

# THE ATLANTIC SURF CLAM FISHERY - 1970

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The 1970 surf clam fishery produced record landings of 66.8 million pounds of meats -- 35% more than in 1969. The New Jersey catch of 48.0 million pounds, a 24% increase, almost equaled the total landings for 1969. Maryland and New York landings increased by 6.6 and 0.5 million pounds, respectively. Landings at Virginia ports totaled 0.9 million pounds. The fleet size decreased and the southward shift continued. The number of vessels declined at Point Pleasant, N.J., and Cape May-Wildwood, N. J., but remained the same at Ocean City, Md., and Long Island, N. Y.

## FISHING AREAS

Cape May-Wildwood, N. J., Point Pleasant, N. J., and Ocean City, Md., were the major surf clam fishing areas in the Middle Atlantic Bight in 1970; Long Island, N. Y., and Virginia provided the remainder of the catch. The New Jersey fishery continued to supply most of the total landings, although the 48.0 million pounds landed were a smaller percentage (72%) than in 1969 (Table). Landings at Cape May-Wildwood were almost triple those at Point Pleasant.

Surf Clam Landings by Area

Area	Number of Vessels		Landings Million of Lbs.	
	1969	1970	1969	1970
Cape May-Wildwood, N. J.	43	41	24.8	34.8
Point Pleasant, N. J.	28	21	14.0	13.2
Ocean City, Md.	14	14	7.1	13.7
Long Island, N. Y.	7	7	3.7	4.2
Virginia	0	4	0	0.9
Total	92	87	49.6	66.8

The areas fished by New Jersey boats in 1970 (Fig. 1) were similar to 1969 (Barker and Ropes, 1971) but more trips were made to the southern areas. The Ocean City, Md., vessels worked mostly inshore and north of Ocean City Inlet, as in 1969. The Long Island, N. Y., landings were taken off Long Beach and Fire Island.

## FLEETS AND METHODS

The New York fleet remained at 7 vessels in 1969. The fleet, based at Freeport, Long Island, consisted of 5 full-time and 2 part-time vessels; the latter landed clams for fish bait. Average catch per trip for the full-time vessels was 252 bushels (4,284 pounds of meats). Total landings of 4.0 million pounds of meats for food and 0.2 million pounds for bait resulted from monthly landings of 172,000 to 516,000 pounds of meats (Fig. 2).

The Point Pleasant fleet decreased for the fourth consecutive year from 28 vessels in 1969 to 21 in 1970. Atlantic City boats were included in the 1970 total because some operated from both ports during the year. Depths fished ranged from 7 to 35 meters (24 to 115 feet); the average depth was 24 meters (78 feet). Most vessels landed daily but some overnight trips were made to more distant grounds. Hours fished per boat-day ranged from 2 to 17. Monthly averages are shown in Figure 3. The average for 1970 was 9.2 hours, 0.3 hours less than in 1969.

The Cape May-Wildwood fleet decreased to 41--2 vessels fewer than 1969. Another large stern-dredger started operating in 1970, bringing the total number of stern-dredgers based at this port to 3. Depths fished ranged from 6 to 37 meters (20 to 120 feet); average depth was 15 meters (49 feet). Most vessels landed daily but some overnight trips were made to the southern areas.

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Fig. 1 - Area and intensity of surf clam fishery by the New Jersey and Maryland fleets, 1970 (based on 3,579 interviews).

Monthly averages of hours fished per boat-day are shown in Figure 3. Effort ranged from 2 to 28 hours. The average for 1970 was 7.1 hours, 0.1 hour less than 1969. Seven vessels landed clams at Lewes, Del., in 1970. These landings were included in the Cape May-Wildwood total because 5 of the vessels were based at Wildwood and all of the clams came from the areas fished by the Cape May-Wildwood fleet.

The Ocean City fleet stabilized at 14 vessels in 1970. Depths fished ranged from 6 to 37 meters (20 to 120 feet); average depth was 14 meters (45 feet). Most vessels made daily trips and worked during daylight hours. Monthly averages of hours fished per boat-day ranged from 4.9 to 7.7 hours. Daily effort ranged from 1 to 13 hours; the average was 6.1 hours (Fig. 4).

