

Rehabilitation of Open Waters within the Albufera of Majorca (selective criteria)

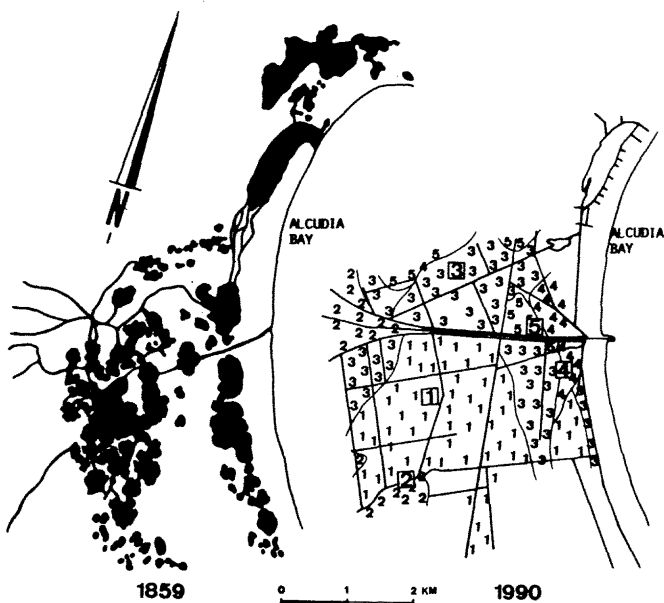
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In 1988 a Natural Park was declared in part of the Albufera region. At present only 3% of the surface area is open water whereas last century water covered 30-40%. In consequence the food resources and habitat of aquatic species have been greatly reduced and the landscape is very homogeneous with emergent macrophytes.

In order to rehabilitate the area we propose an increase in the volume of water which will thus have a longer residence time within the Park.



A plan for use and management (MAYOL 1989) and limnological criteria for the rehabilitation of the Park (MARTINEZ-TABERNER et al. 1990) have been published. The present work discusses one of the criteria in the latter.

By predicting the distribution of submerged macrophytes we can determine the aquatic zones suitable for rehabilitation. We hope to guarantee the continuing existence of aquatic communities that are present but poorly represented and to rehabilitate areas for the reintroduction of those species which have disappeared (BARCELO-COMBIS, 1879-81; MARTINEZ-TABERNER, 1986; MARTINEZ-TABERNER & PERICAS, 1988).

From the existing information on the physico-chemical dynamics of the water and from the environmental tolerances of species we can predict the most likely species in the zones of the Albufera which were previously open waters (see map of 1859). Having established this prediction we can determine the criteria for the selection of new environments within the Natural Park in the following way:

a.- On the vegetation map of the Albufera (FORTEZA & MARTINEZ-TABERNER, 1987), ponds for each community of emergent macrophytes will be included (see map 1990) i.e. a ponds within *Soncho-Cladietum marisci* (1), *Typho Schoenoplectetum glauci* (2), *Scirpietum maritimi-litoralis* (3), *Juncion maritimi* (4) and *Artrocnetum fruticosi* (5).

b.- The potential vegetation map is superimposed on the map with the planned ponds (see map of 1990 with squares) and we will eliminate those that offer the same potential vegetation and those that already exist.

Thus we will obtain not only food resources and new habitats but these resources will also be sufficiently diverse to ensure the existence of many different species. It could be thought that it would be better to invest in a single lagoon but this would only provide a homogeneous change within the Albufera and would only serve to maintain many individuals of very few species. Furthermore this would homogenize the present physico-chemical gradient of the waters which is the most important characteristic of the Park, since it allows a wide diversity of environments and species within a small area.

References:

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