

Presence of some teleosteans species and meteomarine conditions in Lesina Channel
Preliminary note

M. IANNIBELLI*, V. MAROLLA*, G. SPEZIE** and P. VILLANI†

*Istituto di Tecnologia della Pesca e del Pescato, C.N.R., MAZARA del VALLO (Italia)

†Istituto per lo Sfruttamento Biologico delle Lagune, C.N.R., LESINA (Italia)

**Istituto di Meteorologia e Oceanografia, I.U.N., NAPOLI (Italia)

In the period September, 1989 - September, 1990, a research was carried out aiming at the individuation of the influence of meteomarine factors on the ascent of fish fry in the Lesina Lagoon.

The sampling station was established in the channel of Acquarotta, one of the two communications with the sea, situated northwest of this brackish lagoon (MAROLLA, 1989 L. In the course of this research specimens of different genera were captured, besides those belonging to Mugilidae that have represented most of the captures. Species identification was carried out following TORTONESE (1970, 1975) and RANZI (1933).

In particular, the presence of juvenile stages of *Sparus aurata* L. has been noted. They were captured in a more numerous group (14 specimens) under the following conditions of marine parameters: the water salinity presented the lowest value in the whole measuring campaign (S=22), the temperature was 15°C, for the current (in outgoing flow) values of medium-high velocity were recorded, while the dissolved oxygen was 15.1 mg/l. In another case of capture concerning this species, the salinity was 34 ppt, while the temperature and oxygen values were lower (13°C and 14.3 mg/l) compared to the preceding case and the flow incoming. For this species, also the few data at disposal can give a rather significant idea of its behaviour while migrating, as the displacements are noted in presence of water showing values of lower salinity and higher temperature. On the contrary, the concentration of dissolved oxygen does not seem to be a determining factor. However, in conditions of over-saturation for the given temperatures, the inversion of the flow direction (outgoing in the first case and incoming in the second), may have had instead a certain influence on the specimens' density in the two groups for the well-known phenomenon of fish stream tropism.

Moreover, the presence of Clupeids was noted and precisely a group of 205 specimens of *Sardina pilchardus* Walb, in hydrological conditions of S=34, T=13°C, ph=8.2, and with values of dissolved oxygen rather elevated (13.6 mg/l) with outgoing flow.

As far as *Atherina boyeri* (Risso) is concerned, this species seems to aggregate and move in conditions of not high salinity (31 high temperature (24.8°C) and medium-low velocity of the current (12 cm/sec) as regards the whole sampling period.

Concerning the two specimens of *Diplodus sargus* (L.) and *Lithognathus mormyrus* (L.) captured, it is not possible to get any information from the few data at disposal. It can be noticed that the above species are found in very similar hydrological conditions, except for the current, in a phase of outgoing flow for both cases, but resulting to be very weak (4 cm/s) for the capture of the *Diplodus*, while on the other hand, quite elevated (41 cm/s) in the case of the *Lithognathus*.

The captured specimens belonging to the families of Gobiidae, Syngnathidae and Blenniidae are still in phase of identification.

Finally, for Mugilidae, besides the fish fry we deal with in a separate study, it is to be noted the presence of a group of adult specimens of *L. saliens*, contemporary with the recording of the highest temperature values of the day (30°C) and with salinity and velocity of the current of 30 and 4 cm/s respectively, in the only case of sampling with incoming flow.

REFERENCES

- MAROLLA V., 1989.- La Laguna di Lesina: condizioni chimico-fisiche durante l'anno 1977. Ist.Sfrutt.Biol.Lagune CNR Lesina, Rapp. 1:14 pp.
RANZI S., 1933.- Uova, larve e stadi giovanili di Teleostei. Sparidae. Fauna e Flora del Golfo di Napoli, 38 Monografia : 332-382
TORTONESE E., 1970.- Osteichthyes. Fauna d'Italia, 10 : 565 pp.
TORTONESE E., 1975.- Osteichthyes. Fauna d'Italia, 11 : 636 pp.