

SOFT-CRAB INDUSTRY

By Charles F. Lee* and F. Bruce Sanford**

The soft-crab industry is not numbered among the biggest of the fishing industries of the United States, but as will be shown later, it might well be the most unique. As to value, production of the soft and "peeler" crabs, according to the latest available statistics, amounts to just under two million dozen, worth over a million dollars at the vessel or boat level.

LOCATION

Historically, the Chesapeake Bay States of Maryland and Virginia have been the stronghold of the soft crab. In 1958 those states produced, by count, 90 percent of the catch (table 1). It will be noted, however, that this 90 percent represented only 72 percent of the value of the total catch, with Louisiana's 9-percent share of the production being worth 26 percent of the total value. This apparent sharp difference in value is explained by the fact that the price differential for size is considerable--big jumbo soft crabs may bring two or three times as much per dozen as do the small sizes. And the crabs grow big in the Louisiana bayous!

The rapidly expanding blue crab industry in the Southern states is attracting migrants from the Eastern Shore with the know-how to succeed with soft crabs, and we may well expect increased production of soft crabs in the South in the near future.

Table 1 - U. S. Landings and Ex-Vessel Value of Soft Crabs, 1958

State	Quantity		Value	
	No.	%	\$	%
Maryland	13,061,200	56.5	519,512	45.3
Virginia	7,762,176	33.6	303,438	26.5
Louisiana	1,977,395	8.6	297,170	25.9
North Carolina	228,000	1.0	21,415	1.9
Mississippi	69,972	0.3	2,456	0.2
New Jersey, Delaware, and Florida	16,700	-	1,945	0.2
Total	23,115,443	100.0	1,145,936	100.0

Source: From Fishery Statistics of the United States 1958, by E. A. Power, U. S. Bureau of Commercial Fisheries Statistical Digest No. 49.



Fig. 1 - Crabs that are soon to molt are more retiring than usual. Scrapes are the most effective way of taking them, but many are caught by one man in a small boat with a dip net as seen here.

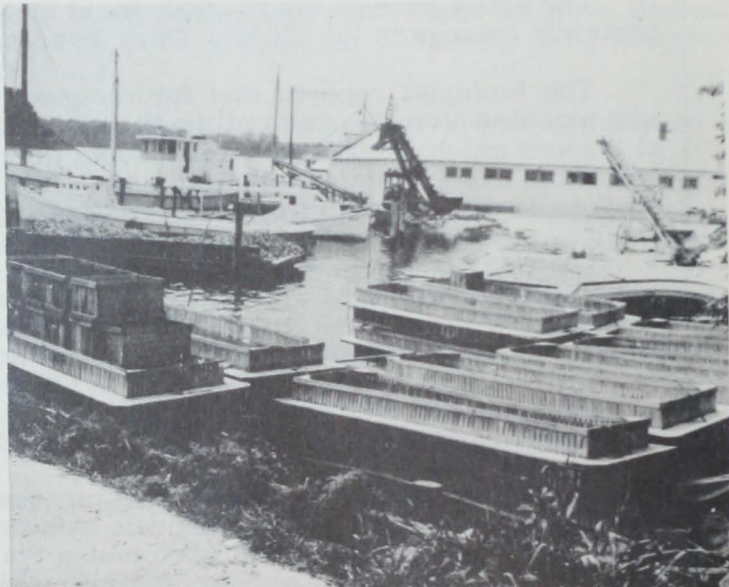


Fig. 2 - Floats such as are shown pulled out on shore are the usual way of holding crabs until the desired soft-shell stage is reached. Typically, the floats are secured in shallow water and are tended from narrow walkways or with a small skiff.

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UNIQUE CHARACTER

The unique character of the industry derives from the fact that the soft crab is just a stage--a very short, transient one--in the life of the blue crab. All crabs molt, but the blue crab seems to be the only species with a behavior pattern that lends itself to exploitation during the soft-shell stage.