The Virginia fleet consisted of 3 vessels based at Chincoteague Island and 1 at Oyster.

#### LANDING STATISTICS

Interviews by port samplers provided information on fishing areas and effort in New Jersey and Maryland. Landings from other areas within the Middle Atlantic Bight were supplied by the NMFS Division of Statistics and Market News.

Record landings of 66.8 million pounds of meats were 17.2 million pounds (35%) higher than in 1969 (Table). Most of the increase was due to the greater amount (10.0 million pounds) landed by the Cape May-Wildwood fleet. New Jersey produced 48.0 million pounds--9.2 million pounds (24%) more than in 1969. Maryland landings were up by 48% (to 13.7 million pounds) and New York landings also increased (0.5 million pounds). Virginia landings totaled 0.9 million pounds in 1970. New Jersey landings were 72% of the total; Maryland, 21%; and New York, 6%. Contributions by the respective States in 1969 were 78%, 14%, and 8%. Less than 2% of the total catch was used for bait.

The percentage of the total New Jersey landings contributed by the Cape May-Wildwood fleet has increased significantly in recent years. Cape May-Wildwood provided 73% (34.8 million pounds) in 1970--up from 62% (24.8 million pounds) in 1969. The Point

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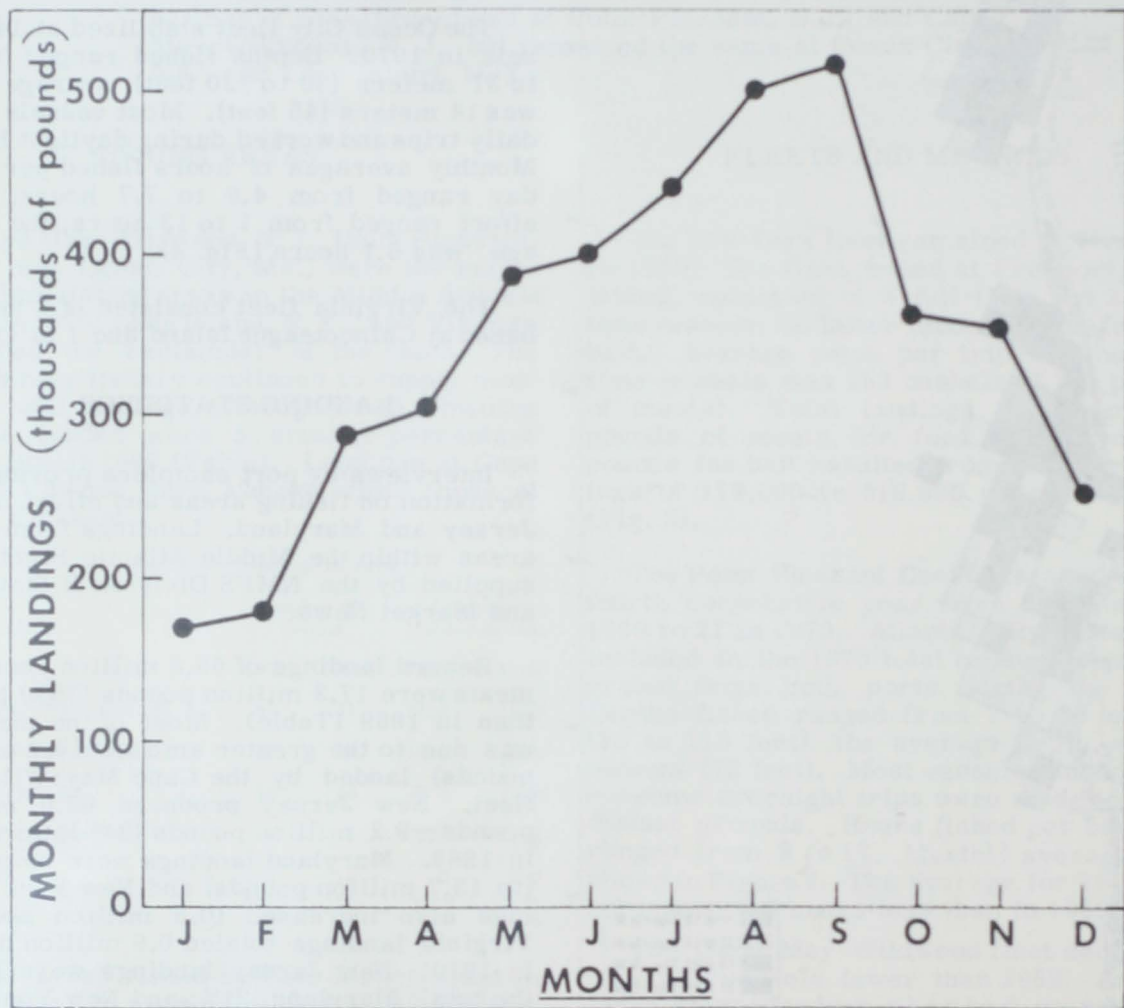


