EXPERIMENTAL FISHING FOR RED SNAPPER.

PART II-THE USE OF MECHANICAL REELS

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INTRODUCTION

In Part I of the report on "Experimental Fishing for Red Snapper," the present methods of the fishery were discussed, and experiments in the use of hoop nets in the fishery were described. (See the February 1948 issue of Commercial Fisheries Review.) Experiments on the use of mechanical reels were made on the sixth cruise of the vessel, Seminole, of Pensacola, Fla., between December 12 and 15, 1945.

EXPERIMENTS WITH SALMON TROLLING GURDIES

So far as can be learned, the installation of mechanical reels on the Seminole was the first to be attempted on the Gulf Coast. This reel is known as a trolling gurdy, and has been in use for a number of years by salmon fishermen of the Pacific Coast. Six of them were installed on the Seminole.

Simply defined, the gurdy is a bronze pulley, or reel, mounted on a power driven shaft, and controlled by a friction clutch to revolve with the shaft, turn freely on it, or to be stopped by a brake. Power may be supplied to the shaft by any convenient method. In this instance, it was chain driven by a 6 horsepower gasoline engine.

FIGURE 1 - SALMON GURDIES & PULLEYS

Single or stranded wire cable of appropriate size and length is wound on the reel. Hooks and sinker are attached to the free end of the cable and led over the side through a sheave mounted above and outboard of the rail. The method of installing a set of three gurdies is shown in Figure 1. Note the gear shift lever of an automobile transmission by which the speed of the shaft may be changed. Reverse is not needed as the weight of the lead sinker pulls the line off the reel.

Each gurdy is individually controlled by a lever. In neutral, the lead carries the line down until near bottom, when the brake is applied to prevent overrunning. When a bite is felt, the clutch is thrown in and the fish hauled rapidly to the surface, where the brake is again applied to avoid snatching the fish into the sheave.

Attention is called to the three sheaves above the gurdies. The center sheave suspended by a spring carries the line from the middle gurdy. When a fish bites, the spring is extended. A safety line connects sheave and pipe support to check a heavy fish. The two sheaves attached to the pipe on either side of the spring serve

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as separators to prevent fouling of the three lines. It will be noted that the cable from the left-hand gurdy passes through the left sheave, over and down through the spring loaded sheave attached to the pipe 6 feet away. The right-hand gurdy is similarly connected. In this way, one man can operate from one to three gurdies, depending on the abundance of fish. However, the limited experience of this investigation indicated that one man rarely could operate more than two gurdies, making it desirable to mount them in sets of two.

A second set of gurdies, inside the rail on the port quarter, is driven by an extension shaft from the forward set. It is not feasible to fish from both sides of the vessel on account of lines on the lee side fouling under the ship as it drifts to leeward.

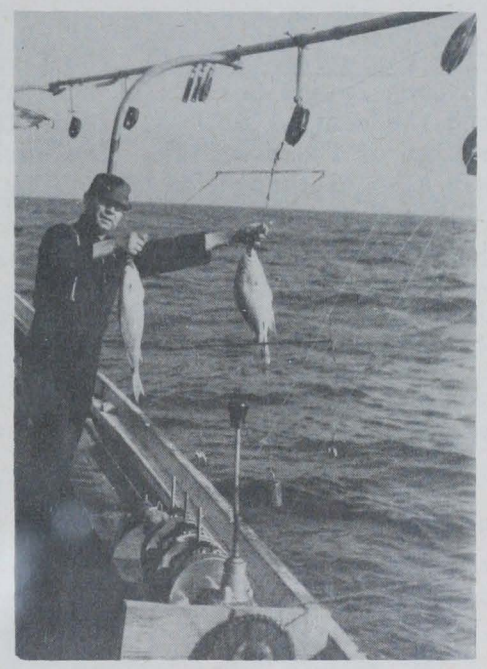

FIGURE 2 - SPREADER BARS & SNOODS

Various methods of attaching snoods to the main line were tried. The one most generally liked was the spreader bar shown in Figure 2. This is a bronze rod 3/8-inch square, and 24 inches long. Two small brass swivel snaps are attached through the center of the rod, one snap hooking into the fishing cable above, the other connecting with another cross bar below. Small swivel eyes are attached to each end of the rod, and to these is hooked a stranded wire snood 16 inches long. A cast lead weight of 7 to 10 pounds is hung from the lower cross bar. As the illustration shows, this rig has four hooks, and there is little danger of fouling when properly handled. Since each spreader is a unit which can be snapped on or off the main cable quickly, any number may be used together.

The observations presented here were made on only one trip from December 12 to 15, 1945. Since no fish were found until the afternoon of the 14th and bad weather forced a return on the morning of the 15th, the total time during which gurdies were used amounted to 4 hours and 33 minutes. Ninety-one snappers and two porgies were taken from a depth of 202 feet.

Forty-two snappers and two porgies were caught with the tandem spreaders illustrated. The nearest competitors were three spreaders which caught 17 snappers, and a single spreader with a catch of 14 snappers.

It would be helpful if direct comparison could be made between catches with gurdies and hand lines. This could not be done because none of the crew had previously operated a gurdy. As may be expected, there were numerous backlashes from reels overrunning, tangled gear in the outboard sheaves, and lost fish from improper manipulation of the clutch. At least a full day is necessary to become acquainted with the handling of the gurdy.

However, it is believed that a fisherman, experienced in using a gurdy, can catch more fish than with a hand line in depths from 30 to 50 fathoms. Fishermen usually find it difficult to hand line deeper than 50 fathoms, but with a gurdy it is practical to fish to at least 100 fathoms. Such an extension in depth is equivalent to opening up new fishing grounds.

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