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CAPTURE TECHNIQUES FOR WRASSE (*Labridae*)

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ABSTRACT

An increasing demand for wrasse used as cleaner-fish for louse control in salmon farming has led to a new fishery for different wrasse species - particularly goldsinny, rock-cook and corkwing wrasse. This paper describes different capture techniques with emphasis on a collapsible pot design.

INTRODUCTION

Since it was discovered that wrasse (particularly goldsinny, rock cook and corkwing) could act as cleaner-fish for lice infested salmon in sea cages (Bjordal 1988; 1990; 1992), the use of wrasse for lice control in salmon farming has increased rapidly. In 1992, 280,000 wrasse were used to clean $8.5 \cdot 10^6$ salmon at 67 fish farms in Norway, and the method is also applied in Scotland and Ireland (Darwall et al. 1992; Treasurer 1993).

Wrasse have so far not been exploited commercially, and have only been fished as no value by-catch, mainly in different gillnet, fyke net and pot fisheries for other species. To meet the increasing demand for live and healthy wrasse, there was therefore a need for a specialized gear for gentle and effective capture of wrasse.

After introductory behaviour studies and trial fishing with existing pots and fyke nets, it was decided to design a special pot construction for wrasse fishing.

POT DESIGN AND OPERATION

Besides the objectives of effective and gentle catch of wrasse, factors as effective making, handling and low on-board storage volume of the pot was taken into consideration. The final design, a collapsible, lantern-shaped pot, is shown in Figure 1.

The pot was introduced for commercial fishing in 1991 (Bjordal et al. 1991), and used with good results during the wrasse season (May - November).

The pots which are baited with crushed crab or mussels are normally set separately at 2-25 m depth. A fisherman typically uses 20-30 pots which are hauled 2-3 times per day as the wrasse tend to enter the pot relatively quickly. Average catch rates are 5-10 wrasse per pot, and catches up to 60 wrasse in one pot have been reported. The pots are most efficient for goldsinny and corkwing wrasse. The wrasse are sold directly to the fish farmers, who stock them with the salmon, normally at a 1:50 wrasse-salmon ratio.

FYKE NETS AND DIP NETS

Besides the collapsible pot, dip nets and fyke nets are the main gears used in the Norwegian wrasse fishery. Dip nets are used to a limited extent as the catch per unit effort is relatively low. The dip net construction is basically a webbing bag mounted to a metal ring (1.5 - 2.0 m diam.). The net is baited, set and retrieved with 5-10 min. soak time.

Fyke nets are more commonly used for wrasse fishing, particularly by fishermen that traditionally have used this method for eel fishing. Different designs are used. Figure 2 shows a construction that has given relatively good catch rates.

CATCH AVAILABILITY

The wrasse season is largely dependent on temperature. Exploratory fishing has shown that good catches in pots are not obtained before late May (W. Norway), while good fyke net catches may be obtained somewhat earlier. This seems mainly to be temperature-related as catches in both gear types are significantly increased when temperature exceeds 9-10°C.

REFERENCES

- Bjordal, Å. 1988. Cleaning symbiosis between wrasses (Labridae) and lice infested salmon (*Salmo salar*) in mariculture. ICES C.M: 1988/F:17. 8 pp.
- Bjordal, Å. 1990. Sea-lice infestation on farmed salmon: possible use of cleaner-fish as an alternative method for de-lousing. Can. Tech. Rep. Fish. Aquat. Sci., 1761: 85-89.
- Bjordal, Å., Brunvoll, L. and Mikkelsen, K.O. 1991. Capture of wrasse. Fiskets Gang, 11 (1992): 15-16.
- Bjordal, Å. 1992. Cleaning symbiosis as an alternative to chemical control of sea lice infestation of Atlantic salmon. In: J.E. Thorpe and F.A. Huntingford (Eds.), World Aquaculture Workshops No. 2, pp. 53-60. The World Aquaculture Society.
- Darwall, W., Costello, M. and Lysaght, S. 1992. Wrasse - how well do they work? Aquaculture Ireland, No. 50: 26-29.
- Treasurer, J. 1993. More facts on the role of wrasse in louse control. Fish Farmer, Jan/Feb (1993): 37-38.