Fig. 2 - Monthly landings of surf clams in New York, 1970.



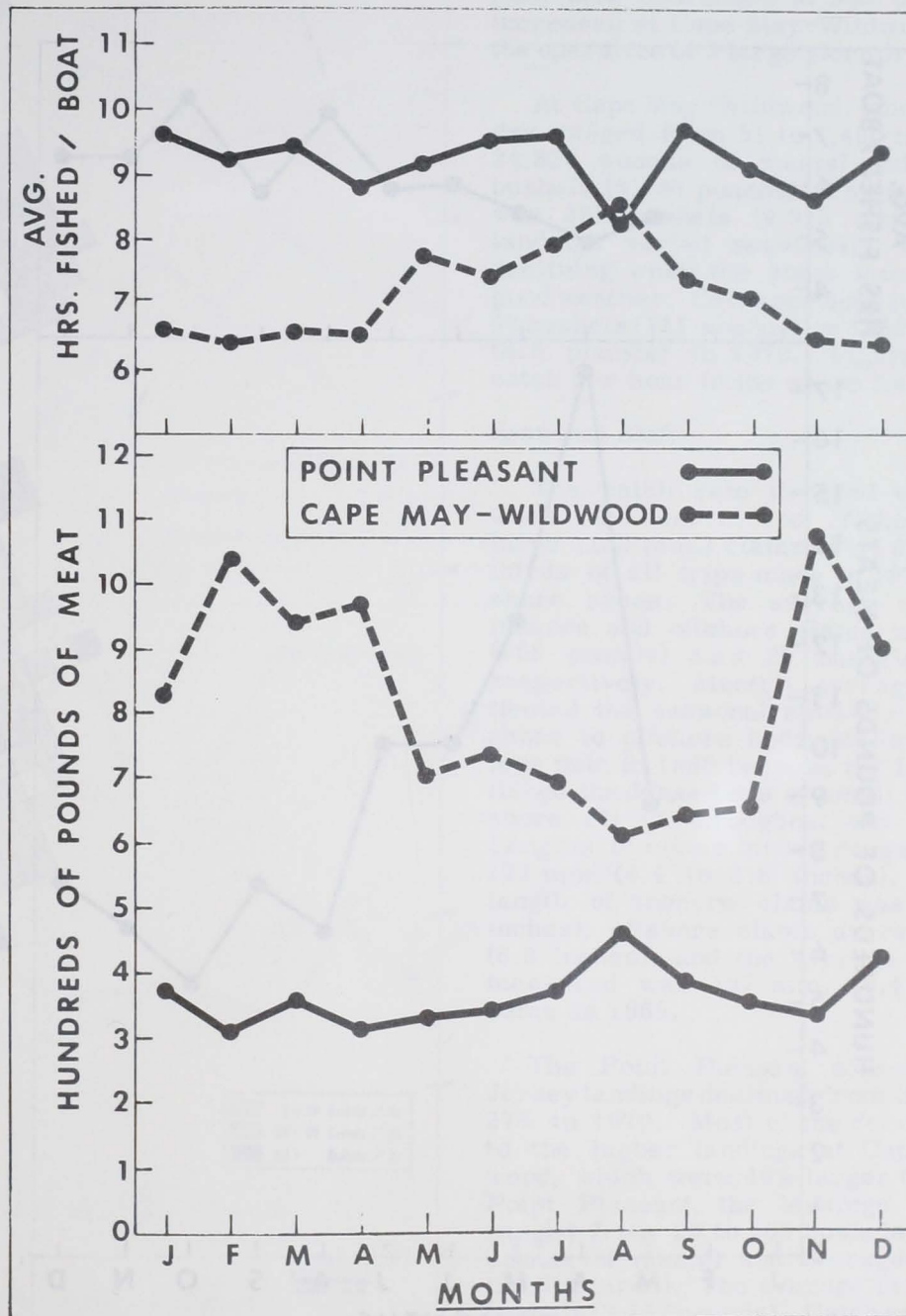


Fig. 3 - Monthly averages of daily effort (upper) and catch per hour (lower) at Point Pleasant and Cape May-Wildwood, N. J., 1970.

