

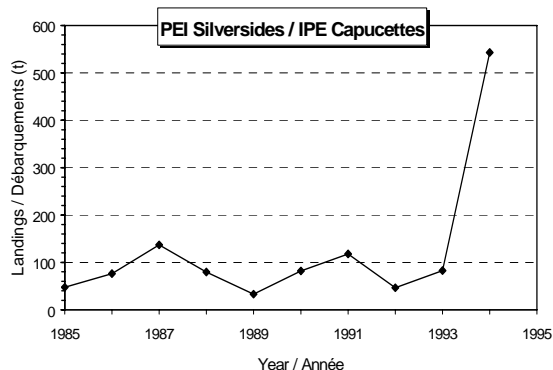
## *Silversides of Prince Edward Island (Menidia menidia)*

### **General description**

*The Atlantic silverside is a small schooling fish that ranges from Florida to the Gulf of St. Lawrence. The species is short-lived with only a minority of fish reaching the age of two years. Fish spawn in the summer and 0+ fish form the bulk of the population in the following fall. Few fish live to spawn a second time. The fish is most often encountered in estuaries and coastal ponds, but it may also undergo offshore migrations. Prince Edward Island has the only commercial silverside fishery in Canada. There is also a small US fishery.*

### **Management**

The modern silverside fishery on Prince Edward Island began in 1973. Since then the fishery has been prosecuted in the fall, principally with trap nets set along the coast, in estuaries, and in coastal ponds. The season is 1 October to 31 December. Landings from 1973 to 1994 averaged 125 tonnes. Landings peaked in 1994 with 543 tonnes. 1995 landings are not yet available, but industry sources indicate landings typical of years prior to 1994.



### **Fisheries data**

Two silverside fishermen completed and returned daily catch logbooks. Mean daily catch rates at the five sites covered by the survey ranged from 329 to 1334 kg per trap per day, with an overall mean of 634. Eight samples from six sites indicated that fish aged 0+ constituted from 49.3 to 97.3% of catches by number.

### **Public consultations**

A meeting of the PEI Estuarine Finfish Consultative Committee, whose scope includes silversides, was held 13 February 1996.

### **Environmental considerations**

Gear set for silversides commonly catches sticklebacks. This is a problem for the industry because buyers will not accept more than a small stickleback by-catch. Seal raids on silverside traps are a problem in the Souris area. Silversides are consumed by many other species, including finfish of commercial value. Hence their conservation may be important to the coastal marine ecosystem and to other fisheries.

### **Status of the stocks**

The only historical data on silverside catch rates on PEI are from a single pond, where trap catches averaged 1904 kg per day in 1975. Mean catch rates in the same pond in 1995 were 1334 kg per trap per day. In the absence of any other biological data between the 1970s and 1995, it is not possible to draw conclusions regarding stock status.

Prince Edward Island silversides spawn in coastal ponds and rivers, and local populations probably constitute separate stocks in the manner of other anadromous species.

### **Prospects**

No basis exists for a forecast.

### **Management considerations**

Very little information exists for this fishery and the supporting resource. Accordingly, we should be cautious with respect to expansion of this fishery. Nets and licenses should be frozen at the present level until more information becomes available on this resource. If market prices rise, fishing pressure could increase sharply as unused licences come into use. Such pressure might increase harvest above sustainable levels.

Consideration should also be given to the silverside's potentially important role in supporting other marine life, including other commercial fish resources.

Available from: Maritimes Regional Advisory Process office, Department of Fisheries and Oceans, P.O. Box 1006, Station B105, Dartmouth, Nova Scotia, Canada B2Y 4A2 Telephone: 902-426-8487.

***Research recommendations***

The logbook and biological sampling program should continue, and cover more areas and habitat types. Age structure should be compared among sites to elucidate possible effect of fishing pressure. Fish from the 1994 season should be examined for age and length, if samples are still available in plant freezers.

***Summary sheet***

More information on PEI silversides is provided in the attached summary sheet.

***For more information***

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**STOCKS:** PEI Silversides - Summary sheet

Year	1990	1991	1992	1993	1994	1995	MIN <sup>1</sup>	MAX <sup>1</sup>	MEAN <sup>1</sup>
<b>Commercial catch</b>									
Landings (tonnes)	81.9	117.8	46.4	82.7	543.1	N/A	46.4	543.1	174.4
Value (\$000)	27	52	18	29	208	N/A	18	208	66.8
1For period 1990-94.									

**Landings:** Landings for 1995 are not yet available. Industry sources indicate landings typical of years prior to 1994.

**Data and assessment:** PEI silversides spawn in coastal ponds and rivers, and local populations probably constitute separate stocks in the manner of other anadromous species. Two logbook fishermen fishing at seven sites reported a mean catch of 634 kg per trap per day (range 329-1334). Zero + fish constituted from 49.3 to 97.3% of catches by number.

**State of the stock:** It is not possible to compare the state of the stock with previous years because there is no time series of catch rate or biological parameters data.

**Ecological considerations** The unwanted presence of sticklebacks (pinfish) as by-catch often limits the timing and location of silverside fishing. Seal depredations of silversides in traps are a problem in the Souris area. Silversides are eaten by many other species and may be an important part of food chains.

**Management considerations:** Caution is recommended with respect to expansion of this fishery considering the scarcity of information on both the fishery and the supporting resource. Nets and licenses should be frozen at the present level until more information becomes available. Fishing pressure could potentially increase above sustainable levels if market prices rise and the large number of unused licences come into use.

**Forecast for 1996:** There is no basis for a forecast.