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STARFISH STUDY DEVELOPS PERTINENT DATA

The ability to move six or eight inches a minute will never get a starfish a speed record but it is one factor which has made the starfish the arch-enemy of the Long Island Sound oyster fishery.

Another factor is that the current starfish population on the oyster grounds is high as 14 per square yard, or about three every two square feet.

These two factors have combined to render ineffective much of the equipment used by oystermen to protect their resource from this predator, the Department of the Interior reports. Final word on the effectiveness of other means of predator control awaits completion of a current study.

The Bureau of Commercial Fisheries, United States Fish and Wildlife Service, has several oyster research projects under way but a summer "special" was ordered on the starfish menace off Long Island. Four of the Bureau's SCUBA (self-contained under-water breathing apparatus) divers were used in the study. The divers worked in about 30 feet of water.

Some of the results of the work follow:

The mechanical implements used to protect the oyster beds from the starfish--the suction dredge, the oyster dredge, a turtle dredge and the starfish mops--do not give the desired protection and only serve to reduce the population to some extent.

The dredges clean a path around the oysterbed but within half an hour the starfish from the side have moved in and the path is again filled with the predators.

The chemical applicators--quicklime spreaders--are still being observed, but they appear to hold more promise for controlling this predator than do the dredges.

The starfish is attached to the bottom, apparently, only when feeding.

It is bouyant enough to remain just above the floor of the Sound, moving on very short, tubular legs or feet.

The starfish moves on its own power six to eight inches a minute, with a might current, across the current or against a current.

A strong current naturally will affect the speed of the predator.

The highest population found was 681 starfish to 50 square yards.

The SCUBA divers learned that the mops and dredges are only about 50 percent efficient, having the tendency to push about half of the starfish to one side instead of capturing them. This defect can be remedied to a considerable extent now that it is known. But even with the mechanical equipment working at top efficiency the numbers of starfish present and their ability to move results in the quick reinvasion of a cleaned path.

There are several kinds of dredges, some using the vacuum cleaner principle and others more or less scooping the starfish from the bottom. The mop is a horizontal bar to which is appended several long-strand cotton mops. As the bar moves across the floor of the sound the fibers tend to extend upward. The starfish, routed from the bottom by the bar, are caught in the fibers.

Two types of quicklime spreaders are being observed in action. These operate near the bottom, eject quicklime which reaches the starfish and sets up a condition which destroys the predator.

The reason why starfish periodically "explode" into tremendous populations is a matter for another--and a long-range--study.

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