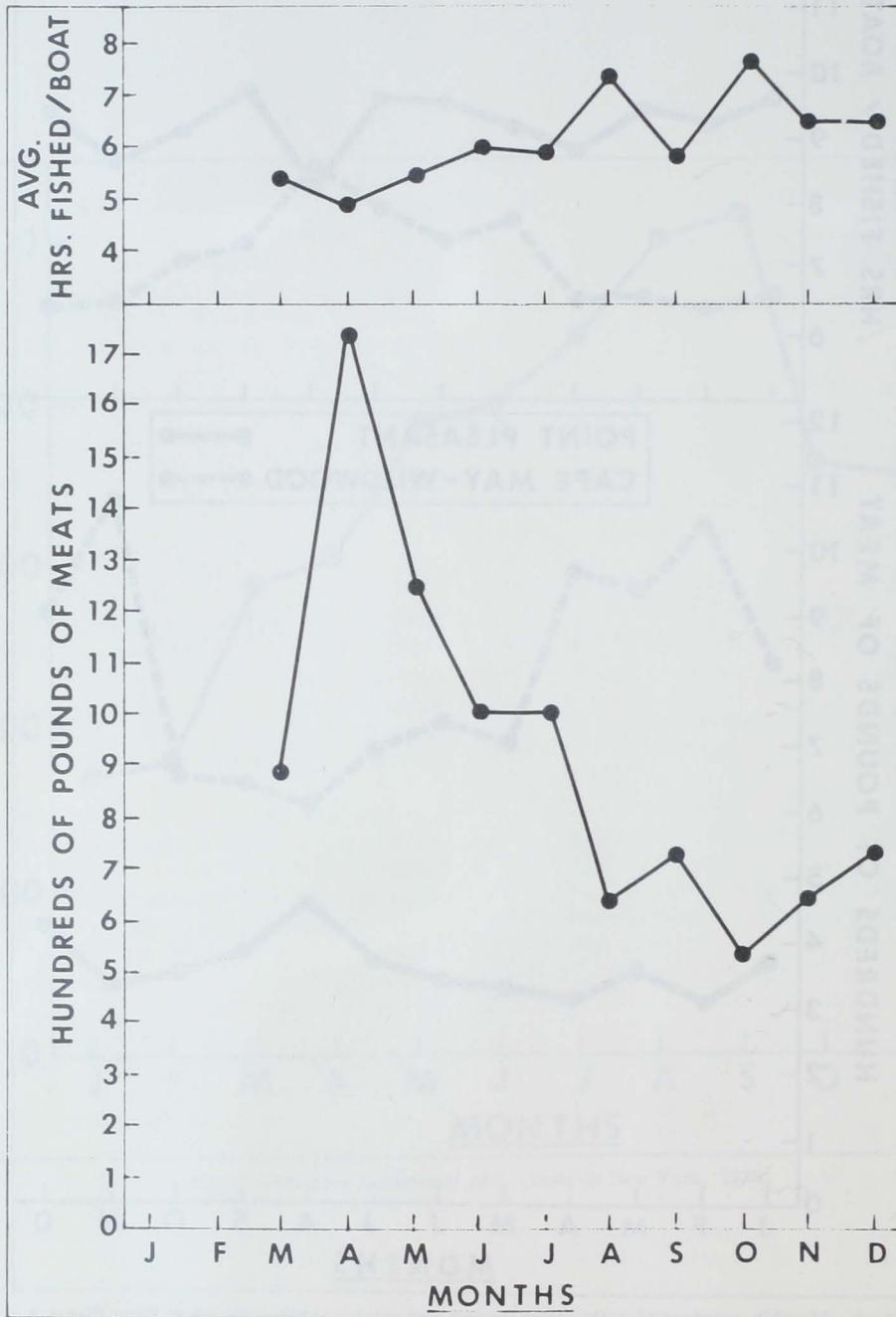


Fig. 4 - Monthly averages of daily effort (upper) and catch per hour (lower) at Ocean City, Md., 1970.

