

Bulent CIHANGIR

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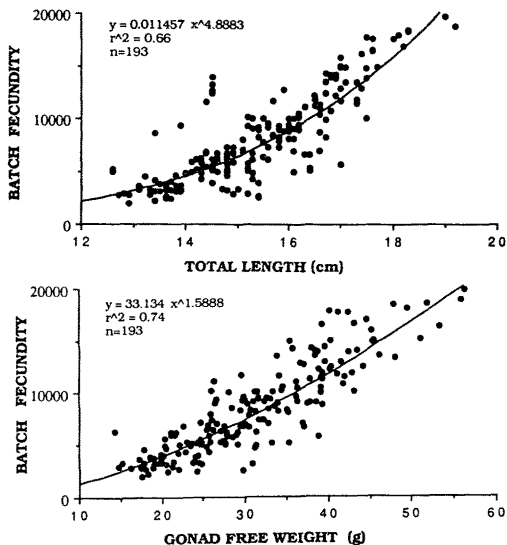
Pilchard's (*S. Pilchardus pilchardus*) batch fecundity was determined for the first time in the Atlantic, Iberian Peninsula by PEREZ *et al.* (1989). In this study, the Mediterranean pilchard's *S. pilchardus sardina*) batch fecundity is presented.

Pilchard (*Sardina pilchardus*) is a serial spawner with protracted spawning seasons and a high number of spawnings per year (BLAXTER & HUNTER, 1982).

The Mediterranean pilchard's reproduction process on the Turkish Coasts of the Aegean Sea takes place between the months of September to May. According to the sexual maturation index (Gonadosomatik Index), the maximum reproduction period occurs during the months of December, January and February in which sea water temperatures reach to annual minimum (CIHANGIR, 1991).

Ovary of 193 female pilchard in hydrated and advanced condition were collected on the Turkish Aegean Coasts by purse-seiner fishing boats during the peak of the spawning months in 1989-1990.

Fish preserved in a 4% buffered formaldehyde solution (HUNTER, 1985), were analysed in the laboratory for fecundity determination. Hydrated and Oocyte Size-Frequency methods were applied on pilchard ovaries. Ovaries were examined for presence of post ovulatory follicles. Ovaries which contain post ovulatory follicles were not used for batch fecundity estimations due to some oocytes being already released. The method is described in HUNTER *et al.* (1985).



In this study, batch fecundity is found to be 2000-3000 eggs/female for the lengths of 12-13 cm and 10000-15000 eggs/female for the lengths of 16-17 cm. The highest batch fecundity is 20000 eggs/female in 19.1 cm individual. Batch fecundity, the number of eggs released per spawning event, of pilchard increases with fish size. The relationship of batch fecundity and total length, ovary free weight are shown in the figures.

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