



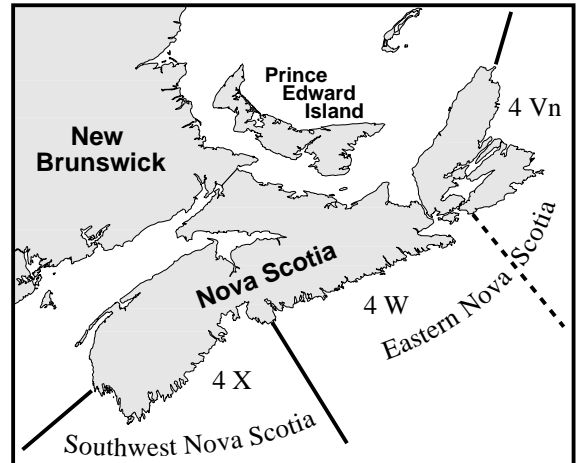
Atlantic Nova Scotia Softshell Clam (*Mya arenaria*)

Background

The soft-shell clam, *Mya arenaria*, ranges in the Atlantic Ocean from North Carolina to the Arctic, extending south to central Europe. In the early 1900s, it was introduced to California and has since spread north to British Columbia. Although found primarily in muddy, intertidal habitats, it also lives subtidally and in a range of sediment types. There are separate sexes which spawn in June.

Reported time from spawning to harvestable shell lengths (51 mm) varies among clam beds from 6 to 8 years. The fishery for the soft-shell clam in the Canadian Maritimes has had a long history with archaeological records indicating that clams were an important dietary component of the native tribes two to three thousand years ago. Formal catch records date back to the late 1800s. Harvesting technology has changed very little over the last century.

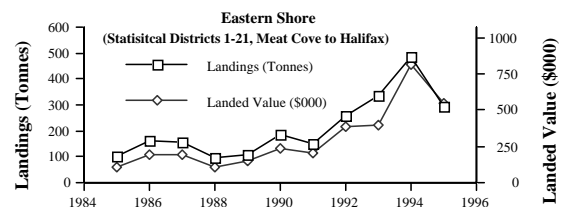
In the last half of this century, rising numbers of entrants to the fishery resulted in imposition of controls. Minimum shell length limits were instituted in the 1970s, and in the last two years commercial harvesters have required licenses. Recreational harvesting still requires no permit.

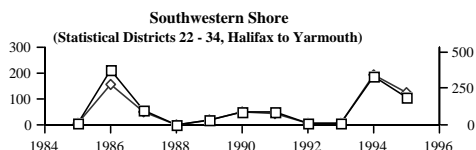


The Fishery

Numbers of commercial licenses issued rose from 551 in 1994 to 905 in 1995 likely as a result of disappearing jobs in traditional fisheries. Additional problems are created by the harvesting of some beds by harvesters from distant parts of the province, and closures of productive, albeit contaminated, beds. The minimum shell length restriction on the Atlantic coast is 51 mm, a size that should help protect animals which can spawn at roughly 40 mm in length. Recent industry input through regional clam advisory committees suggests limited access licensing will assist in controlling excessive harvesting, but this limitation has yet to be imposed. Consideration is also being given to instituting logbook catch recording for individual licensees. Reported softshell clam **landings** in Nova Scotia have been declining in recent decades although totals for the Atlantic side have generally risen since 1990. Despite the reported rise in clam harvesters in that same period, there was nonetheless a drop in landings for 1995.

Reported Atlantic NS Softshell Clam Harvest





Eastern and Southwestern Nova Scotia Softshell Clam Harvest Landings (tonnes)

District	'85 - '95 Ave.	'91	'92	'93	'94	'95
East NS	233	150	256	334	489	296
SW NS	69	50	5	5	186	107
Total	151	200	261	339	675	403

Eastern US shellfish markets, which are used in part by Maritime fish companies, are reportedly becoming flooded with softshell clams. As a consequence, in 1996, local Nova Scotian clam purchase prices have dropped to half of what they were in 1995.

The most productive Atlantic coast statistical district in 1995 was No. 20 (near Halifax Metro), holding 22% of all licenses yet reporting 239 tonnes (59%) of the 403 tonne total. Of the 202 licensed harvesters in that district in 1995, reportedly half dug clams as their sole income source, the rest dug either part-time or, given other employment and economic circumstances, simply harvested sporadically. The district showing the next largest landing (No. 34, at Yarmouth) while reporting only 78 tonnes (19% of the total) nonetheless had 329 licensed harvesters.

Resource Status

Stocks are reportedly declining in several historically productive beds. Industry is currently asking that clams marginally contaminated by coliform bacteria be made available for either re-deployment to clean water for later harvesting, or for depuration and immediate sale. While such contaminated stocks are known to be illegally harvested, a matter of concern to both public health and conservation officials, these closed areas do represent a kind of enhanced production preserve where clams thrive. These protected although contaminated areas very likely enhance recruitment to adjacent populations.

Outlook

Landings have dropped from a peak in 1994. There is increasing effort in this fishery and there has been

an increasing number of pollution-related closures. Fishing effort on open beds is probably too high. This nearshore contamination and over-exploitation combined with variable market prices has encouraged recent interest in applying aquaculture techniques to rearing *Mya arenaria*. Work done in the 1970s by DFO demonstrated the efficacy of suspension culture as a means of accelerating growth rates to commercially harvestable sizes. One company on the Southwest Shore is currently conducting field growth trials on an intertidal lease using hatchery-reared clams. Results will be compared with adjacent, ongoing DFO experiments in clam suspension culture.

Should the sale price of clams remain low into 1997, it is likely that both the extent of licensing and landings will markedly change. Given the rather open "commons" nature of the fishery which has persisted since the 1800s, community-based programs to advise and assist in the control of clam harvests have the potential for making marked improvements to harvests, and to related sociological and environmental issues that impinge negatively on this fishery. The appearance of such programs in Nova Scotia is thus timely and welcomed by those who understand that this common fishery is both inadequately controlled and vulnerable.

For more information

Contact: Kenneth Freeman
Invertebrate Fisheries Division
Bedford Institute of Oceanography
P.O. Box 1006
Dartmouth, Nova Scotia B2Y 4A2

Tel: (902) 426-7360
Fax: (902) 426-1862
E-Mail: Freemank@mar.dfo-mpo.gc.ca

References

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