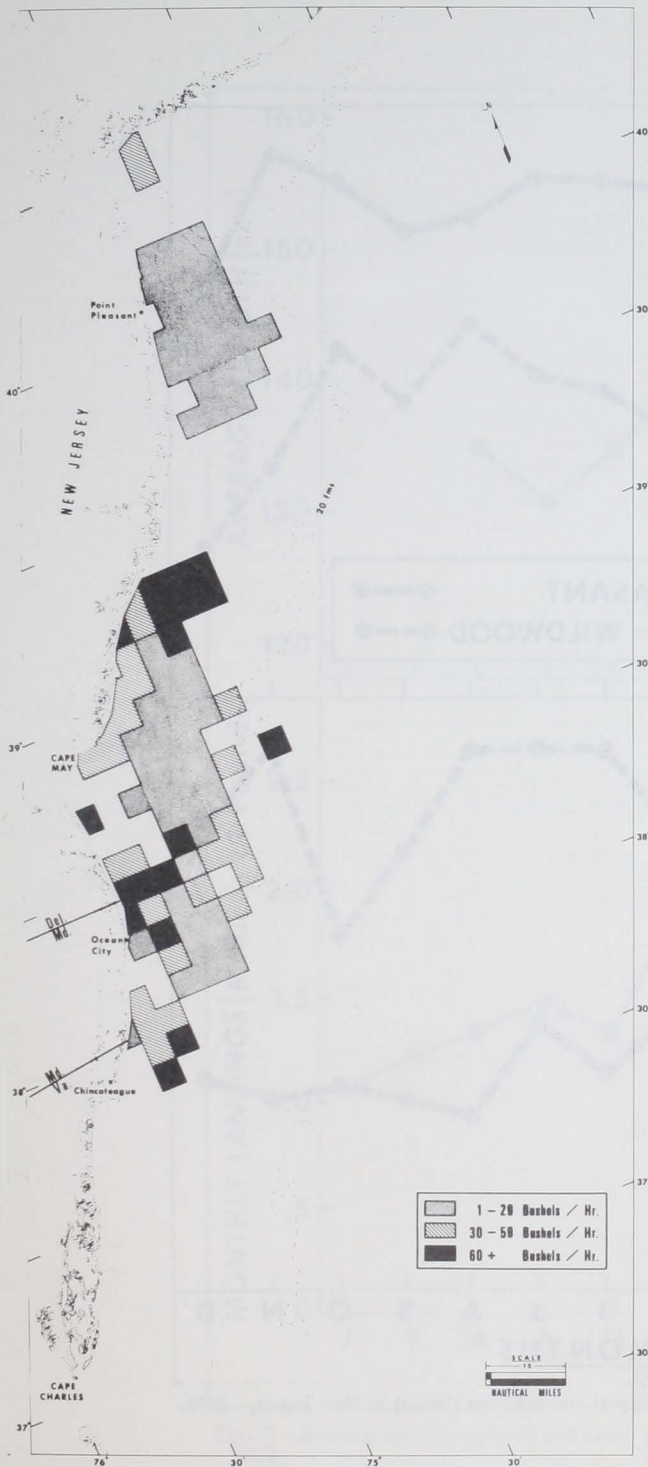


Fig. 5 - Catch per hour within the area fished by the New Jersey and Maryland surf clam fleets in 1970 (based on 3,579 interviews).

Pleasant fleet decreased more than Cape May-Wildwood (7 less at Point Pleasant and 2 less at Cape May-Wildwood). Although the fleet size decreased at both ports, landings increased at Cape May-Wildwood because of the operation of 3 large stern dredge vessels.

