

# THE ATLANTIC SURF CLAM FISHERY IN 1966

By Thomas M. Groutage and Allan M. Barker\*

The fishery for Atlantic surf clams (*Spisula solidissima*) landed a record 45 million pounds of clam meats in 1966. New Jersey landings, centered at Point Pleasant, composed 96 percent of the total. Less than 2 percent of the total landings was used for fish bait. Sampling at Point Pleasant, Barnegat, Cape May, and Wildwood, N. J., provided data on the fishery. Daily catches averaged 332 bushels at Point Pleasant and 315 at Wildwood; both averages are less than those for 1965. Clams landed for processing had a mean shell length of 151 mm. (6 in.) at Point Pleasant and 130 mm. ( $5\frac{1}{8}$  in.) at Wildwood.

The surf clam industry has developed rapidly since the early 1940's and is a major contributor to total shellfish production. In 1966, the fishery produced about 32 percent of the U. S. molluscan shellfish landings and was second only to the oyster fishery. This report is the second designed to document the expansion of the fishery and to summarize statistics. The 1965 data were reported by Groutage and Barker (1967)<sup>1</sup>.

## FISHING AREA

Surf clams were dredged from two principal areas along the New Jersey coast. The largest and most productive grounds were between Barnegat Lightship and Point Pleasant (fig. 1). Point Pleasant, the center of commercial landings, had an operating fleet of about 45 vessels, an increase of 5 over 1965. During the year, two to five vessels were based at Barnegat Inlet and one to three at Atlantic City. Depth of clam beds in the Barnegat Lightship-Point Pleasant fishing area ranged from 15 to 34 meters (48 to 110 feet); average depth was 22.5 meters (74 feet).

About 10 boats operated out of Cape May-Wildwood. Water depths in this fishing area (fig. 1) ranged from 7 to 21 meters (24 to 70 feet) and averaged 10.7 meters (35 feet). Fishing effort was concentrated in the inshore area.

## GEAR AND METHODS

Most surf clam boats made 1-day trips; some Point Pleasant boats made 2-day dredging trips off Long Island. Length of dredging time per trip varied from 1 to 22 hours (average 9.5) at Point Pleasant and from 1 to

11 hours (average, 6.0) at Wildwood. Compared with 1965, fishing time increased slightly (from 8.9 to 9.5 hours) at Point Pleasant and decreased slightly (from 6.4 to 6.0 hours)

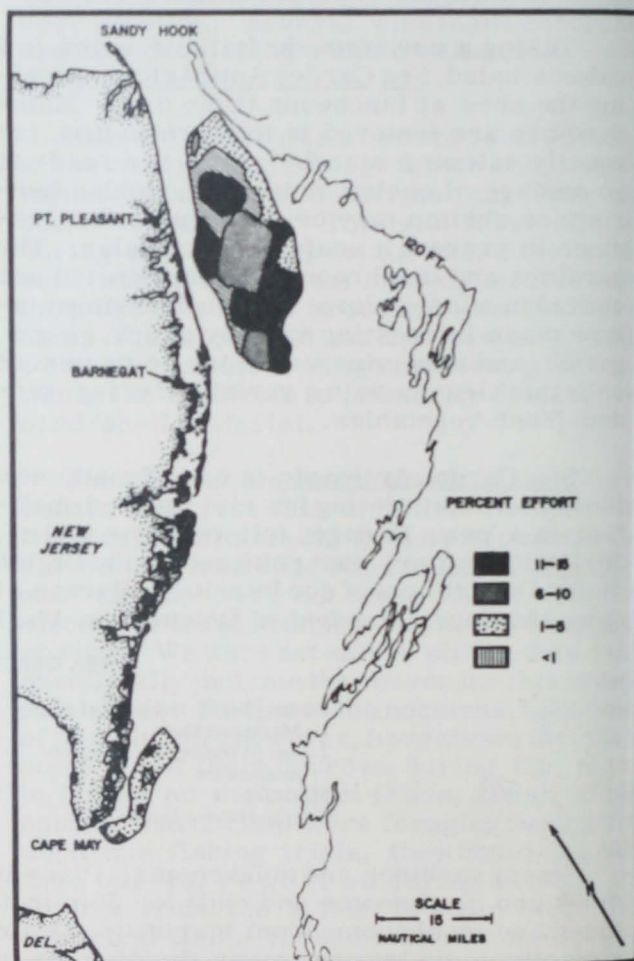


Fig. 1 - Location of surf clam dredging off the New Jersey coast in 1966 (percentage of total New Jersey effort).

