

# TRAPPING SABLEFISH

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Fish traps have been an effective capturing gear used by both sophisticated and primitive cultures for thousands of years. Recently, the concept has enjoyed a renewed interest because of improved construction techniques and the prime quality of fish captured--and because traps are often species-specific, thereby reducing waste of unwanted fish.

During the past three years, the NMFS Seattle Exploratory Fishing and Gear Research Base has carried out experimental fishing for sablefish (*Anaplopoma fimbria*)

with various trap designs. A collapsible steel-mesh trap is now used by the R/V 'John N. Cobb' to estimate sablefish populations and their distribution along the Washington and Oregon coasts. The commercial fishing vessel M/V 'Seattle' has fished traps for sablefish intermittently for two years.

The fish-catch rates of traps may vary widely depending upon time of year and depths fished. The Seattle's most successful trip produced 50,000 pounds with 1,077 trap liftings in 14 days.

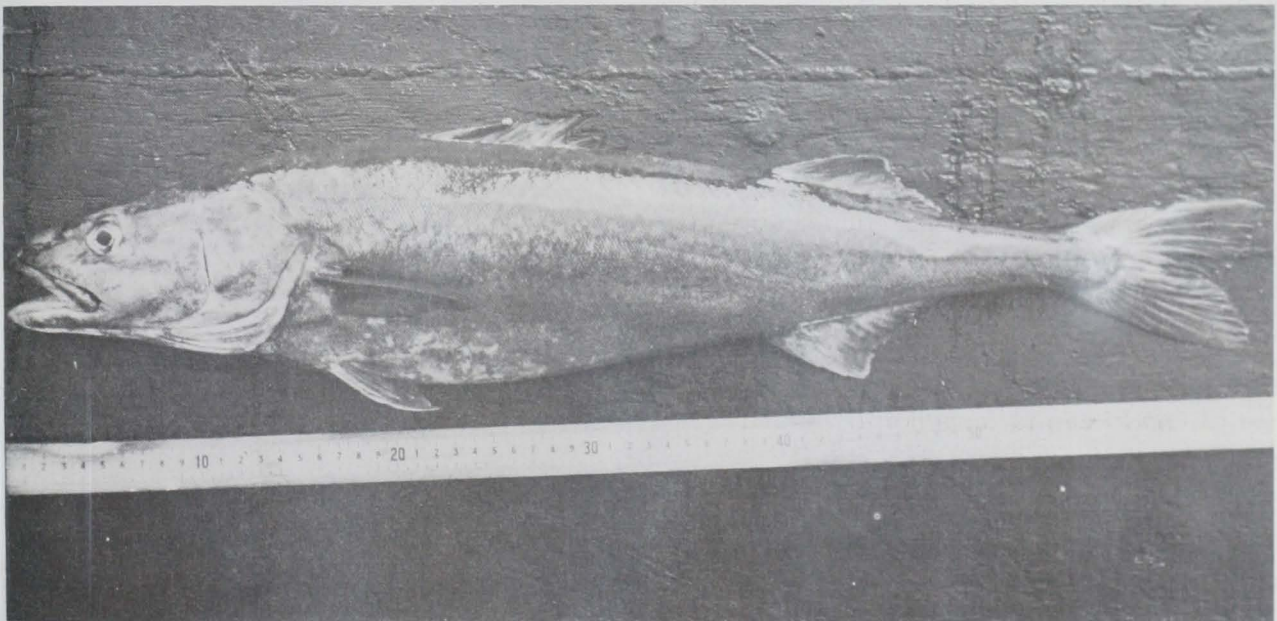


Fig. 1 - Sablefish (*Anaplopoma fimbria*), commonly called blackcod by west coast fishermen, are captured in deep water from California to Alaska. The fish has excellent flesh quality and is primarily kippered.

