

Scientific Name: *Potamothrix moldaviensis* Vejdovsky and Mrazek, 1902

Common Name: tubificid, oligochaete, annelid

Taxonomy: Available through ITIS

Identification: This oligochaete has bundles of 6–9 bifid crochets with longer and thinner upper teeth in comparison to the lower ones on anterior segments. There are modified thick spermathecal chaetae with long teeth on segment 10 and there is one very long bifid ventral seta per bundle on segment 11. There are no prostate glands, no chitinous penis sheaths, and no capilliform chaetae (Brinkhurst 1965; Spencer 1978; Finogenova and Poddubnaja 1990; Yildiz et al. 2005).

Size: *P. moldaviensis* ranges in length from 10–30 mm (Finogenova and Poddubnaja 1990; Yildiz et al. 2005).

Native Range: *P. moldaviensis* is from the Ponto-Caspian region in the Black Sea, Caspian Sea, and Sea of Azov (Brinkhurst 1965; Milbrink and Timm 2001).

Nonindigenous Occurrences: *Potamothrix* spp. were probably introduced to the Great Lakes basin before 1959 and remained undetected. *P. moldaviensis* has been recorded from Lake Erie, Lake Michigan, Lake Ontario, Lake Superior, Lake Huron, Lake St. Clair, the St. Clair River, St. Mary's River, the Detroit River, the Niagara River, Cayuga Lake, and other water bodies within the Great Lakes basin (Brinkhurst 1965, 1967; Hiltunen 1969; Johnson and Brinkhurst 1971; Mozley and Garcia 1972; Stimpson et al. 1975; Spencer 1978, 1980; Graney et al. 1986; Barton 1988; Griffiths 1991; Weider 1992; Boyd et al. 2001; Lozano et al. 2001; Nalepa et al. 2002; Grigorovich et al. 2003a, b; Spencer and Hudson 2003).

Means of Introduction: Unknown.

Status: Established where recorded.

Ecology: *P. moldaviensis* is a freshwater oligochaete that can tolerate brief increases in salinity only. It is generally rheophilic, preferring rivers or lakes with bottom currents. It has been recorded at depths of 3–115 m, although it is generally less common below 35 m. It occurs in mesotrophic to eutrophic conditions in gravelly sand, sand, muddy sand, amongst macrophytes, and crushed shells. It is generally absent from substrate with high silt and clay content (Brinkhurst 1967; Hiltunen 1967; Timm 1970; Moroz 1974, 1994; Stimpson et al. 1975; Spencer 1978; Probst 1987; Barton 1988; Lang and Reymond 1993; Sauter and Gude 1996; Milbrink and Timm 2001; Strayer et al. 2003, 2006).

P. moldaviensis can reproduce by making pear-shaped cocoons covered in sediment particles that adhere to hard substrates. One study found that at 10°C *P. moldaviensis* spends around 46 days in cocoons, 300 days as an immature individual after it hatches, and 150 days in the mature stage. At 15°C the length of time spent in the cocoon decreases to 30 days (Arkhipova 1983; Bonacina et al. 1987; Milbrink and Timm 2001).

Impact of Introduction

A) Realized: Unknown.

B) Potential: Some studies suggest that *Potamothenix* spp. may have a positive impact on native oligochaetes in Europe. The benefit could result from the numerous bacteria found in *Potamothenix* spp. faeces, which could allow for improved feeding by natives. In Lake Malaren, Sweden, *P. moldaviensis* and other Ponto-Caspian *Potamothenix* spp. are associated with increased oligochaete diversity (Milbrink 1993; Milbrink and Timm 2001).

Remarks: *P. moldaviensis* has dispersed throughout much of eastern and central Europe with the aid of the shipping industry and canals (Milbrink and Timm 2001).

P. moldaviensis is synonymous with *Euliyodrilus moldaviensis*.

Voucher Specimens:

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Other Resources:

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Group: Annelids - Oligochaetes

Lake(s): All Great Lakes Drainages

Genus: *Potamothrix* (synonymous with *Euiliodrilus*)

Species: *moldaviensis*

Common Name: tubificid, oligochaete, annelid

Status: Established

Freshwater/Marine: Freshwater (mainly), but tolerates some brackish water for short periods

Pathway: Unknown, but Shipping is a strong possibility

Exotic/Transplant: Exotic