

Invertebrate Fisheries Maritimes Region 1996 Overview

Introduction

Almost two-thirds of the marine resources reviewed in Maritimes Region during 1996 were invertebrate and marine plant stocks. These included 12 stocks in the Gulf of Maine, 13 stocks in the southern Gulf of St. Lawrence, and 22 stocks in the waters along the Scotian Shelf. A comparison of the number of assessments by species group is given in the table below. The crustacean group includes lobster, snow crab, other emerging crab species and northern shrimp. The molluscan group includes 8 scallop stocks and a variety of emerging species that are not fully exploited. The echinoderm group includes sea cucumbers and sea urchins. The predominant seaweed fisheries are rockweed in the Bay of Fundy and Irish moss in the southern Gulf.

Group	Number of stocks assessed			
	GOM	S. Shelf	S. Gulf	Total
Pelagic	5	1	3	9
Groundfish	7	7	5	19
Crustacean	4	8	4	16
Molluscan	6	12	7	25
Echinoderm	1	2	1	4
Seaweed	1		1	2
Total	24	30	21	75

A summary of the 1995 landings, recruitment, exploitation status, abundance, and change in abundance from 1994 to 1995 is given by ecosystem in the tables below. Landings are expressed in tonnes. Recruitment, or new animals entering the fishery in 1997, is expressed as being low, medium, high or unknown. Exploitation status refers to how a resource is being fished relative to its target: high means above target, med means on target, and low means below target. Abundance is expressed as being relative to the long-term average.

Gulf of Maine

Species	Stock	1995 landings (t)	Recruitment 1997	Exploitation status	Abundance	Status 1995 vs 1994
Lobster	Fundy	1,270	High	High	High	↗
Lobster	LFA 34	9,618	High	High	High	→
Jonah	GOM	21	?	Low	?	→
Rock crab	GOM	25	?	Low	?	→
Scallop	Georges	2,000	Low	Med	Med	→
Scallop	German	400	Med	Med	?	↘
Scallop	Browns	2,000	Med	Med	?	↘
Scallop	Digby	290	Low	High	Low	↘
Scallop	Brier	770	Low	High	Low	↘
Soft clam	Fundy	1,621	?	High	?	→
Sea urchin	Fundy	1,621	Low	Med	High	→
Rockweed	GOM	18,400	High	Med	High	→

It can be seen in the above table that scallop resources in the Bay of Fundy appear to be declining, but no change is evident for the other resources.

Southern Gulf of St. Lawrence

Species	Stock	1995 landings (t)	Recruitment 1997	Exploitation status	Abundance	Status 1995 vs 1994
Lobster	S. Gulf	18,000	?	High	High	↘
Rock crab	S. Gulf	4,000	?	?	High	↗
Snow crab	S. Gulf	23,200	Low	Med	High	↘
Toad crab	S. Gulf	?	?	Low	High	↗
Scallop	S. Gulf	400	?	High	?	?
Stimpson's	S. Gulf	300	?	?	?	?
Soft clam	S. Gulf	700	?	?	?	?
A. surfclam	S. Gulf	900	?	?	?	?
N. quahaug	S. Gulf	600	?	?	?	?
Mussel	S. Gulf	6,100	?	?	*	?
Oyster	S. Gulf	2,600	?	?	?	?
Sea urchin	S. Gulf	100	High	Low	High	↗
Irish moss	S. Gulf	10,000	?	?	?	?

*Predominately an aquaculture species.

In the southern Gulf, the abundance of the lobster and snow crab stocks appears to be declining. By contrast, the abundance of urchins and rock and toad crabs appears to be high. The abundance of molluscan resources is uncertain.

