

LARVAL FEEDING TRIALS WITH STRIPED TRUMPETER, *LATRIS LINEATA*

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Abstract

The striped trumpeter, *Latris lineata*, is an esteemed table fish and highly suited to the sashimi market, and therefore holds considerable commercial value. Due to the absence of empirical data on the lifecycle of *L. lineata*, a research project was initiated to investigate the reproductive biology and various developmental (embryonic - larval - juvenile) stages of the species. The baseline information obtained could then be utilised for both assessing the aquaculture potential of *L. lineata*, and for application to the effective management of the wild fishery.

Results to date have shown striped trumpeter to be highly fecund, producing small pelagic eggs (1.31 ± 0.11 mm) with a single oil droplet (0.27mm). Fertilisation rates of approximately 97% have been repeatedly achieved from the artificial fertilisation of hand-stripped ova. Newly hatched larvae are small (3.34 ± 0.26 mm), poorly developed and have a relatively large yolk sac.

Hatchery produced larvae were obtained over two successive breeding seasons (1989 and 1990), and trialled on a variety of larval diets. These included (i) a microencapsulated pelleted diet, (ii) a combined microencapsulated - live food diet (iii) a live food diet consisting of *Brachionus plicatilis* and *Artemia sp.* (iv) a combined *Brachionus plicatilis* and mixed zooplankton diet, and (v) a mixed zooplankton diet.

Growth and development were significantly higher for those larvae fed on the combined *Brachionus plicatilis* and mixed zooplankton diet. Flexion was observed from Day 23 post hatch, and the tail, dorsal and anal fins were developed by Day 44 post hatch. For those larvae fed on *Brachionus plicatilis* and *Artemia sp.* development tended to be suppressed, and by Day 45 post hatch there was no visible sign of flexion. Growth and development of larvae reared on the microencapsulated diet was negligible.

Feeding trials, experimental results and inherent problems will be presented at the Workshop, together with future research directions for the 1991 breeding season.