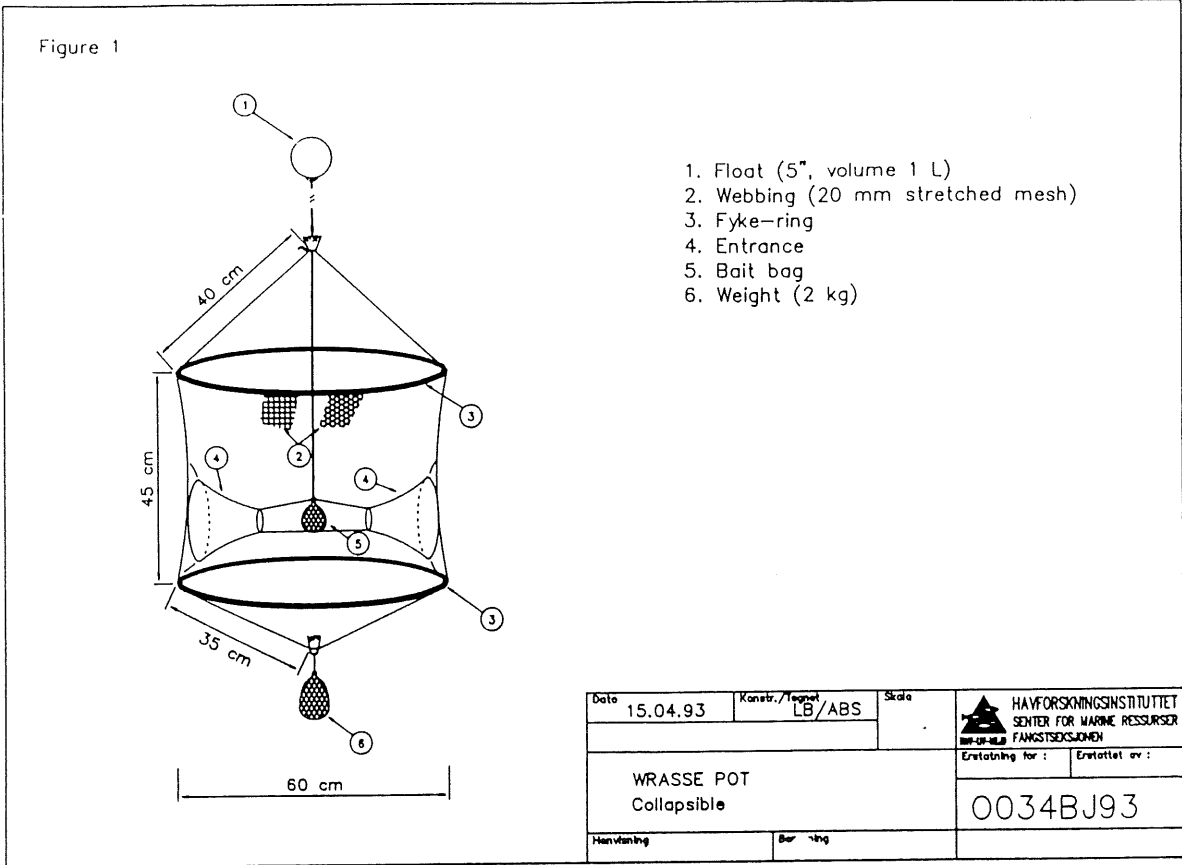


Figure 1. Collapsible wrasse pot.

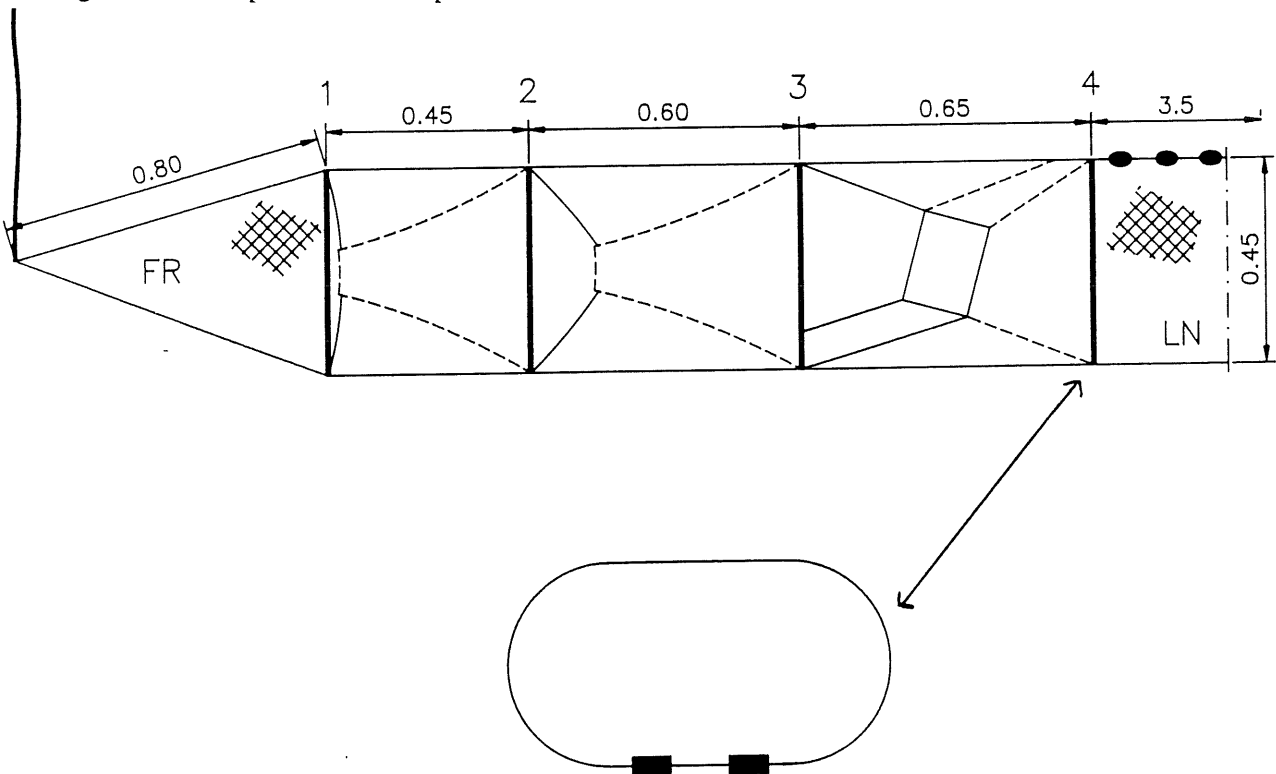


Figure 2. Fyke net for wrasse (and eel) fishing (single fyke and leader-net). FR: fish room, LN: leader net. Measures in m.