

## SURFACE TRAWL FOR CATCHING JUVENILE AMERICAN SHAD

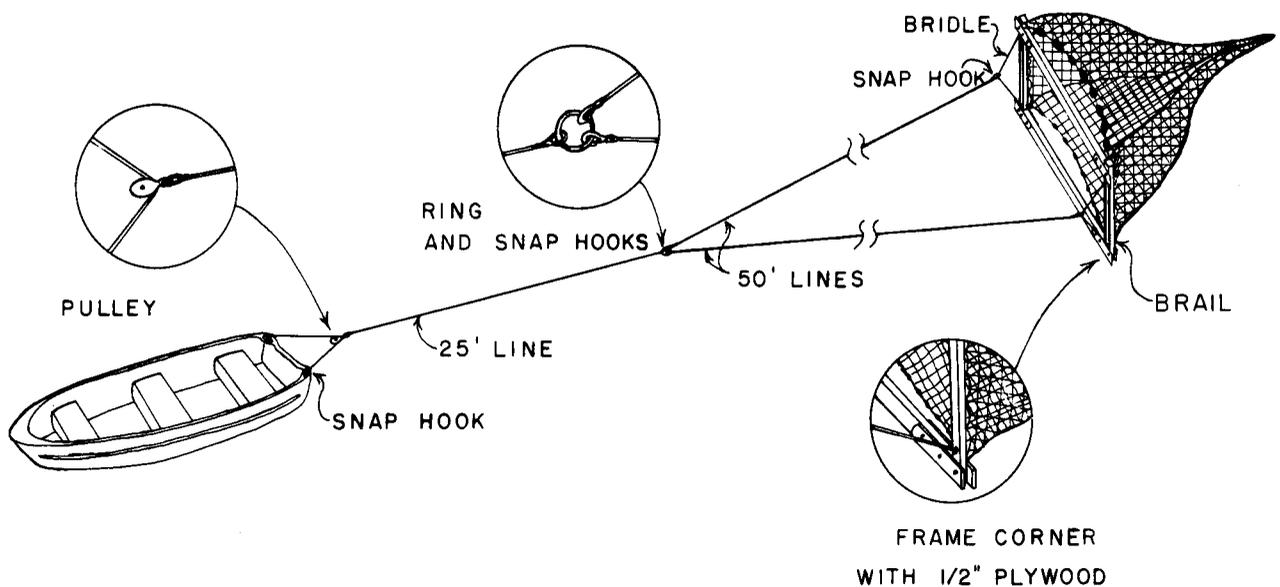
Difficulties that were encountered while collecting juvenile American shad (Alosa sapidissima) in impoundments and estuaries pointed out the need for an easily assembled, maneuverable gear that would permit the rapid coverage of large water areas. The surface trawl shown here has been developed for this purpose. It has been used successfully to collect young shad ranging from 40 to 105 millimeters in fork length, and undoubtedly could be used to collect other small fishes.

This trawl, which is made of 1/2-inch stretched mesh nylon netting with a 4- by 12-foot opening, is 15 feet long and tapered to form a cod end. The 2- by 2-inch wooden brails and 2- by 2-inch by 12-foot boards, reinforced at the corners by 1/2- by 2- by 12-inch plywood strips, frame the opening of the net. The plywood strips are fastened with 1/4-inch brass bolts and extend 2 inches beyond

the end of the 12-foot boards to form a slot for the brails. The boards are joined to the brails with 1/4-inch brass bolts through the plywood strips. The brails are laced to each side of the net. The towing harness and brail-bridles are made of 5/16-inch polyethylene rope. A pulley rides a short line attached to the boat transom corners.

A 16-foot aluminum boat with a 10- or 18-horsepower outboard motor is used to pull the trawl. To operate, the trawl is floated away from the boat. When it is trawled, the net uprights into "fishing" position. At the end of the trawl, the wooden frame tilts backward and the lead-line immediately buoys to the surface with the frame, thus preventing the escape of caught fish.

Some advantages of this collecting gear are as follows: (1) It is easily assembled at the site and can be carried by one man;



(2) the floating quality of the polyethylene rope helps to prevent fouling, and, being colored, the rope is easily seen by boaters and skiers; (3) all lines under tension are behind the motor and operator, and therefore the risk of injury is reduced; (4) trawling assignments can be performed by one man; and (5) the boat and trawl

are maneuverable, and the work space is not reduced.

The trawl and attachments, exclusive of the boat and motor, cost approximately \$65.

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