At Cape May-Wildwood, landings per boat-day ranged from 51 to 1,460 bushels (867 to 24,820 pounds of meats) and averaged 338 bushels (5,746 pounds). The average in 1969 was 289 bushels (4,913 pounds). Monthly landings varied seasonally, with the catch declining when the boats moved offshore in good weather. Catch per hour increased from 43 bushels (731 pounds) in 1969 to 48 bushels (816 pounds) in 1970. Figure 5 shows the catch per hour in the areas fished.

#### Seasonal Shift

The catch rate dropped sharply in May when the fleet moved offshore to fish for large (150 mm.) clams (Fig. 6). About two-thirds of all trips made in 1970 were to inshore areas. The average catch rate for inshore and offshore clams was 57 bushels (969 pounds) and 25 bushels (425 pounds), respectively. Monthly average length reflected the seasonal shift in effort from inshore to offshore beds, but the change was less than in 1969 because the larger vessels fished the dense beds of small (120 mm.) inshore clams throughout the year (Fig. 6). Lengths of clams landed ranged from 113 to 173 mm. (4.4 to 6.8 inches). The average length of inshore clams was 128 mm. (5.0 inches); offshore clams averaged 160 mm. (6.3 inches); and the average for all clams measured was 137 mm. (5.4 inches)--the same as 1969.

The Point Pleasant share of the New Jersey landings declined from 36% in 1969 to 27% in 1970. Most of the decrease was due to the higher landings at Cape May-Wildwood, which were 40% larger than 1969. At Point Pleasant, the landings per day-trip ranged from 28 to 505 bushels (476 to 8,585 pounds of meats) and averaged 190 bushels (3,230 pounds). The average in 1969 was 221 bushels (3,757 pounds). Catch per hour averaged 21 bushels (357 pounds) in 1970 and 23 bushels (391 pounds) in 1969. Monthly catch rates and landings were relatively stable in 1970 (Figs. 3 and 6). Most of the variation was due to the effects of bad weather. Lengths



