

Scientific Name: *Sphaeromyxa sevastopoli* Najdenova, 1970

Common Name: mixosporidian

Taxonomy: available through ITIS

Identification: *S. sevastopoli* spores are long tubes that are thicker in the middle and tapered at either end, containing ejectable polar filaments. Spores generally have a granular appearance and typical specimens exhibit long striations from one extreme to the other, while atypical ones may not. Description based on detailed drawings by Yurakhno (1993).

Size: *S. sevastopoli* spores are 17-17.5 µm in length (Yurakhno 1993).

Native Range: *S. sevastopoli* is endemic to the Black Sea and Sea of Azov drainages (Pronin et al. 1997; Rolbiecki 2006).

Nonindigenous Occurrences: *S. sevastopoli* was discovered in the Great Lakes in exotic gobies collected from the St. Clair River and Lake St. Clair in 1994 (Pronin et al. 1997) and from the St. Louis River near Lake Superior in 1995 (Bronte et al. 2003).

Means of Introduction: *S. sevastopoli* was likely introduced with its host fishes in ship ballast water (Pronin et al. 1997).

Status: Established.

Ecology: In general, Myxosporidia live as parasites in poikilothermic vertebrates, often fish (Post 1983). In the Great Lakes basin, *S. sevastopoli* occurs in the gallbladders of host fishes. It was found in the round goby (*Neogobius melanostomus*) in Lake St. Clair and the St. Clair River, and the tubenose goby (*Proterorhinus marmoratus*) in Lake St. Clair (Pronin et al. 1997).

S. sevastopoli naturally occurs in brackish waters in the Black Sea region in gobiid fishes, including the round goby and the big-scale sand smelt (*Atherina boyeri*) (Yurakhno 1993, 1997; Pronin et al. 1997).

Impact of Introduction

A) Realized: None.

B) Potential: It is unlikely that *S. sevastopoli* can regulate goby populations in the Great Lakes (Pronin et al. 1997).

Remarks:

Voucher Specimens:

References:

Bronte, C. R., M. P. Ebener, D. R. Schreiner, D. S. DeVault, M. M. Petzold, D. A. Jensen, C. Richards, and S. J. Lorenzo. 2003. Fish community change in Lake Superior, 1970-2000. *Canadian Journal of Fisheries and Aquatic Sciences* 60:1552-1574.

Post, G. 1983. *Textbook of Fish Health*. T. F. H. Publications, The British Crown Company of Hong Kong. 256 pp.

Pronin, N. M., G. W. Fleischer, D. R. Baldanova, and S. V. Pronin. 1997. Parasites of the recently established round goby (*Neogobius melanostomus*) and tubenose goby (*Proterorhinus marmoratus*) (Cottidae) from the St. Clair River and Lake St. Clair, Michigan, USA. *Folia Parasitologica (Ceske Budejovice)* 44(1):1-6.

Rolbiecki, L. 2006. Parasites of the round goby, *Neogobius melanostomus* (Pallas, 1811), an invasive species in the Polish fauna of the Vistula Lagoon ecosystem. *Oceanologia* 48(4):545-561.

Yurakhno, V. 1993. New data of the fauna of myxosporidians from fishes of the Black Sea. *Parasitology* 27(4):320-326. (in Russian)

Yurakhno, V. 1997. Myxosporeans (Protozoa: Myxosporea) from different ecological groups of the Black Sea fish. *Ecologiya Morya (Ecology of the Sea)* 46:83-89. (in Russian)

Other Resources:

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Group: Category not available - parasite

Lake(s): Lake St. Clair Drainage, Lake Superior Drainage

Genus: *Sphaeromyxa*

Species: *sevastopoli*

Common Name: mixosporidian

Status: Established in Lake St. Clair and Lake Superior drainages

Freshwater/Marine: All

Pathway: Shipping (introduced with exotic fish hosts)

Exotic/Transplant: Exotic