Some aspects on the fecundity and reproduction of the sand sole, *Solea lascaris*, in Iberian coastal waters

**Introduction**

The sand sole *Solea lascaris* is commercially important in the Iberian fisheries as it reaches high values in the market. Only a few studies were directed to the reproduction and fecundity of this species in Iberian waters. This work aims to collect information and compare it using the same methodology.

**Results & Discussion**

Sex ratios by length-class showed:
- Male dominance under 25 cm total length and females dominance over 25 cm total length.

The length at first maturation for females was:
- 13.4 cm in the north of Portugal,
- 21.8 cm in the southern Portuguese coastal waters, and
- 21.1 cm in the southern Spanish coast.

The reproductive season occurred between February and September.
The analysis of the histology of the ovary, not only indicated determinate fecundity but also multiple spawning during the reproductive season.

Potential fecundity was estimated in:
- 155226±71175 oocytes/female in the north and
- 87839±56046 oocytes/female in the south.

These values are significantly different (F=7.58, p=0.004).

It was possible to estimate the fecundity for Cadiz area because there were sufficient data.

The fecundity-length (cm) relationship is:
- Fecundity=28.301 total length
- Fecundity=36.999 total length

The fecundity estimates for the northern area were lower compared to the south and to other studies (Deniel, 1984; Dinis, 1986). This could be related not only to the populational characteristics but also to the way mature females were obtained. In the north they were obtained from fishing vessels, after heavy manipulation with probable oocyte losses whereas in the south they were obtained directly from commercial fisheries in the North and South of Portugal as well as the Bay of Cadiz, South of Spain, in order to study some aspects of the reproduction and fecundity of this flatfish.

**Material & Methods**

867 sand sole (*S. lascaris*), were collected between June 1998 and August 1999 from commercial fisheries in the north and south of Portugal as well as the Bay of Cadiz, South of Spain, in order to study some aspects of the reproduction and fecundity of this flatfish.

Standard histological methods were used replacing paraffin by Leica historesin as mature ovaries are very friable.

The length at first maturation was obtained with asymmetrical maturation ogives computed with the Astudillo & Sanchez (1989) method.

Fecundity was accessed by the stereological method (Laird & Priede, 1986).

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