

# STANDARD OPERATION PROCEDURE

## PIT Tagging of Lumpfish





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PIT Tagging of Lumpfish – Standard Operation Procedures 10, Version 2, Centre for Sustainable Aquatic Research, 6 pages.

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## NEED

Parasitic sea-lice are the biggest threat facing sustainable salmon production in the world with an annual cost to industry of £500 million.

Using lumpfish as cleaner fish offers an attractive alternative to the use of chemicals or medicines.

For certain studies involving the lumpfish and for broodstock tracing it is important to be able to identify individual fish over a period of time.

Therefore there is a need to PIT tag lumpfish on occasion in order to be able to repeatedly identify individuals.

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## NOVELTY

CSAR are the only facility in the UK involved in the collection of lumpfish broodstock to harvest fresh milt and eggs for incubation. This specialisation results in the need for disease screening, which makes the identification of individual fish essential. In addition CSAR is focusing on Scottish fish for Scottish salmon farms. This unique focus lends itself to study, in which the identification of individuals may be of particular importance.

This SOP guides the user on the best practice methods for PIT tagging lumpfish.

## EQUIPMENT USED

- Disposable gloves
- 2-Phenoxyethanol & beaker
- PIT tags, implanters and reader
- Cool boxes
- Measuring board
- Weighing scale
- Record sheets

## PROCEDURE

Please ensure that all the following work is carried out in RAS B.

### Prior to tagging

- Ensure that all equipment listed above are available.
- Prepare an anaesthetic bath. Fill a cool box (or suitably sized container) with 30 litres of system water. Add 9ml of 2-phenoxyethanol (0.3ml/litre) to a beaker of the same water and stir well to ensure it is well mixed. Add this to the cool box and aerate the water.
- Prepare a recovery bath. Fill a cool box (or suitably sized container) with 30 litres of system water.

### Anaesthetic

1. Transfer the fish to the anaesthetic bath and monitor throughout.
2. Check the fish is appropriately anaesthetised by gently tilting it on its side. If it is slow to right itself it is ready to be measured.

### Measuring and sampling

3. Gently remove excess water from fish (with damp cloth or paper roll),
4. Place on measuring board on tared balance and record total length (to the tip of the tail (mm), weight (g) and sex (based on external characters).
5. Select a PIT tag and check it works with the scanner.
6. Insert the PIT tag into the individual in the marked **X** on the diagram on the left flank. **Please note that the applicator needle should be inserted at an angle of ~25 degrees.**
7. Check the tag has been secured inside and that the tag can be read by the reader. The tag number should be noted and recorded on the record sheet.

### Recovery

8. Place fish in a darkened recovery tank for 10 – 15 minutes to recover.
9. Once the fish is able to hold its own body position and is clearly pumping water through its gills it can be stocked into the appropriate tank and record the destination tank number to complete the record sheet

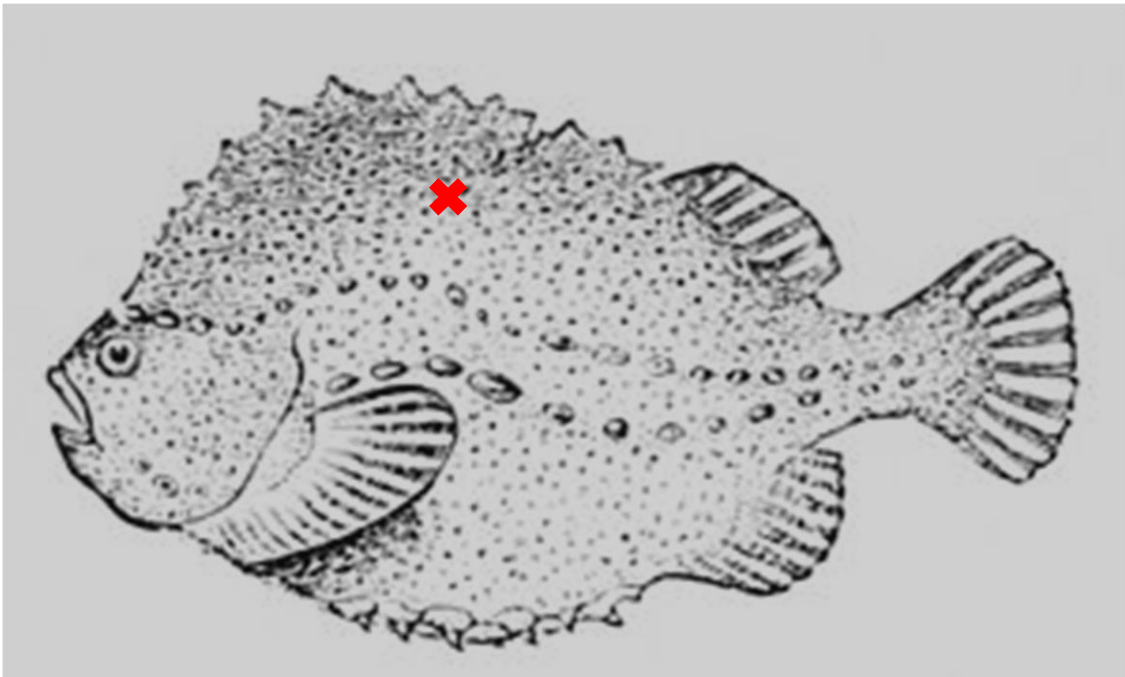


Diagram showing position for inserting the tag.

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