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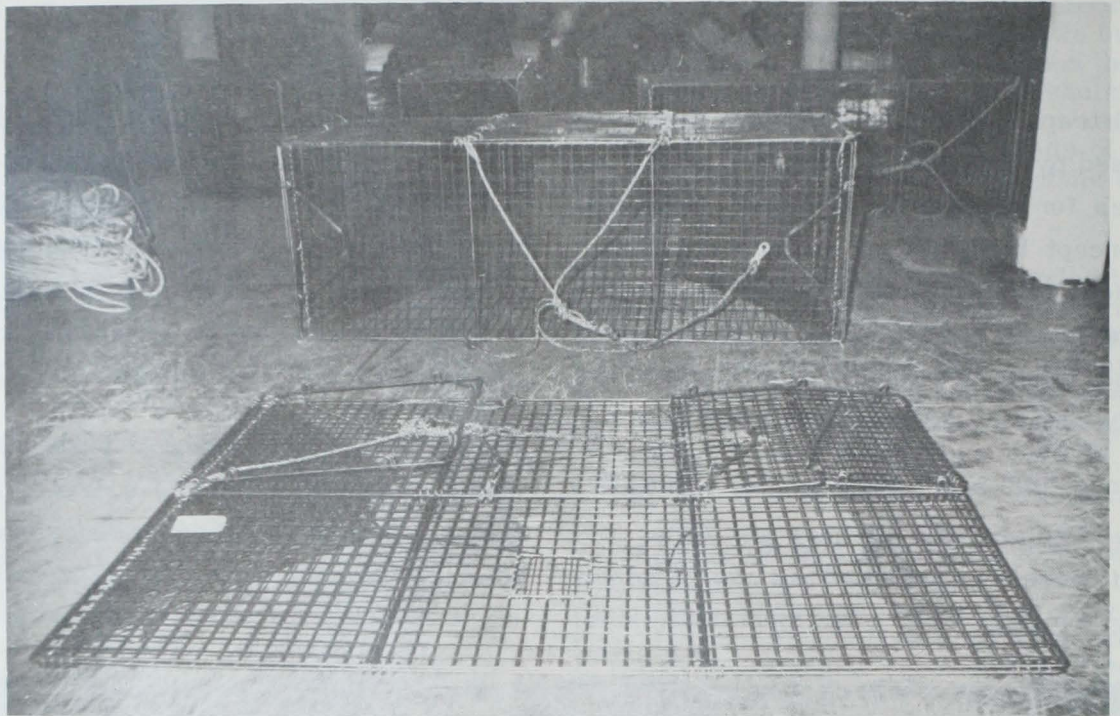


Fig. 2 - The collapsible trap currently used by NMFS is 34 inches by 34 inches by 8 feet long. Steel mesh is 2 inches square to allow small fish to escape. The trap will collapse flat for storage aboard a vessel. All trap parts remain connected, so one fisherman can reassemble a trap in less than one minute.

