8TH IGZEGAR ABSTRACTS

8th International Congress
on the Zoogeography and Ecology of
Greece and Adjacent Regions

HELLENIC
ZOOLOGICAL
SOCIETY

Kavala
17-21 May 1999

NAGREF
NATIONAL AGRICULTURAL
RESEARCH FOUNDATION

published by
Hellenic Zoological Society ©1999

SEAONAL CHANGES IN ABUNDANCE AND SPATIAL DISPERSION OF THE INFRALITTORAL HARD SUBSTRATUM MEGAFAUNA IN THE NORTH AEGEAN SEA

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This study presents the results of a work carried out for the first time in the North Aegean Sea, on the seasonal variation of the abundance and spatial dispersion of the following organisms: *Agelas oroides* (Schmidt, 1864), *Axinella canabinna* (Esper, 1794), *Axinella verucosa* (Esper, 1794), *Displastrella bistellata* (Schmidt, 1864), *Dysidea fragilis* (Montagu, 1818), *Caryophyllia smithii* (Stokes and Broderip, 1828), *Halocynthia papillosa* (Linnaeus, 1767), *Flustra sp.* and various other encrusting bryozoan species. These organisms were classified, after preliminary sampling, among the most characteristic inhabitants of hard substrate infralittoral communities (lower part, 15 metres downwards). The data were collected using an underwater camera and the randomly distributed squares method was applied. In each case the optimum square size and number was chosen.

These data were used to calculate the mean abundance (number of individuals / m^2); the ANOVA and the Fisher PLSD test were used to estimate any seasonal change analysis of variance. The Morisita's index of dispersion was also calculated. In order to determine the significance of its values a $\div^2$ test was used.

This analysis showed that the most of the above organisms were randomly distributed in all four seasons, with the exceptions of *Agelas oroides* and *Caryophyllia smithii*, which showed a different pattern and their distribution was contagious. The spatial dispersion of the encrusting bryozoan species was also contagious during summertime, but it was random during the other seasons. Finally, in the case of *Halocynthia papillosa* a uniform distribution was observed. Concerning the abundance of the examined organisms, a general gradual decrease was observed towards the summer, especially in the case of *Caryophyllia smithii*.