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<sup>1</sup>Groutage, Thomas M. and Allan M. Barker: 1967. The surf clam fishery. U. S. Fish and Wildlife Service, "Commercial Fisheries Review," vol. 29, no. 2, pp. 55-58 (also Sep. No. 780).

at Wildwood. Towing time per dredge haul remained at an average of 4 tows per hour. Eight boats entered the fishery; seven were converted vessels and one was a metal boat specifically constructed for surf clam dredging.

### LANDING STATISTICS

Over 1,400 interviews of vessel captains were obtained for information on fishing location and effort, and 10,500 commercial-size clams in 883 samples from landings were measured. Seven trips were made on commercial vessels, where 1,500 clams were measured from catches in 115 dredge hauls. The amounts of surf clams landed along the Atlantic coast were taken from "Current Fishery Statistics".

Total landings of 45 million pounds of surf clam meats in 1966 set a new record. The previous high was 44 million pounds in 1965 (Groutage and Barker, 1967). Greater demand for the product and higher prices to the fishermen led to an increase in total effort and to the rise. Ninety-six percent (43.2 million pounds of meats) of the total landings were made in New Jersey, 4.0 percent (1.8 million pounds) in New York, and 0.2 percent (60,000 pounds) in Maryland. Only about 2.2 percent of the total U. S. catch was used for bait in sport fisheries; included were 1.4 percent (60,000 pounds) of the catch in New Jersey, 0.7 percent (387,000 pounds) in New York, and 0.1 percent (3,000 pounds) in Maryland. Compared with 1965, landings increased in New Jersey and New York and decreased in Maryland. Landings in Rhode Island and Massachusetts remained insignificant and were used entirely for bait.

Nearly 76 percent (32.4 million pounds of meats) of the New Jersey landings were made at Point Pleasant and Barnegat, compared with over 79 percent (33.5 million pounds) in 1965. Winter weather in 1966 restricted dredging in deeper waters. Daily landings per boat at Point Pleasant ranged from 21 to 1,061 bushels (353 to 18,044 pounds of meats) and averaged 332 bushels (5,644 pounds). Average for 1965 was 355 bushels (6,035 pounds). Catch rate per hour of dredging (fig. 2) averaged 35 bushels (593 pounds of meats); in 1965, 40 bushels (678 pounds).

Clam landings at Wildwood (fig. 3) amounted to over 22 percent (9.5 million pounds of meats)

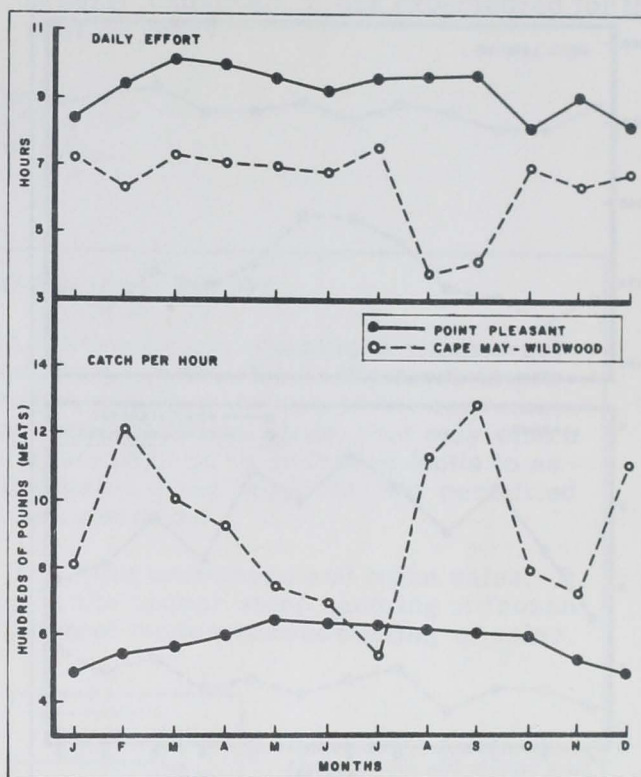


Fig. 2 - Monthly averages of daily effort and catch per hour at Point Pleasant and Cape May, N. J., 1966.



Fig. 3 - Unloading a day's catch of surf clams at Wildwood, N. J.

of the New Jersey total; they were less than 20 percent (8.4 million pounds) in 1965. Monthly landings in Wildwood increased, generally, throughout the year (fig. 4). No boats moved from Point Pleasant to Cape May in the spring of 1966 (in contrast to 1965), but four

Data provided in personal communications from BCF, Office of Statistical Services, Fishery Reporting Specialists in the respective states.

