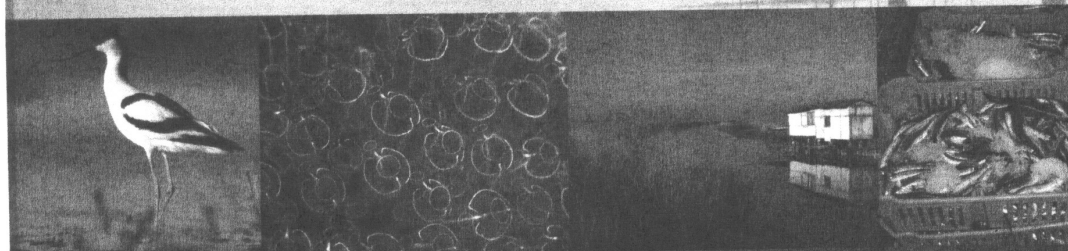
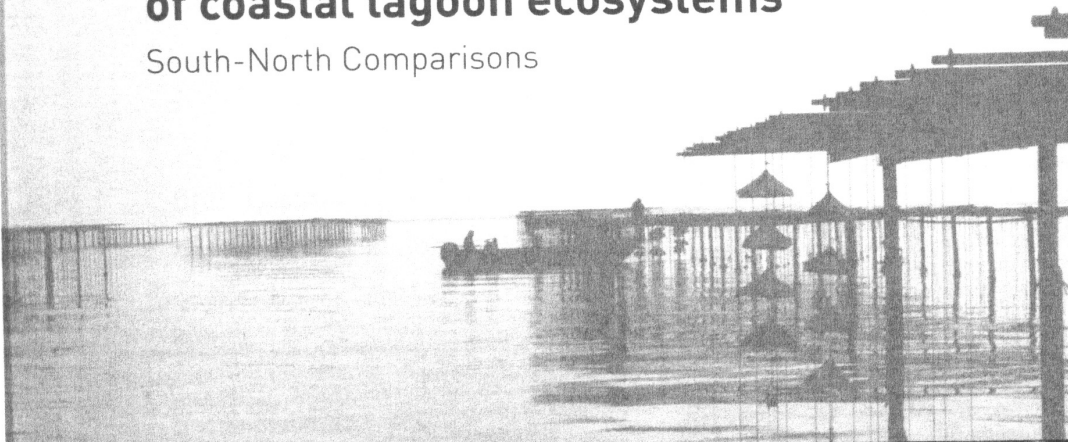




European Conference on Coastal Lagoon Research
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Research and management for the conservation of coastal lagoon ecosystems

South-North Comparisons



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**Recherche et Gestion
pour la conservation
des écosystèmes lagunaires**

Comparaisons Nord / Sud

Population structure and reproductive ecology of the Mediterranean killifish *Aphanius fasciatus* (Nardo, 1827) in the Venice lagoon

Structure de la population et écologie de la reproduction du cyprinodonte méditerranéen *Aphanius fasciatus* (Nardo, 1827) dans la lagune de Venise

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The Mediterranean toothcarp *Aphanius fasciatus* (Nardo, 1827) is a small killifish, inhabiting the central-eastern Mediterranean area. It is an "estuarine resident", listed in the Annex II of the Habitat Directive 92/43/CEE. Previous investigations on the fish assemblages of the shallow waters of the Venice lagoon showed that this species is mainly found in saltmarsh systems, contributing with high abundance to the typical fish fauna of these habitats. This work aims to provide some baseline information on the population biology and reproductive ecology of the species in the Venice lagoon, in the framework of a wider project on the assessment of its habitat use, ecological requirements and life cycle adaptations, with the final goal of habitat and species conservation. Fish were collected monthly, from February to November, in twenty sampling stations located in saltmarsh systems of the North and Central basins, using a small beach seine net. Data collected included abundance, frequency length distribution, sex ratio, age composition and reproductive investment. Main environmental parameters (such as water temperature, salinity and DO) were also measured to quantitatively assess the abiotic characteristics of the sampled habitat. From February to June, the population was composed of both mature males and females, whose minimum size was well below the 20 mm in SL, with a sex ratio often biased towards males. First results indicate a short life cycle, with age groups 1 and 2 being the most represented in the population. GSI values increased from late March until May-June, reaching their peak at late May: the reproductive investment was positively correlated to both male and female body size. The inspection of GSI values revealed an extended breeding season over the warmer months. Results were discussed in the light of comparisons with other Mediterranean populations of the species, and in the perspective of future line of research on this species.