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DEPARTMENT OF THE INTERIOR

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UNITED STATES FISH AND WILDLIFE SERVICE

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STORY OF COD AND CURRENTS SOUGHT BY DRIFT BOTTLES

Another step along the long trail of "predicting abundance" of a species of fish has been taken by the Bureau of Commercial Fisheries, United States Fish and Wildlife Service, the Department of the Interior has announced.

This one concerns cod fish, once the real money fish of the Northwest Atlantic and still an important species. The cod is one of those fish which spawn at the surface of the ocean, placing the eggs at the mercy of wind, waves and weather. Soon after the eggs hatch the cod head for the bottom.

As far as is known now, young cod can find bottom down to 600 feet. If the bottom is deeper than that, the young cod can't make it and die. This makes the Continental Shelf an important place in the life cycle of the cod.

While the cod is popularly associated with New England it does spawn as far south as the Chesapeake Bay and Chincoteague, Virginia, area. There is a considerable spawn off the coast of New Jersey. It is a winter spawner and since it spawns on the surface of the sea the ocean drifts and currents in late winter are an important factor.

The problem of the Bureau of Commercial Fisheries is to determine whether the ocean drift in the cod spawning area at cod spawning time is such that the young fish or the spawn are taken to deep water, depriving the young cod of a chance to reach their haven on the Continental Shelf.

If this natural action of ocean currents can be plotted successfully--it will take more than one year to do it--the fishery biologist, by knowing the drift and the condition of the spawn can predict what portion of a year's production will be able to drop to the Continental Shelf and have a chance of survival.

This information is important for the orderly harvesting of the crops of the sea--if a species is known in advance to be in short supply there is no need to gear up for a big catch, and conversely, a bumper crop should not be wasted because the industry did not have enough notice to gear up for it.

In making this attempt to relate ocean drift to cod spawn the Bureau called upon the United States Navy for help and with the aid of Naval Air it was able to squeeze a couple of weeks' work into a few hours and do a better and more complete job of it.

The Navy's task was to drop drift bottles--a thousand of them--into the Atlantic from Sandy Hook to Chincoteague. To do this, the Naval Air Station at Lakehurst, New Jersey, supplied two blimps. The Navy blimps made test runs to determine height and speed for safe bottle dropping. The tests indicated that bottles could be dropped without breaking from any height up to 300 feet and at any speed.

The flights were made on East-West transects, 20 miles apart, and from one mile from shore to the edge of the shelf, in some places about 75 miles off shore. Time consumed was from 4:30 one afternoon to 6:30 the next morning. The air was calm and the mission accomplished without incident.

The bottles were "pop bottle" size. Each bottle contains the necessary instructions for reporting the finding. The Bureau wants to know where and when the bottle was found. It will pay 50 cents for each of the bottle tags returned to its Biological Laboratory at Woods Hole, Mass.

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