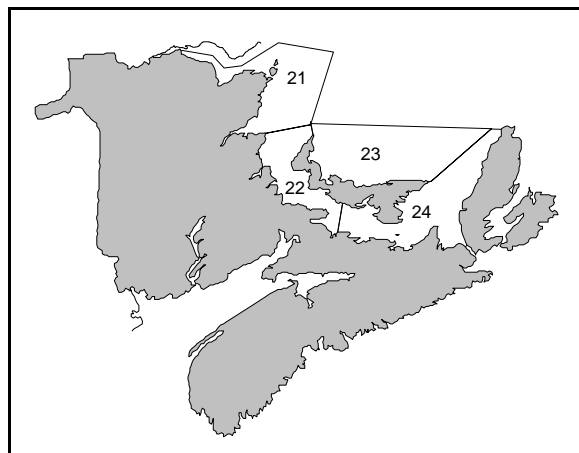


**Southern Gulf of St. Lawrence
Sea scallop**



Background

The sea scallop (*Placopecten magellanicus*), a bivalve mollusc found in the Atlantic coastal waters, has a range from Cape Hatteras to the Strait of Belle Isle. Sexual differentiation occurs at an age of 1+. Most animals do not, however, contribute significantly to reproduction until they reach a length > 70mm (approximately 3 years old). Sex ratio of males:females is usually 1:1 with hermaphrodites rare in the adult population. Spawning usually occurs in the early fall prompted by water temperature decreases. The males and females release their gametes synchronously and fertilisation occurs in the water column. The larvae are planktonic for 4 to 5 weeks after which time they metamorphose and settle on suitable substrates to begin their benthic life.

The giant scallop fishery in the southern Gulf of St. Lawrence has always been complementary to the lobster and herring fisheries. Almost all scallop fishers hold more than one fishing license, however, a few fishers do depend on the scallop fishery as their primary income. The main scallop beds are in Baie des Chaleurs and throughout the Northumberland Strait. A small bed is also found on the north side of PEL. Scallops are generally found on hard gravel bottom and more rarely on mud bottoms. Scallops are not fished in winter due to ice cover.

Most fishers in the southern Gulf of St. Lawrence use modified Digby dredges (or drags) which are the most efficient gear on rocky and gravel bottoms. A sweep chain dredge was used in the past when scallops were abundant on soft bottoms. Approximately 75% of the 780 license holders are active but only for a limited time. License renewal is not dependent upon fishing activity from year to year.

The southern Gulf of St.-Lawrence is divided into four scallop fishing districts (SFD): 21, 22, 23 and 24 as shown in the map above. The stocks are managed by applying various management strategies: meat count, drag size, ring size and season. The strategies vary among districts and from year to year as agreed by fishers and managers at the Scallop Advisory Committee meetings and workshops. Stock assessment surveys were last completed in 1986; sea and port sampling were terminated in 1988. Fishers are not required to submit logbooks and landing statistics are compiled from processors sale slips from registered buyers. In 1995, the fishery was monitored by an analysis of the official landing statistics and a review of the meat count inspections as conducted by Fishery Officers during the season.

The Fishery

Management: Since the 1970's, this has been a limited entry fishery, however, fishers are allowed to transfer their license. Management strategies are developed and approved by individual SFA advisory committees under the direction of DFO Resource Allocation in consultation with DFO Science. In 1995, the Fisheries Management regulations were as follows:

Summary of the 1995 southern Gulf of St. Lawrence Scallop Fishery regulations.

	Total # of Fishers	Meat Count per 500g	Max. Drag Width	Ring size
SFD 21	107	39	21'	---
SFD 22	202	52	16'	3"
SFD 23	79	52	21'6"	---
SFD 24	391	52	16'8"	---

Summary of the 1995 Scallop Fishing Seasons in the southern Gulf of St. Lawrence.

	Fishing Seasons
SFD 21	Apr. 26 to Dec. 31
SFD 22	May 10 to Jun. 12
SFD 23	Apr. to Dec. 31
SFD 24	Apr. 15 to Jun. 30 and Oct. 1 to Dec. 31

Landings: In 1995, 336.6 mt of scallop meat was landed in the southern Gulf of St. Lawrence.

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

Year	71-80 Avg.	81-91 Avg.	1992	1993	1994	1995*
SFD21	29.1	52	64.4	82.5	112.5	85.0
SFD22	142.4	129.9	70.3	79.6	97.1	105.9
SFD23	0.2	1.8	0.7	0.7	0.8	0.3
SFD24	144.2	103.6	130.1	192.8	170	145.4
Total	315.9	287.3	265.5	355	380.4	336.6

*preliminary data

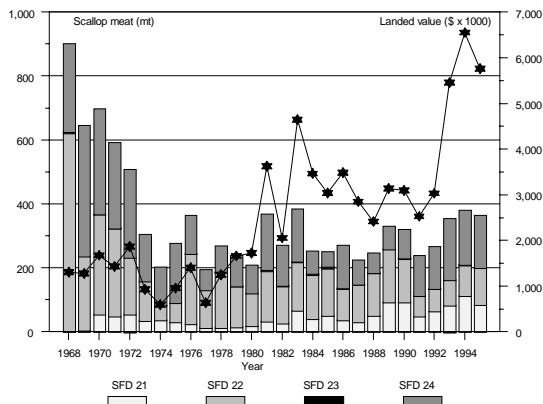
Catch rates: The average meat weight (kg) of scallops per sales slip sold to registered buyers was determined from the landing statistics as shown in the table below. The catch is sold after 2 to 4 fishing days in SFD 21 while in SFD 22 and 24, scallops are sold daily.

Extrapolated catch rates (kg meat per sales transaction) for the Gulf Fisheries Region SFDs 21, 22, and 24 from 1992 to 1995.

kg meat/sale	1992	1993	1994	1995*
SFD 21	102	100	157	138*
SFD 22	43.9	46.3	42.7	44*
SFD 24	52.3	39.2	37.1	43.8*

* preliminary data

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



Biological data: The Fishery Officers in SFD 21, 22 and 24 conducted spot checks of the scallop catch and randomly verified meat counts (weights) in 1995.

Summary of the meat count (#/500g) verifications for the southern Gulf of St. Lawrence

	# of check	Avg #/500g	Lowest #/500g	Highest #/500g
SFD21	18	28.5	22	44.1
SFD22	70	33.8	19.8	50.7
SFD24	34	34.4	27	41

The data were converted to scallop heights using a weight to shell height relationship determined previously (L.A. Davidson, unpublished data). On this basis, commercial shell height of scallops ranged from 85-119mm in SFD 21, 80-116mm in SFD 22 and 91-120mm in SFD 24. Scallops of < 76mm shell height are generally discarded.

Issues

Are die-offs prevalent?

No massive die-offs have been observed in recent times.

Is there an impact of scallop dragging on lobster grounds?

Scallop dragging does not usually occur on lobster grounds. In some areas, however, lobsters are found on the scallop beds but only in the spring after ice-out. In SFA 24, the scallop fishing season in 1995 was opened two weeks before the lobster season and many lobster fishers were concerned by the effect of scallop gear on the lobsters. Once the lobster season was opened, the scallop fishers avoided all areas with lobster gear.

Can we measure the impact of seeding natural beds?

Yes it can be measured, and is presently being investigated by both MAPAQ and DFO Laurentian Region in the Magdalen Islands with the collaboration of scallop fishers (Project REPERE) (G. Cliche, pers. comm.). The impact of the initial seeding is being measured with diving/video surveys. Two and three years after the seeding the impact can be measured by assessment surveys (M. Giguère, pers. comm.).

For More Information

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