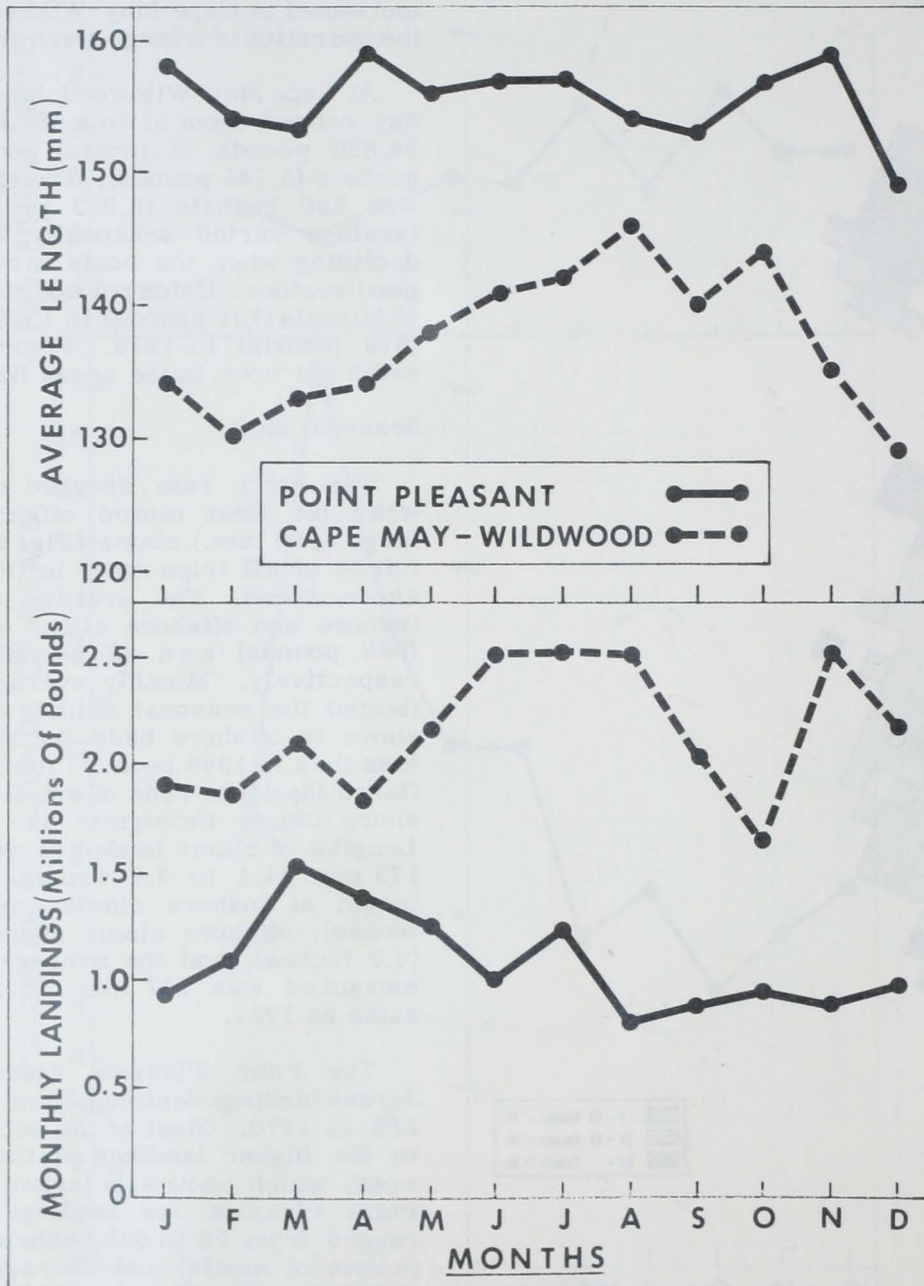


Fig. 6 - Monthly mean length of surf clams (upper) and landings (lower) in New Jersey, 1970.