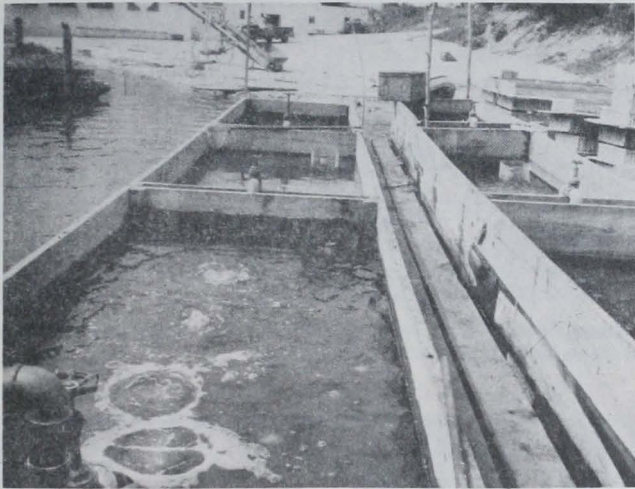


Fig. 3 - In this plant, an innovation in handling soft crabs has been tried and has proved effective in reducing losses in the floats. Permanent tanks are built over the water, and a pump aerates and exchanges the water in the holding tanks.

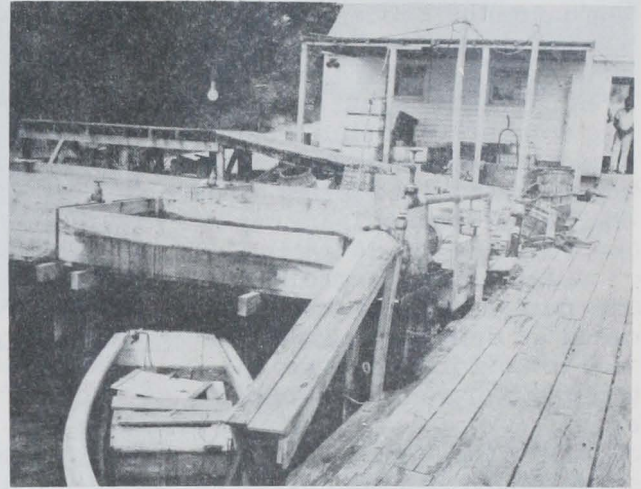


Fig. 4 - Only a small pump is needed to handle the six tanks. The boards protect the pump intake pipe. Note the box midships in the small crab boat moored at the dock. The crabs are held in the box to keep them cool during the run to the plant.

The successful operator of a soft-crab "shedding" plant needs skill that comes only from long experience. He must be able to select at a glance from among a scurrying mass of crabs, the "peelers" or those that are approaching the "buster" stage; that is, those that are starting to emerge from their shells.

Before beginning the molt, blue crabs are known as "green" or "fat" crabs, and show a fine white line on the outer segment of the "backfin." In a few days, this color changes to yellow, then pink. It is at this stage that they are known as "peelers" and are held in separate floats. "Red sign" immediately precedes the "buster" stage, and these crabs must be separated from the peelers to prevent them from being killed during the defenseless pe-



Fig. 5 - Dip nets are used to move the crabs from tank to tank as needed. Water in the tanks is 6 to 8 inches deep, and each tank holds several hundred crabs.



Fig. 6 - The manager is holding crabs in the four stages that the watermen recognize and use to judge the time before molting actually starts. Called "white, yellow, pink, and red," the colors refer to a thin line on the edge of the "backfin" where the shell first splits open.

riod of shedding. Once their shell is gone, they must be removed from the water within an hour, or they begin to toughen and become "buckrams" -- too tough to sell as soft crabs and too soft to cook and pick.

Fortunately, removal from the water indefinitely suspends the hardening process, and they can be packed and shipped as soft crabs. Most are shipped as fresh, live crabs, but an increasing number are being frozen, so this gourmet item can now be obtained at inland cities or during the off-season.