Scotian Shelf

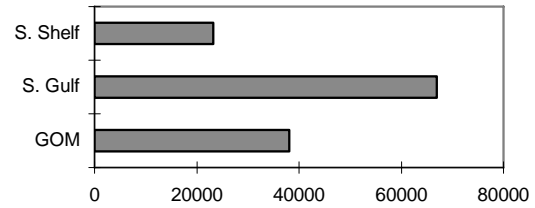
Species	Stock	1995 landings (t)	Recruitment 1997	Exploitation status	Abundance	Status 1995 vs 1994
Lobster	LFA 27-30	2,265	?	High	Med	↘
Lobster	LFA 31-33	1,881	?	High	Med	↘
Snow crab	C. Breton	1,554	?	Med	?	→
Toad crab	C. Breton	63	?	Low	Med	?
Jonah crab	Offshore	73	?	Low	?	→
Red crab	S. Shelf	734	?	High	?	→
Rock crab	S. Shelf	173	?	?	?	→
N. shrimp	C. Breton	3,197	High	Med	High	↗
Scallop	Sable	130	Med	Med	Low	→
Scallop	Middle	20	Med	Med	Low	→
Stimpson's	S.Shelf	11,600	Low	Med	High	→
Whelk	S.Shelf	?	?	Low	?	?
O. quahaug	S.Shelf	79	?	Low	High	?
N. quahaug	S.Shelf	?	?	Low	?	?
Moonsnail	S.Shelf	?	?	Low	?	?
Soft clam	S.Shelf	403	?	High	?	↘
Jacknife	S.Shelf	?	?	Low	High	?
A. surfclam	S.Shelf	?	?	Low	?	?
Propeller-clam	S.Shelf	?	Med	?	High	?
Oyster	S.Shelf	150	?	High	Low	?
Cucumber	S.Shelf	?	?	Low	?	?
Urchin	S.Shelf	1,000	High	Med	Med	→

On the Scotian Shelf, the shrimp resource appears to have a high and increasing abundance. Abundance of the crab, scallop and urchin resources appears to remain unchanged from the previous year.

Landings

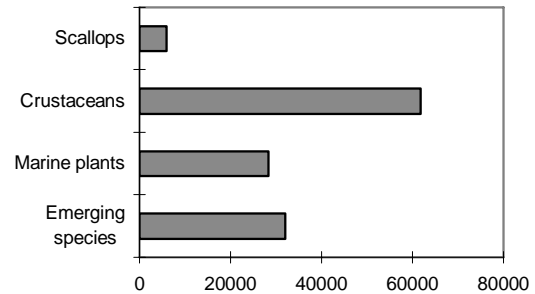
The greatest landings of invertebrates and marine plants were in the southern Gulf. This value was equal to the combined landings of the Gulf of Maine and the Scotian Shelf.

1995 Landings (tonnes)



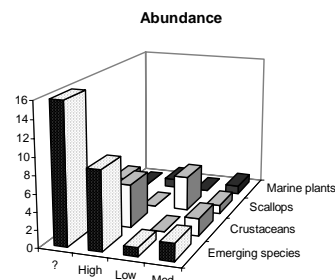
Most of the landings were from crustacean fisheries, namely lobster and snow crab. Emerging species, mainly molluscs, and marine plants had similar tonnages landed in 1995.

1995 Landings (tonnes)



Resource status

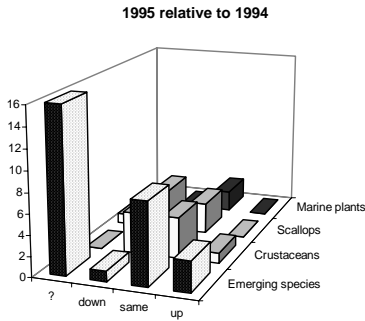
As shown in the figure below, the current abundance of most emerging species is unknown. Crustacean stocks tend to have high abundance, whereas scallop stocks are generally at low abundance.



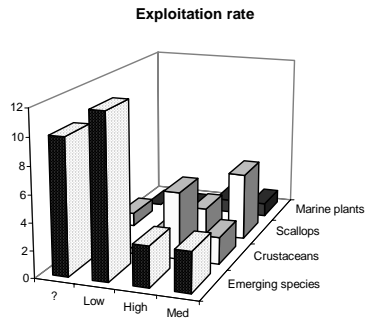
In the following figure, it can be seen that there has been a decline in the abundance of most scallop and crustacean stocks over the past two years. Change in the abundance of most emerging species remains uncertain.

For More Information

Contact: Michael Chadwick
 Invertebrate Fisheries Division
 Science Branch, Maritimes Region
 Gulf Fisheries Centre
 P. O. Box 5030
 Moncton, NB E1C 9B6
 Tel: (506) 851-6206
 Fax: (506) 851-2387
 E-mail: chadwickm@gfc.dfo.ca



Although exploitation rates can only be estimated in 1995, they appear to be high or above the target for most crustacean stocks, particularly lobster; whereas, they were unknown or appeared to be low for most emerging species.



Recruitment in 1997 is generally unknown for most crustacean stocks and emerging species; it is believed to be low for scallop stocks in the Bay of Fundy and average for other areas.

