

## German Bank Scallop

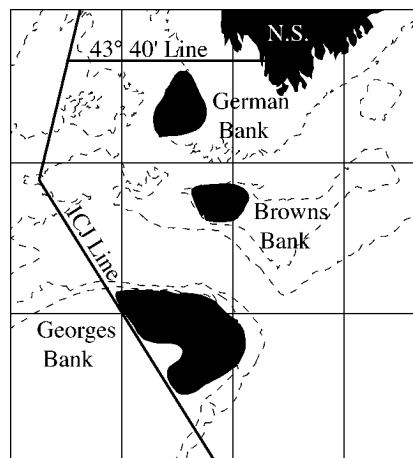
### Background

The Sea Scallop, *Placopecten magellanicus*, is found in the Northwest Atlantic, from Cape Hatteras to Labrador. Scallops are aggregated in patches and harvestable concentrations are called beds. Major areas of offshore fishing activity are Georges Bank, the Scotian Shelf (Middle Grounds, Sable Island Bank, Western Bank, Browns Bank, and German Bank) and St Pierre Bank. Scallops prefer a sandy, gravel bottom and occur in depths of 35 to 120 m.

Scallops have separate sexes. They mature at age 2. The female gonad is red in colour and the male gonad colour is creamy white. The major spawning period is August to October. The fertilized eggs develop through several stages until settlement on the bottom within 30 to 60 days.

Growth is estimated from the position of annual rings on the shell. The growth rate varies from one area to another and is influenced by season, depth, and temperature. German Bank is an area of low productivity with the slowest growth-rate of all the offshore scallop areas.

Offshore scallop vessels range from 27 to 46 m length overall. The offshore fleet uses a New Bedford offshore scallop rake or drag, 4 to 4.9 m in width. Two drags are fished simultaneously, one on each side of the vessel.



### The Fishery

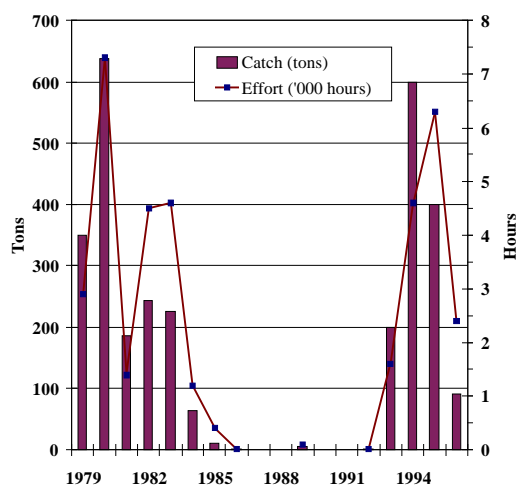
#### Landings (tons)

Year	70-79 Avg.	80-89 Avg.	1992	1993	1994	1995	1996
TAC	-	-	-	200	600	400	100
Catch	60	170	<1	200	600	400	100

German Bank at the southwest tip of Nova Scotia, has been exploited off and on since the mid 1960s. The Bay of Fundy and the offshore scallop fleets fished there under common access but different regulations. While the offshore scallop fleet fished under a meat count regulation, the Bay of Fundy fleet did not have a count restriction. The Inshore/Offshore Agreement of 1986 established a separation of the fleets at latitude 43° 40' North. The offshore fleet exploits scallop beds south of this line.

During the early 1980's, catches on German Bank south of 43°40' were important but steadily declined until 1985. The fishery resumed in 1993 after a seven-year interruption. It is a seasonal fishery to avoid gear conflicts with the lobster fishery. In 1993, a 200 t TAC

was harvested over seven weeks. The meat count was lowered to 40 meats per 500 g for 1994. In 1994, a 'roll-over' TAC agreed upon by industry and fishery managers resulted in three quota increments of 200 t for each six-week period (total 600 t) provided catch-rates did not decrease significantly and meat count was met. In 1995, 400 t were fished. Catch-rates declined rapidly and the meat count increased during the second quota increment. Such catch levels had not been sustained in the early 1980's. The 1996 TAC was set at 100 t. **Effort** has been steadily rising since 1993. It decreased by 38% from 1995 to 1996.

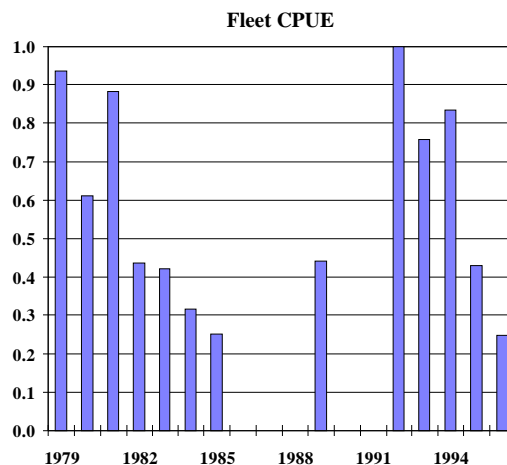


### Resource Status

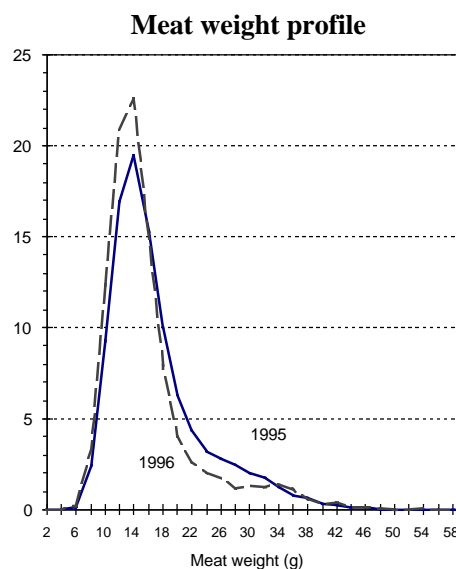
Logbooks provide catch and effort data from which catch-rate (CPUE) is estimated. Landings are monitored at dockside. The catch is sampled at dockside for size distribution. Research surveys provide average numbers-at-age of scallops per standard tow. CPUE, size of meats in the catch and research survey abundance indices are used to determine stock status.

**Commercial catch-rates** were high in the early 1980s but had decreased markedly by 1985. When the fishery resumed in 1993, catch-rates

were high. They have been on a steep decline since 1995.



The **average meat weight** in the catch corresponded to a count under 30 per 500 g up to 1996. The average meat weight dropped slightly in 1996 with a higher fraction (59 versus 48%) of meats under 15 g.



The **research survey** indicated a reduction in densities of all sizes of scallops from 1995 to 1996.

## ***Outlook***

There is limited recent information available for German Bank scallops. The fishery resumed in 1993 after a seven year interruption. The 1996 fishery operated under a 100 t TAC increment which was not renewed. Catch-rates remained low throughout the season. The catch composition showed a greater contribution of small meats compared to previous years. Survey catch-rates dropped considerably.

Given the short term (1993-1996) and long term (1979-1996) history of the German Bank scallop grounds, it would appear that irregular recruitment and slow growth make it difficult to sustain a fishery at catch levels greater than 100 t.

This report is available from the:

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*La version française est disponible à l'adresse ci-dessus.*



## ***For more Information***

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## ***References***

Robert, G. and M.A.E. Butler, 1997. Scallop stock status for 1996 - Eastern Scotian Shelf and German Bank. DFO Canadian Stock Assessment Secretariat Res. Doc. 97 / 49.