FIRST EXPERIENCES WITH WRECKFISH CULTURE (Polyprion americanus) IN GALICIA. BEHAVIOUR AND ONGROWING


1. Introduction

Wreckfish culture (Polyprion americanus) is proposed as one of the most viable options within the list of new species to be developed in commercial aquaculture. Its rapid growth, the special characteristics related to its handling, its price on the market and its scarcity along our coastline as well as the genetic homogeneity of existing stocks (Sedberry et al., 1996; Ball et al., 1995), high growth rate during the pelagic stage and the prolonged juvenile growth stage, mean that it ranks among one of the firmest candidates for species diversification for aquaculture in our country.

One of the main problems presented by this species in terms of its culture is the age of first maturation as, in fact, from the pelagic to the benthonic stage, it is associated with the age of first maturation and to physiological changes. Furthermore, in terms of its behaviour, these changes occur when it reaches the 65 cm size and spawning occurs at depths of 45-850 m.

2. Materials and Methods

Experiments on this species have been conducted from the viewpoint of obtaining data on growth and behaviour of adult individuals, in order to create a reproducing stock that would make it possible to obtain viable eggs once first maturation age is reached.

Fish were caught by hook off the Galician coast, located while sheltering under floating objects which, to a large extent facilitated the good conditions in which they were transported to the tank. Once in the tank, they were deoxygenated with oxygenated water and transferred to tanks where they were adapted to captivity.

Once adapted, fish were distributed into two batches, one (A) of which being that of reproducers comprising 10 individuals with an average weight of 70.5±s1.1224 kg was transferred by road to the facilities at the Vigo Oceanographic Centre and stabilised in 120 m³ tanks, where they immediately began to feed. Food was based on a paste (semi-moist feed), as normally used with some reproducing stocks of other farmed species, made at our facilities with fishmeal and oil, mussel and squid, among other components. Fish were sampled (by size and weight) five months later, for which purpose they were anasthetized with phenoxethanol, at a concentration of 0.3 ml/l, for handling. Individuals were marked with microchips for identification and blood samples (gills and tissue tail) were taken for genetic identification.

The other batch of juveniles (B), comprising 12 individuals, with an approximate average weight of 1 kg, was stabilised in a 40 m³ tank of the IGAFAC facilities. The following parameters were recorded on a daily basis: temperature, salinity and oxygen, and on a monthly basis, weight and size samplings were taken, for which purpose they were anasthetized with phenoxethanol.

3. Results

Both catching with hook and transfer and adaptation to captivity do not appear to play a determining role in this species, neither in adult individuals nor in juveniles, as this species presents an extraordinary capacity to adapt to inert food. Wreckfish is a species which, to date, has led to highly favourable expectations in terms of farming. Data on the growth of wild individuals adapted to captivity are extraordinarily good and mortality has been zero throughout this period. No type of pathology has been noted and, although handling is complicated, it is practicable with the anaesthetized individuals. Those respond very well to anaesthesia and to subsequent recovery.

The peak temperature for ingestion appears to be from 14°C. From that temperature and beyond, both juvenile and adult individuals practically stop eating, and recover the habit as the temperature rises.

4. Acknowledgements

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5. Conclusion

The excellent results obtained in ongrowing, management and behavior, and the possibilities of obtaining viable spawns make that kind, one of the most promising candidates for industrial cultivation.

References