1984) also give a brief description of this species from the key provided by (Hrabě, 1981).

Acknowledgements

We would like to thank Dr. Sencer Akalın for arranging the figures.

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