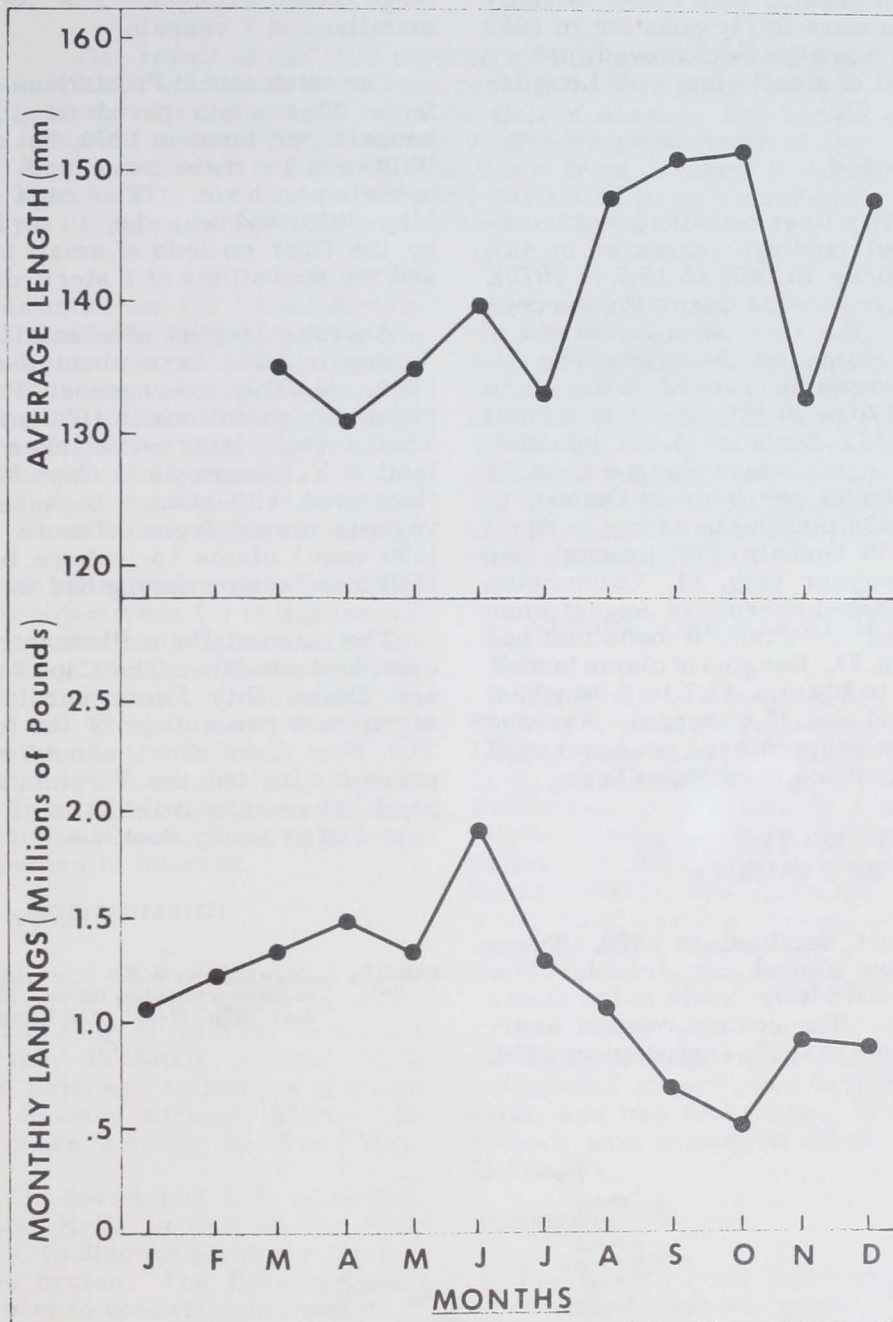


Fig. 7 - Monthly mean lengths of surf clams (upper) and landings (lower) at Ocean City, Md., 1970.



of clams landed ranged from 126 to 171 mm. (5.0 to 6.7 inches) and averaged 157 mm. (6.2 inches) in 1970. The average length was 2 mm. (0.1 inch) greater than 1969. Monthly average lengths were fairly constant in 1969 until December when the fleet moved inshore to fish on a bed of small clams off Long Island, N.Y. (Fig. 6).

#### Landings Increased

The Ocean City fleet remained at 14 vessels in 1970 but landings increased by 48% (7.1 million pounds in 1969 to 13.7 in 1970). Much of the increase was due to the concentrated effort by the fleet on a dense bed of small inshore clams off Delaware (Fig. 1). Landings per day-trip ranged from 10 to 1,184 bushels (170 to 20,128 pounds of meats) and averaged 321 bushels (5,457 pounds). Mean monthly catch rates ranged from 31 bushels (527 pounds) per hour in October to 102 bushels (1,734 pounds) per hour in April and averaged 53 bushels (901 pounds) per hour during the year (Fig. 4). Catch rates and landings dropped sharply in August when the fleet moved to offshore beds that had large clams (Fig. 7). Lengths of clams landed ranged from 95 to 200 mm. (3.7 to 7.9 inches) and averaged 141 mm. (5.6 inches). Average lengths varied monthly with the seasonal shift of effort from inshore to offshore beds.

### STATUS AND TRENDS OF THE FISHERY

Fishing effort declined in 1970. There were less hours fished per trip by New Jersey vessels and 5 fewer boats in the entire surf clam fleet. The southward shift in effort, which started in 1967, continued in 1970.

The Ocean City, Md., fleet remained at 14 vessels. Four boats operated out of Virginia ports. The Cape May-Wildwood fleet added 1 large stern-dredger. The New York fleet stabilized at 7 vessels.

The catch rate at Point Pleasant decreased from 23 bushels per hour in 1969 to 21 bushels per hour in 1970, but at Cape May-Wildwood the rate increased from 43 to 48 bushels per hour. The high rate at Cape May-Wildwood was due to an intense effort by the fleet on beds of small inshore clams and the operations of 3 stern-dredgers.

Average lengths of clams landed in New Jersey in 1970 were about the same as in 1969. Monthly averages at Point Pleasant had minor variations in 1970 until December when small clams were taken off Long Island, N.Y. Averages at Cape May-Wildwood fluctuated with season because most of the vessels moved from offshore beds of large (150 mm.) clams to inshore beds of small (120 mm.) clams during bad weather.

The catch at Point Pleasant will probably continue to decline. The Cape May-Wildwood and Ocean City fleets should contribute a significant percentage of the total landings. The New York fleet should remain at its present size but the Virginia fleet may expand. The southward shift in effort and landings will probably continue.

#### LITERATURE CITED

- BARKER, A. M. and J. W. ROPES  
1971. The Atlantic surf clam fishery - 1969. *Comm. Fish. Rev.* 33(6): 35-42. (Also Reprint No. 912.)

