

## SUMMARY

The present Doctoral Thesis makes the first study on the growth of epibionts in the nets of marine farms of the Western Mediterranean. Also, this Doctoral Thesis is a novel contribution in the field of marine biofouling by collecting information not only taxonomically but also the ecology of the actors and factors involved. The objective of this study is to know the most common epibionts in Mediterranean marine aquaculture nets and their relationship with depth, season, situation on the farm and the response of the epibionts to the presence of a commercial antifouling paint with Based on cuprous oxide, performing for this purpose an exhaustive statistical analysis.

To this end, 192 polyethylene sheets of 400 cm<sup>2</sup> were placed on a Spanish southeast sea farm, specifically in the municipality of Villajoyosa (Alicante), at two different depths, with different orientations and antifouling paint and without it. The plates were collected in four periods of the year: in early spring, early summer, early autumn and the last, after 1 year submerged. Macroscopic species were studied at the taxonomic level and the data were treated with the Stathgraphics Centurion XVI.II and Promov software 15,02 to perform the relevant statistical studies.

Nothing has been written before this work on the impact of these paintings on the colonies of the epibionts studied in this thesis, although it has been verified with this thesis that antifouling painting is an effective technique for the fight against marine epibiontes, And that works in addition to any depth and with any orientation. Also, it has been corroborated that the plates were covered more of organisms ,according to the time of exposure in the sea, It had or not antifouling painting,The chronological order of invasion of the plates by the epibionts has also been verified. In addition, the sheets that were located in the discharge area of the fish facility and under the current, were plates populated with a greater number of epibionts, regardless of the depth, orientation or presence of the antifouling paint.

