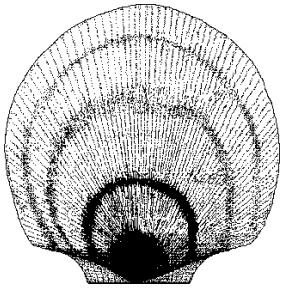
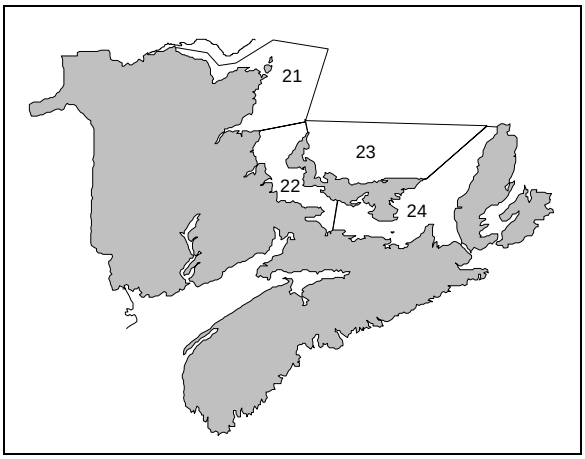


Southern Gulf of St. Lawrence Sea scallop



Background

The sea scallop (Placopecten magellanicus), is a bivalve mollusc found only in the western Atlantic from Cape Hatteras to the Strait of Belle Isle. Sea scallops occur to depths of 40 m in the coastal waters of the southern Gulf of St. Lawrence. They occur on a wide range of hard bottom types but are rare or absent from mud and silt. Water temperatures above 20-23 C are usually lethal to sea scallops and are one possible cause of occasional mass mortalities of adult scallops in the southern Gulf.

Sea scallops spawn as early as age-2 but do not contribute significantly to egg production until they reach a length > 70 mm (approximately 3 years old). Sexes are separate and egg fertilization occurs in the water column. Spawning usually occurs during late summer and the larvae are planktonic for 4 to 5 weeks before they metamorphose and settle to the bottom in mid-autumn. Recruitment to the bottom is often patchy and highly variable due to variation in egg and larval mortality, suitability of bottom type, and wind and tidal effects on currents at the time of metamorphosis. Sea scallops in the southern Gulf reach harvestable size a age 4 or 5.

Almost all scallop fishermen hold more than one fishing license, they also fish herring and lobster. The main scallop beds are in Northumberland Strait and Chaleur Bay. A small fishery also occurs on the north side of PEI. Most fishermen in the southern Gulf of St. Lawrence use modified Digby dredges, which are the most efficient gear on rocky and gravel bottoms.

Stock assessment surveys have not been undertaken since 1986; sea and port sampling were terminated in 1988. Licence holders are not required to submit logbooks. Landing statistics are compiled from sale slips submitted by processors and from a limited number of reports submitted by Conservation and Protection officers (Nova Scotia only).

The Fishery

This has been a limited entry fishery since the 1970s (779 licences). **Management strategies** are developed and approved by individual SFA advisory committees in consultation with DFO Resource Management and Science branches. SFA 21 divided itself into three sub-areas in 1996. The Fisheries Management regulations for 1996 were:

Summary of the 1996 southern Gulf of St. Lawrence Scallop Fishery regulations.

	Total # of Licences	Meat Count per 500g	Max. Drag Width	Ring Size
SFA 21	107	39	21’	---
SFA 22	202	52	16’	3”
SFA 23	79	52	21’6”	---
SFA 24	391	52	16’8”	---

Summary of the 1996 Scallop Fishing Seasons in the southern Gulf of St. Lawrence.

	Fishing Seasons
SFA 21A	15 June-17 Aug. and 16 Sep.-20 Nov.
SFA 21B	29 Apr.-17 Aug. and 16 Sep.-20 Nov.
SFA 21C	24 Jun.-17 Aug. And 16 Sep.-30 Nov.
SFA 22	6 May-8 Jun.
SFA 23	15 Apr.-31 Dec.
SFA 24	15-21 Apr., 7 May-30 Jun. and 7 Oct.-31 Dec.

