

### Southern Gulf Bar Clam

#### Background

The bar (or surf) clam (*Spisula solidissima*) is a bivalve mollusc found in shallow, high energy (open exposed areas) sandy coastal areas (from mid-intertidal to 25m) from Cape Hatteras to its most northern distribution in the southern Gulf of St. Lawrence. Its distribution commonly overlaps with that of razor clams (*Ensis directus*). The sexes are separate with sexual maturity reached at lengths >80mm at an age of 4 years in PEI (Sephton & Bryan 1987, 1990). Sex ratio of males:females is usually 1:1 with hermaphrodites rare in the population. Spawning occurs in individuals with ripe gonads at water temperatures greater than 12-15°C from late July through to early October with the external fertilization of eggs (Sephton 1987). The planktonic larval stage lasts 4-5 weeks followed by metamorphosis and spat settlement. Artificial collection of spat is not possible with this species and little is known about the recruitment of young of the year to the local populations (Sephton & Bryan 1985).

Long established commercial beds are located along the north (Malpeque & New London) and east (Cardigan & Boughton) coasts of PEI as well as in the Northumberland Strait (Hillsborough Bay PEI, Kouchibouguac and Cape Tormentine NB) (see map above) (Sephton & Bryan 1985, 1987). A new commercial bed was also located recently near Wood Islands, PEI by the developmental (exploratory) fishery activities. Bar clams are fished from lobster boats rigged with an A-frame to haul a hydraulic (mechanical) dredge with a blade width of about 76cm. Water pumps on board pump water through high pressure reinforced hoses to the dredge manifold to emulsify the substrate.

#### Cont'd

Stock assessments were last conducted on several of the PEI beds in the 1980's with the results compared to the previous assessments conducted in the 1970's (Sephton & Bryan 1985). Recruitment into the commercial fishery generally takes 5-6 years (Sephton & Bryan 1990). Inshore recreational fishery beds occur throughout the region where there are extensive exposed sand bars and are fished manually with hand tools. Use of wet suits and scuba diving is permitted in some areas.

Bar clam fishing has traditionally been considered supplemental to the spring lobster and crab fisheries with most of the product processed for the canned clam and chowder markets in the USA. Few of the 21 mechanical fishing licenses issued in PEI are still active because of low commercial catches and high annual capital equipment repair costs. The supplemental nature of this fishery is also reflected in the number of manual fishing licenses (716) held in the southern Gulf (561 NB, 155 NS clams unspecified) of which only about 20% of the licenses are active. Fishing seasons vary among the provinces through local variation orders but all are theoretically open from Jan. 1 to Dec. 29. The bar clam fishery is closed in southeastern NB from Jun. 1 to Oct. 1 (which coincides with the spawning season) and closed to diving in PEI from Apr. 1 to Dec. 31. The minimum legal size limit in PEI and NS is 76mm while that in NB was recently increased to 102mm. A license is not required for the recreational bar clam fishery but it is further regulated by a daily bag limit per person (100 NB and NS, 300 PEI, total number of any mix of clam species as for soft shell clams and quahaugs). The spring recreational fishery for home consumption and preserving is a major activity in many areas throughout the area.

## The Fishery

**Management:** The commercial hydraulic, manual and recreational fisheries in the southern Gulf are currently regulated by season, gear type, daily bag limit (recreational only) and minimum size limits.

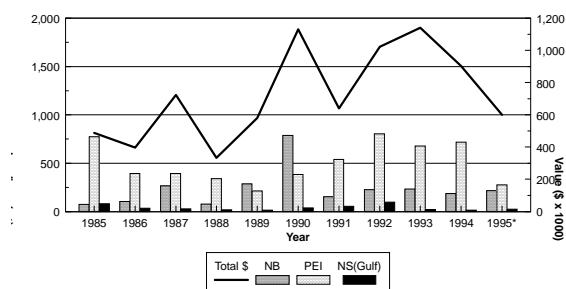
### Landings:

#### Summary of bar clam landings (mt) for the southern Gulf areas of NB, PEI and NS.

Area	85-89						
	Avg	1990	1991	1992	1993	1994	1995*
NB	161	787	152	226	233	187	217*
PEI	423	385	539	805	677	719	277*
NS	36	37	55	96	22	15	25*
Total	620	1209	746	1127	932	921	519*

\* Preliminary Data

#### Bar clam landings for the southern Gulf from 1985-1995 showing landings (bars) and landed value (line). Data from 1995 are preliminary.



Total landings for 1994 (921 mt) were similar to that observed in 1993 (932 mt). Indications are that final landings for 1995 (incomplete data for PEI) will be comparable. Landings for PEI increased from 1990 (385 mt) to 1992 (805 mt) and reflects the developmental fishery activity on the Wood Islands bed. The increased landings for NB in 1990 over that observed in other years reflects an attempt to market a value-added product by some processors that was subsequently discontinued. All landing data are from processors sales slips with no Fishery Officer Supplemental "B" estimates of private sales or recreational fishing activity.

## Resource Status

There are no data to evaluate the status of this resource.

## Management Considerations

### Should there be a minimum legal size of 100mm?

The minimum legal size was increased from 76mm to 102mm in NB in 1995 based on the scientific information on size at sexual maturity (Sephton 1987, Sephton & Bryan 1990). It is suggested that the size limits be standardized throughout the Gulf Fisheries Region at 102mm to allow females to mature and spawn for 2 years before being recruited into the commercial fishery.

### Should there be a ban on mechanical harvesters?

There is presently no substantive evidence that the fishing gear is having a negative effect on the fishery or the surrounding environment. Environmental effects research should, however, be conducted to provide more information to better answer this question.

## For More Information

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## References

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