Scientific Name: *Scolex pleuronectis* Müller, 1788

Common Name: cestode

Taxonomy: available through ITIS

Identification: *S. pleuronectis* refers to a complex of species of cestodes in the order Tetraphyllidea. They exhibit proglottids containing male and female genitalia that can be shed to develop into new individuals. Plerocercoids and adults have a scolex for attachment to the host with various bothridia (hooked holdfasts) and an accessory apical sucker. The number of loculi per bothridium has been recorded to range from 1-74 in species from around the world. Larvae can encyst as metacestodes in some hosts and are difficult to identify at this stage (Anantaraman 1963; Avdeeva and Avdeev 1980; Post 1983; Radhakrishnan et al. 1984; Wojciechowska 1990; Pronin et al. 1997; Chambers et al. 2000; Fernandez et al. 2004).

Size: Information is lacking for *S. pleuronectis* collected from the Great Lakes basin. However, other species in this group can measure 0.1-8.8 mm in length by <0.1-0.4 mm in width. Measurements vary according to whether or not the worm is relaxed and its life history stage, and whether width is measured at the apical sucker or in the middle of the worm (Anantaraman 1963; Reimer 1977; Radhakrishnan et al. 1984; Wojciechowska 1990; Chambers et al. 2000).

Native Range: As a species complex, *S. pleuronectis* is cosmopolitan in distribution. Little is known about individual species' ranges within this group. However, it is known that at least one species in this group occurs in the Black Sea watershed using the round goby (*Neogobius melanostomus*) as its host (Pronin et al. 1997).

Nonindigenous Occurrences: *S. pleuronectis* plerocercoids were first collected from the Lake St. Clair watershed in 1994 (Pronin et al. 1997).

Means of Introduction: The species was likely introduced with *N. melanostomus* to the Lake St. Clair watershed in ships' ballast water (Pronin et al. 1997).

Status: Established where recorded.

Ecology: Plerocercoids in the species complex *S. pleuronectis* were found in the intestinal walls of two individual *N. melanostomus* collected from the Lake St. Clair watershed. For some tetraphyllidean species it is known that copepods are common intermediate hosts. This group is very common in diadromous, marine and brackish water fish species, including those in the families Cottidae, Salmonidae, and Clupeidae. Each proglottid of a cestode is a single unit containing all reproductive organs for development in a host (Anantaraman 1963; Post 1983; Groenewold et al. 1996; Pronin et al. 1997).

Species within this group have been recorded in the Atlantic Ocean, the Pacific Ocean, the Mediterranean, the Black Sea, the Gulf of St. Lawrence and St. Lawrence estuary, and rivers on the east coast of North America. They occur in at least 60 species

of teleost fishes from the Atlantic Ocean alone. They also occur in marine mammals and various invertebrates (Anantaraman 1963; Rosenthal 1967; Brooks and Brothers 1974; Radhakrishan et al. 1984; Scott 1988; Landry et al. 1992; Hogans et al. 1993; Reimer 1993; Arthur et al. 1995; Groenewold et al. 1996; Moran et al. 1996; Chambers et al. 2000; Gonzalez and Kroeck 2000; Oliva 2001; Moravec 2003; Fernandez et al. 2003, 2004; O'Connell and Fives 2004; Tavares et al. 2004).

Impact of Introduction

A) Realized: None.

B) Potential: It is unlikely that any nonindigenous parasites, this one included, can regulate *N. melanostomus* populations in the Great Lakes drainage (Pronin et al. 1997).

Remarks: In 1788, Mueller proposed to name a group of metacestodes from intestines of teleost fish as *S. pleuronectis*. In 1819, Rudolphi, who doubted whether this species was valid, chose *S. polymorphus* to synonymize these species. Scientists have gradually realized that these two names actually include a large number of tetraphyllidean metacestodes (Chambers et al. 2000).

Voucher Specimens:

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> Correction: Parasites of the recently established round goby (*Neogobius melanostomus*) and tubenose goby (*Proterorhinus marmoratus*) (Gobiidae) from the St. Clair River and Lake St. Clair, Michigan, USA. Correction of title from Parasites of the recently established round goby (*Neogobius melanostomus*) and tubenose goby (*Proterorhinus marmoratus*) (Cottidae) from the St. Clair River

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Other Resources:

Author: Rebekah M. Kipp

Revision Date: May 28, 2007

Citation for this Information: Rebekah M. Kipp. 2007. GLANSIS.

Group: Category not available - parasite

Lake(s): Lake St. Clair Drainage

Genus: *Scolex*

Species: *pleuronectis* (synonymous with *polymorphus*; as a cryptic species complex, it encompasses many different taxa)

Common Name: cestode

Status: Established

Freshwater/Marine: All

Pathway: Shipping

Exotic/Transplant: Unknown