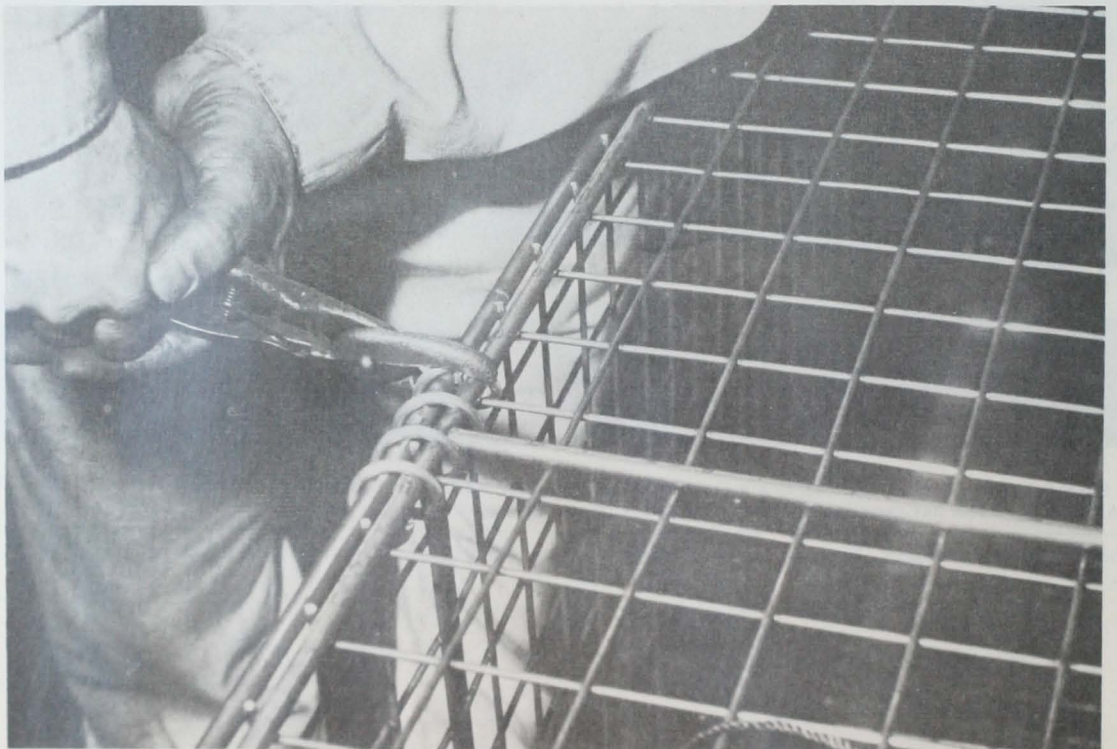


Fig. 3 - Trap side and end pieces are constructed individually, then joined by coiled springs. After each coil is spun into place by hand, the ends are crimped to prevent further movement. The coil also serves as a hinge when the trap is collapsed.





Fig. 4 - A spring-loaded snap hook at the end of the bridle permits the trap to be quickly connected or released from the groundline. Small rope loops (beckets) are placed at intervals (commonly 50 fathoms) in the groundline to space traps evenly.



Fig. 5 - Forty-five ready-to-assemble sablefish traps are shown on the afterdeck of the R/V John N. Cobb. When appropriately stacked for commercial fishing, a smaller vessel could carry 100 to 200 collapsed traps. Once assembled, traps are not collapsed unless the vessel moves to a distant fishing area. Trap strings are usually left to fish whenever the vessel returns to port to unload the iced catch.



Fig. 6 - Chopped frozen herring is placed in a plastic jar for each trap. Hundreds of small holes in the jar and lid permit oils and juices to escape--but prevent the bait from being devoured by sand fleas (amphipods). Bait handling is expedited by placing the jar into the trap loose rather than tying, as is done in other trap fisheries. It is done this way because studies suggest there is no increased catch for tied-up bait containers, and the used jar will fall out of the trap as fish are removed.



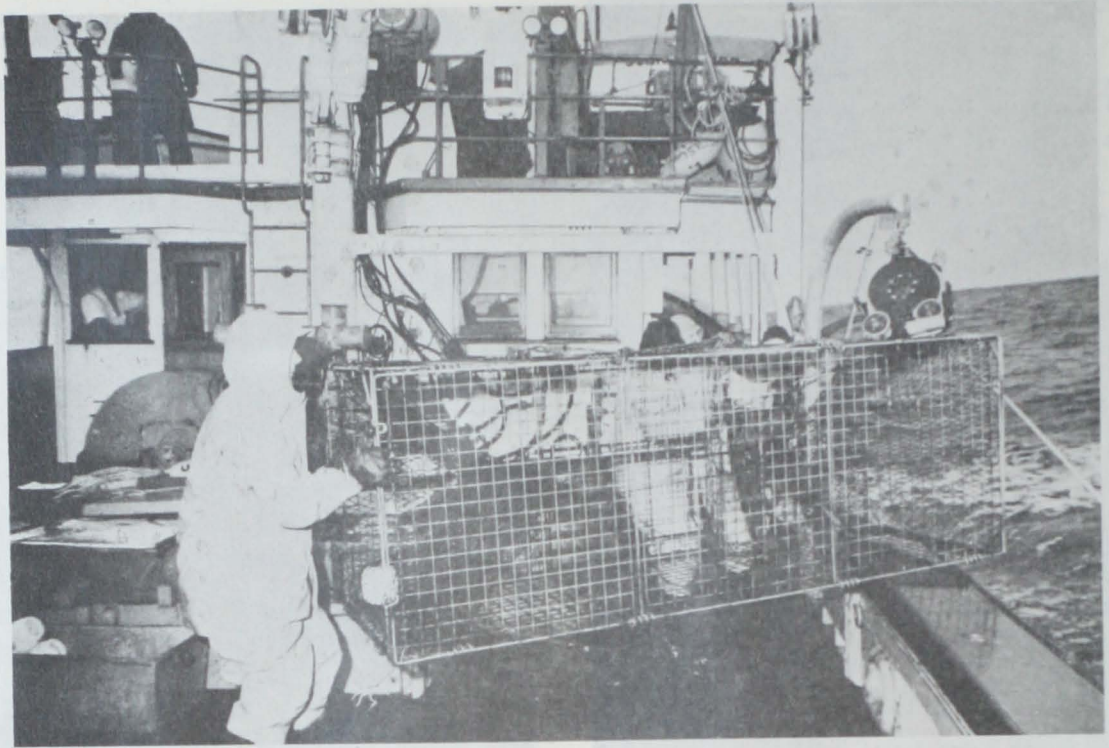


Fig. 7 - Traps are set at intervals along the groundline as it pays out through the hydraulic line hauler. Setting groundline under some tension tends to stretch the line along the ocean floor.



