REPRODUCTION OF BLACKSPOT SEA BREAM, *PAGELLUS BOGARAVEO B.*, IN CAPTIVITY

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Introduction

Blackspot sea bream is one of the species to which more research effort has been devoted during recent years in Spain. It is also probably one of the species which has had a greater demand in the aquaculture sector.

Due to its behavior and biological characteristics (Sánchez 1982; Krug 1990), this is one of the species with more possibilities to be repopulated along the Spanish coast. Recent information obtained regarding this aspect shows us the interest manifested by some Spanish autonomous communities for this species, which has a great socio-economic importance, to become selected for repopulation programs which can solve the current overexploitation state of some fishing grounds.

One of the current key factors for the development of this species culturing is reproduction control. This aspect had not been treated before due to the fact that the scarce number of functional breeding stock made it very difficult to have readily available individuals for manipulation.

Material and Methods

For this species culture two stocks were used: one from the natural environment and one born in captivity, with which there was an attempt to close the production cycle.

Originally, the stock which was housed in $32m^3$ tanks (years 1991-1999) was formed by individuals from the natural environment. This stock of 50 individuals underwent a controlled thermoperiod (14°C) during the whole year for a 4-year period. During this period no lays were recorded. It also underwent an induction with LHRHa with progressive doses of 5,10 and 15µg.kg^{-1} (Peleteiro *et al*. 1997) but a positive answer was not obtained. The first lays in captivity were obtained in 1997, once the fish was put again at ambient temperature.

This stock was mixed later (years 1999-2001) with a similar stock of 60 individuals. They were housed in a $120m^3$ circular tank in which the first large-scale lays were obtained.

The lot formed by born in captivity individuals which had started to lay at age four (Peleteiro *et al.*, 2000), suffered a great perivisceral fattening (12.5% fat) due to an improper feeding, which caused the suspension of the lays.

Results

Figure 1 shows the total eggs production from 1999 to 2002. Apart from the biological material needed to carry out the necessary experiences for the improvement of the culturing, feeding and other techniques, the excess material was delivered to a private company for its exploitation.
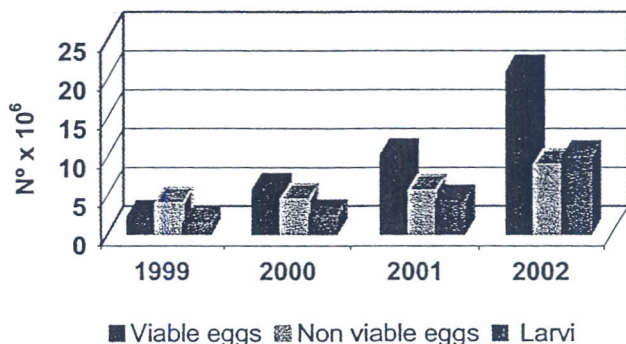

■ Viable eggs ▨ Non viable eggs ▥ Larvi

Fig 1. Total egg production from 1999 to 2002

The morphometric characteristics of eggs and larvae were determined, as well as the necessary number of eggs.cc^{-1} for the assessment of lays per volume. The period of natural lay in captivity was determined. This period covers form the beginning of February to the end of May with some variations depending on the year.

References

Krug, H.M., 1990. The Azoream blackspot sea bream, *Pagellus bogaraveo* (Brunnich, 1768) (Teleostei, Sparidae). Reproductive cycle, hermaphroditism, maturity and fecundity. CYBIUM.1990. vol 14 (2): 151-159.

Peleteiro, J.B., Olmedo, M., Gómez, C. & Álvarez-Blázquez, B., 1997. Study of reproduction in captivity of blackspot sea bream (*Pagellus bogaraveo* B.). Embryonic development and consumption of vitelline sac. ICES CM 1997/HH:19.

Peleteiro J.B., M. Olmedo and B. Álvarez-Blázquez. 2000. Culture of *Pagellus bogaraveo*: Present knowledge, problems and perspectives. CIHEAM, FAO. Cahiers options méditerranéennes, Vol. 47: 141-151.

Sanchez, F., 1982. Preliminary fishing and biological data about red sea-bream (*Pagellus bogaraveo* B.) in the Cantabrian Sea (N.Spain). ICES CM 1982/G:39.