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ABSTRACT BOOK



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surnatants (3/4 individuals pools). Characterization of ChEs was carried out using different specific substrates and model inhibitors.

The effect of the adaptation at different salinities on ChEs was evaluated. An *in vitro* experiment was performed in order to evaluate the inhibitory activity on ChEs of an insecticide carbamate (Methomyl).

Results showed that muscle was the tissue with the highest acetylthiocholine iodide (ATChT) hydrolysis rate. The analysis of kinetic constants K_m and V_{max} indicated ATChT as the substrate with highest affinity. The outcome of experiments with model inhibitors suggested that acetylcholinesterase is the prevalent form of ChEs. Methomyl inhibited ChEs at a μM range. The adaptation at different salinities had no significant effects on ChEs normal range activity levels. Results of the present work showed that *A. fasciatus* can be considered as a promising candidate sentinel model to be included in monitoring programs of transitional environments.

S5.20 The Lagoons of Corfu: multiple impacts, conservation strategies and economic exploitations

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In the Island of Corfu there are seven lagoons which have different biological and chemical characteristics and also different impacts and human interventions. In this research, a preliminary description of the lagoons is reported using available data from the literature. The lagoons of Corfu have been poorly studied from the point of view of ecological functions and biodiversity. Specifically the lagoons are: 1. Lagoon Korission, it is the largest lagoon of Corfu. Located in the southwest of the island has an area of 600 hectares approximately. Works like a fish farm and is protected area Natura 2000. The main intervention of the lagoon is the increasing of the human activities in the area of the lagoon; 2. Lagoon Chalkiopoulos, the second largest lagoon of Corfu, it has a total size of 180 hectares. There was a fish farm fifteen years ago. It is estimated that the last seventy years the lagoon has lost about 1/3 of its extent. This lagoon has received the most and the major intervention is the reduction in the area in order to create the Airport of Corfu; 3. Lagoon Antinioti, it is located northeast of Corfu and it has a total size of 100 hectares with the marshland Kounoufadi which is part of the lagoon. Works like a fish farm and is included in the protected areas Natura 2000. The main interference of the area has been done on the part of the marshland Kounoufadi where twenty years ago have been put polders by the municipality of Corfu in order to build a Municipal Stadium; 4. Lagoon Alykes Lefkimmis, it is a small lagoon of



about 30 hectares in the southeast of Corfu. Along with former Alykes Lefkimmi is included in the protected areas Natura 2000. There is not significant human intervention in the lagoon in addition with the former Saline of Lefkimmi (which forms a single ecosystem) for which the area has decreased due to residential use. Three small lagoons in the area of Erimitis which is in the northeast part of Corfu, there are 3 small lagoon ecosystems (Akoli, Vromolimni and Avlaki) located on the northeast coast of Corfu. Each of these has a size of 2-4 hectares. The most remarkable is that the lagoon Akoli in the past served as a fish farm and had an artificial orifice communicating with the sea. Such abandonment of this orifice it is noticed a decrease in the depth of the lagoon.

S5.21 Ecological restoration of coastal lagoons; prediction of ecological trajectories and economic valuation

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The seven lagoons of the Palavas complex (S. France) were exposed to nutrient over-enrichment during at least four decades mainly from the effluents of the WWTP of Montpellier. In order to improve the water quality of the lagoons this WWTP was renovated and upgraded and, since the end of 2005, its effluents are discharged 12 km offshore into the Mediterranean through a blast pipe (total investment 150 M€). We studied the possibilities of this lagoon to recover more oligotrophic conditions and the spontaneous recolonisation of the associated seagrass communities. While, the phytoplankton communities respond quickly to the reduction of the nutrient loading, the sediments have accumulated large amounts of N and P, which delays the recovery of a good ecological status. In our combined ecological-economic study we used a focus group of experts (i) to predict ecosystem trajectories for the current management (passive restoration) and (ii) to design additional measures applied in a two-step approach for accelerating the process (active restoration). Only for the least impacted lagoon Ingril, the passive restoration will yield good result within a reasonable time frame. For the most impacted lagoon Méjean, we studied the willingness to pay, by local populations and tourists, for the extra costs related with the active restoration. We used a multiple contingent valuation (MCV) considering 6 different management options. Three levels of recovery of seagrass meadows were combined with different options for access (status quo, increasing access, increasing access with measures to reduce disturbance). We also considered that increasing seagrass meadows represent a trade-off for the emblematic flamingos, while other bird species (ducks, swans, herons), emblematic seahorses