The physical condition of the peeler and soft crab is almost as delicate as its flavor, and to hold losses down, the operator of a soft-crab shed-

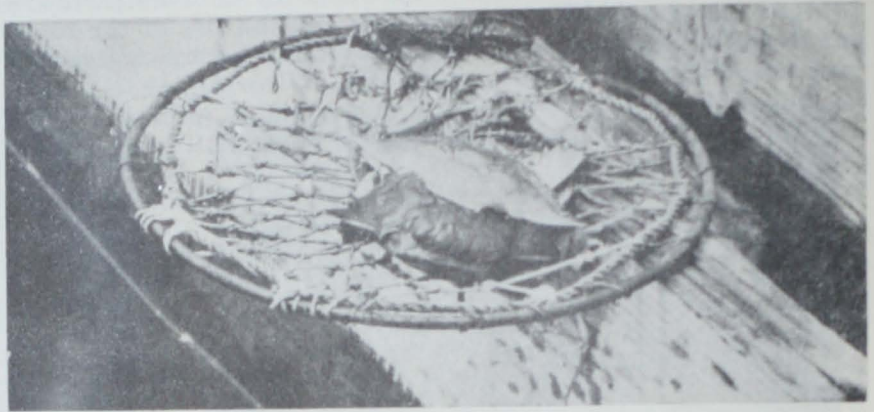


Fig. 7 - In the crab net is a "buster" crab, well on its way of working out of the old shell. This is the last stage before "harvesting."

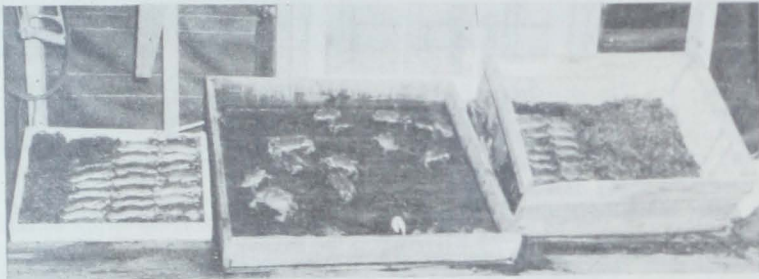


Fig. 8 - Within an hour after shedding, the soft crabs must be removed from the water and packed. The live crabs are sorted from the middle box. Small ones are on the right, large ones on the left.

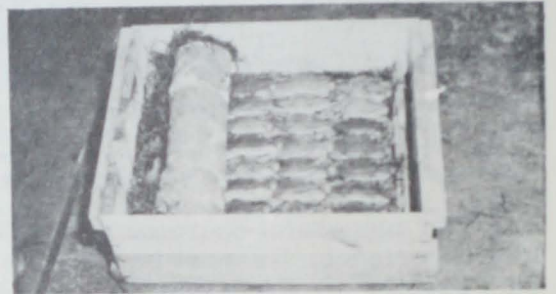


Fig. 9 - Crabs are packed carefully, nested in moist seaweed, and covered with special porous paper. If kept cool, they will live for several days when packed in this manner. The major demand is nearby in the big coastal cities, so the crabs reach market in excellent condition.

ding plant must keep almost a constant day-and-night watch over his floats. But to the born crab man, it's worth the effort. Nothing compares with the flavor of a soft crab, battered and fried just right.

Pictures can tell better than words the story of this unique industry.

Note: The authors gratefully acknowledge the assistance of Messrs. James and Walter Abbott, Northside Crab Company, Weems, Virginia, in the preparation of this report.



DRYING AND SMOKING OF FISH ANCIENT PROCESSES

"The drying and smoking of fish are ancient processes. Archaeologists and anthropologists tell us that drying and smoking were probably developed shortly after the discovery of fire and before man learned to make pictographs on rocks. The art of salting is also very old, going back to the Stone Age. The use of vinegar and spices goes back, at least, to the Greeks and Romans."

--Principles and Methods in the Canning of Fishery Products,
Research Report No. 18 (page 1),
U. S. Fish and Wildlife Service.