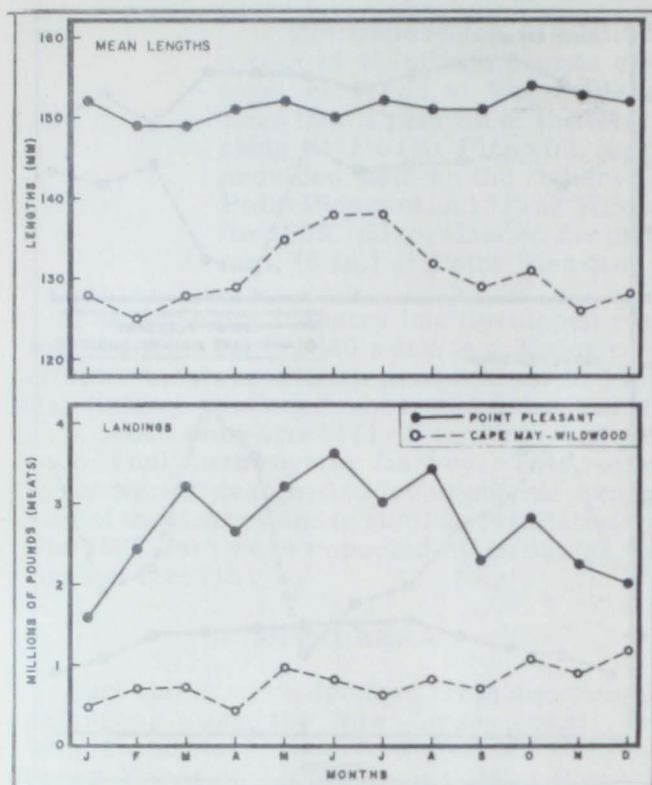


Fig. 4 - Mean lengths of surf clams and monthly landings of surf clam meats in New Jersey in 1966.

boats did change ports late in the year. Daily catches per boat ranged from 40 to 867 bushels (634 to 14,746 pounds of meats) and averaged 315 bushels (5,355 pounds). The average hourly catch rate was 53 bushels (893 pounds of meats). Hourly catch rates were highly variable at Wildwood (fig. 2). This variation can be ascribed to weather conditions, location of clam beds, and sampling methods.

Over 1.5 percent (653,000 pounds) of the New Jersey total catch of surf clam meats was landed at Atlantic City; in 1965, it was only 0.1 percent (43,000 pounds). Landings at Belmar in Monmouth County amounted to 0.9 percent (395,000 pounds) of the New Jersey total, compared with 0.8 percent (357,000 pounds) in 1965.

Monthly average lengths of surf clams landed at Point Pleasant were more uniform than those of clams landed at Cape May-Wildwood (fig. 4). The mean shell length of 6,485 clams, randomly sampled at Point Pleasant throughout the year, was 151 mm. (6 in.) and the range was 105 to 189 mm. ( $4\frac{1}{8}$  to  $7\frac{3}{8}$  in.). Figure 5 shows the 1965 and 1966 length frequencies; Point Pleasant clams had similar lengths in both years. Clams landed at Wild-

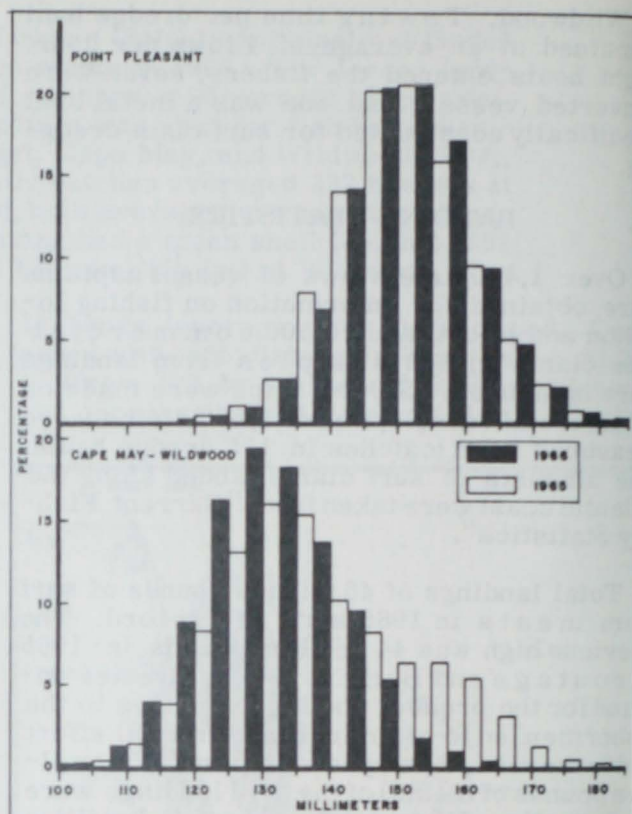


Fig. 5 - Length comparisons of surf clams landed in New Jersey in 1965 and 1966.