In 1996, 342 mt of scallop meat were **landed** in SFAs 21-24 of southern Gulf of St. Lawrence.

Summary of scallop landings (mt of meat) for the southern Gulf of St. Lawrence

Year	71-80 Avg.	81-92 Avg.	1993	1994	1995	1996*
SFA21	29.1	53	82.5	112.5	85	92.7
SFA22	142.4	124.9	79.6	97.1	105.9	90.6
SFA23	0.2	1.7	0.7	0.8	0.3	3.1
SFA24	144.2	105.8	192.8	170	145.4	155.1
Total	315.9	285.5	355	380.4	336.6	341.5

***preliminary data**

Resource Status

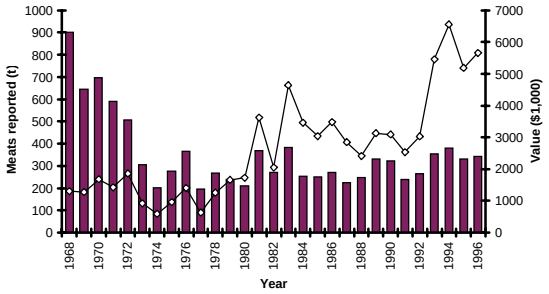
The average meat weight (kg) of scallops per sales slip sold to registered buyers has shown little change in SFAs 22 and 24. **Catch rates** for SFA 21 represent 2 to 4 fishing days while catches are sold daily in SFAs 22 and 24. Ten index logbooks were distributed in SFA 24 during autumn 1996. Only two were completed. The mean (± SE) catch rates were 4.5 ± 0.25 and 4.4 ± 0.31 kg meats/h.

Extrapolated catch rates (kg meat per sales transaction) for the Gulf Fisheries SFAs 21, 22, and 24 from 1992 to 1996.

kg meat/sale	1992	1993	994	1995	1996*
SFA 21	102	100	157	138	129
SFA 22	44	46	43	44	38
SFA 24	52	39	37	44	42

* preliminary data

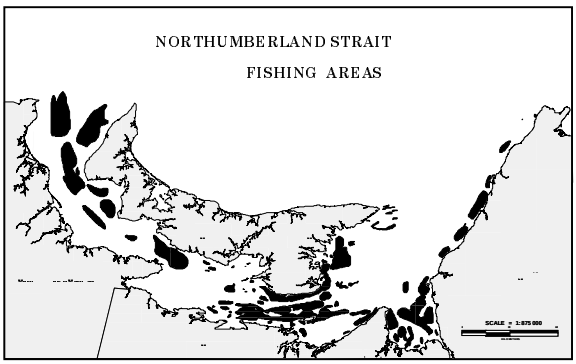
Giant scallop landings (mt of meat) and landed value (line) for the southern Gulf of St. Lawrence from 1968 to present.



There has not been **at sea or port sampling** of the commercial catches since 1988; therefore, the size- and age-structure of the catches for 1996 are unknown. The last research survey was conducted since 1986. Thus, there were no fisheries independent estimates of abundance or distribution of commercial or pre-recruit sized animals for 1996.

Habitat Management personnel conducted **surveys** in 1995 and 1996 in which individual fishermen identified locations of scallop resources in SFAs 22 and 24. Based on surficial sediments, there is about 6,000 km^2 of suitable scallop substrate. The area currently fished (black areas) represented 3034 km^2 (50%) of the suitable habitat.

Locations of areas of significant scallop fishing activity as identified by fishermen during surveys conducted during 1995 and 1996.



Outlook

Catches have remained at about the same level since the early 1970s. Effort, however, has increased in recent years. This resource is likely overexploited, which suggests that fishing effort should be reduced.

Management Considerations

Scallop dragging occurs on lobster grounds, resulting in some conflict in all scallop fishing areas.The conflict in SFA 24 seems to be more pronounced because the autumn scallop fishery occurs at the depths occupied by lobster at that time of year. In addition, many lobster fishermen are concerned by the damage that scallop gear may have on lobster habitat.

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