Fig. 8 - During experimental fishing, groundlines up to 600 fathoms long are coiled into a large wooden barrel (tierce) to facilitate handling the single line in rough seas.

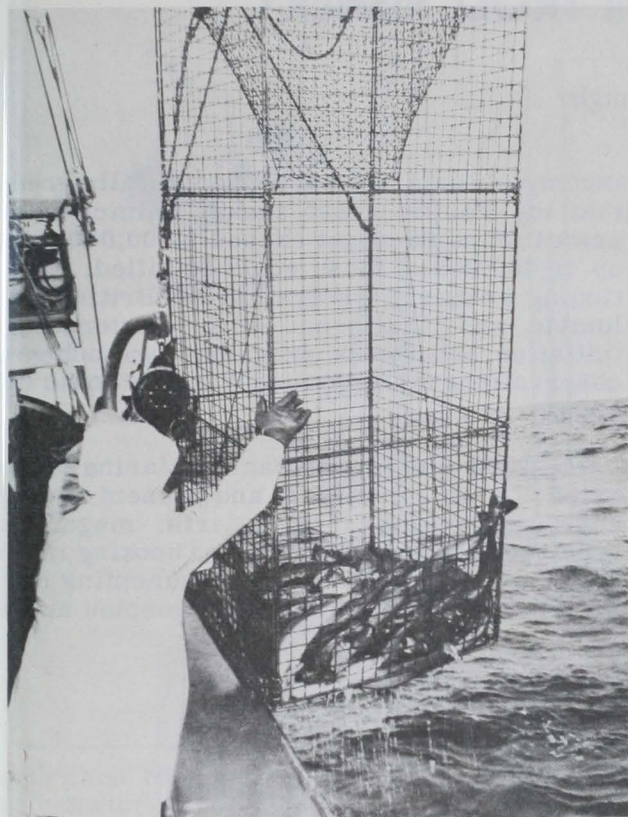


Fig. 9 - Upon surfacing, each trap is unclipped from the ground-line and lifted aboard with the ship's hoist. Note the unique, ungated, tunnel orifice.

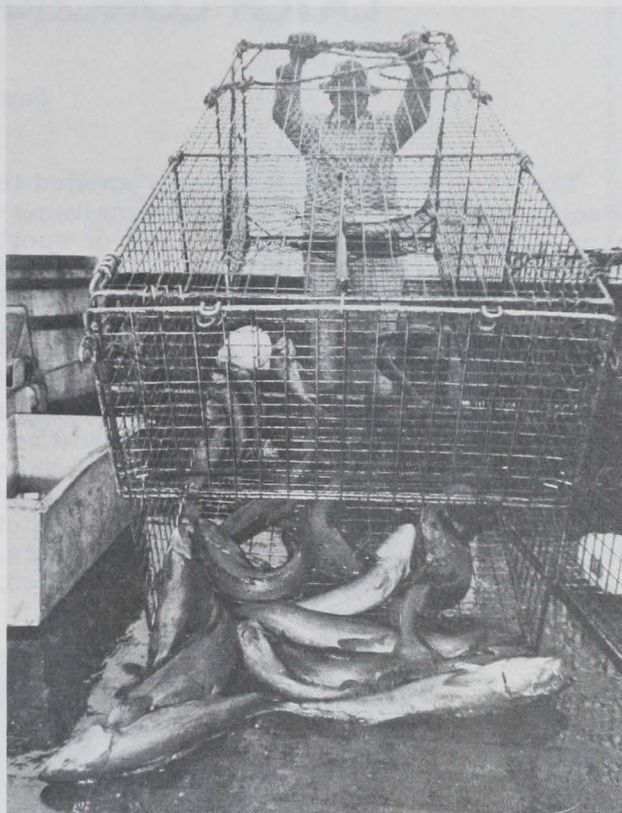


Fig. 10 - The hinged trap end piece is raised to dump both fish and the bait container. Before resetting, a fresh bait jar is placed in the trap.