wood had a mean length less than that of Point Pleasant clams; for 3,637 Wildwood clams measured throughout the year, the range was 100 to 160 mm. (4 to  $6\frac{1}{4}$  in.) and the mean length was 130 mm. ( $5\frac{1}{8}$  in.). In 1965, the mean length of Wildwood clams was 139 mm. ( $5\frac{1}{2}$  in.).

At Point Pleasant, amounts of small clams (less than 130 mm. or 5 in. long) discarded at sea were negligible--about 1 bushel per 200 bushels landed. In the Wildwood area, amounts of discarded clams (less than 115 mm. or  $4\frac{1}{2}$  in.) were slightly greater (about 2 bushels per 200 bushels landed).

#### STATUS AND TRENDS OF THE FISHERY

Information from interviews with vessel captains indicated that fishing effort has increased over 1965's. The average length of surf clams caught in the Barnegat Lightship area has remained at 151 mm. (6 in.). The mean length at Wildwood, however, decreased from 139 mm. ( $5\frac{1}{2}$  in.) in 1965 to 130 mm. ( $5\frac{1}{8}$  in.) in 1966. Acceptance of smaller clams by some processors permitted clam boats to fish on the smaller, dense, inshore clam beds.

Increased demand for surf clam meats caused higher prices, which encouraged more effort by the fleet. The fishery continued the

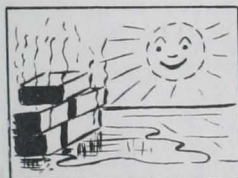
orderly expansion it has experienced for the past 20 years.



## GUIDES TO HANDLING FROZEN FOODS

Proper handling is the decisive factor in developing and retaining a volume-getting frozen food department. Next to the consumer, the retailer is the most important factor in the expansion of frozen foods because he is next to the consumer. Consumers, in ever-increasing numbers, want and buy frozen foods--but only where they know that quality is assured. Packers lavish care on their frozen foods to assure quality. But results of this care are dissipated if the products are permitted to deteriorate in the store--sales and customers are lost.

Frozen foods are profit-making foods. They win customers and make sales. It pays to take care of them. Here are 10 guides to the proper store handling of frozen foods--10 direction signs to the successful winning of customers and making of sales.



1. Nothing invigorates you like sunshine and fresh outdoor air, but they're death to frozen foods. Get that delivery off the sidewalk fast!



2. Rush the delivery to zero storage. Don't give it a chance to thaw. Frozen foods which defrost and are refrozen lose taste appeal and customers.



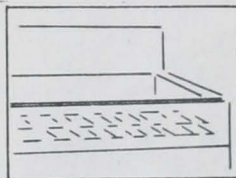
3. Frozen foods suffer damage when permitted to stand on the floor. Protect quality--get them off the floor and into the cabinet fast!



4. Don't leave anything in long enough to become frost-covered. Rotate stocks. Always take out old packages and place them on top of the new!



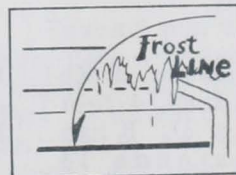
5. Customers won't buy torn, crushed, or frost-covered packages. So take your choice--either you'll get rid of them or they'll get rid of your customers.



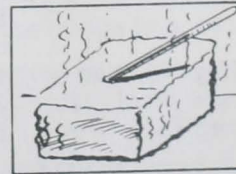
6. Give customers maximum choice. Keep cabinets well-stocked at all times. Remember, the bigger the display, the bigger it sells.



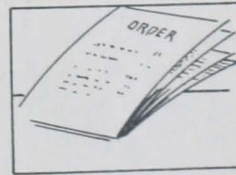
7. Be a good housekeeper. Keep cabinets tidy. Work over them often. Customers buy only what they can see--let them see what you have.



8. The plateline is the defrosting line; stock nothing above it. And keep packages back from the glass front to let the cold air circulate.



9. Frozen foods become incurably ill above zero temperature. Keep that destructive fever down. Check cabinet temperature every morning and every night.



10. Stocks don't sell in the backroom. Order in just what you need between deliveries and a small reserve of fast-movers to avoid out-of-stocks.