

Contribution to the study of marine flora of Pagassitikos Gulf and  
of N. Sporades islands, Greece.

S. Haritonidis, K. Tzavellas and I. Tsekos  
Botanical Institute, University of Thessaloniki,  
Thessaloniki Greece.

Summary: This study attempts to complete the knowledge we have so far obtained about the marine flora encountered in Pagassitikos Gulf and N. Sporades islands. About 100 taxa were established in these biotops. The biological forms, the type of flora and the floral elements were also defined and have indicated that the mediterranean and subtropical species prevail in Pagassitikos, while there is a dominance of the subtropical-atlantic species on N. Sporades islands.

Résumé: L' étude tâche de compléter les connaissances qu' on a en jusqu' aujourd' hui sur la flore marine de Golfe de Pagassai et des îles N. Sporades. Chez les biotopes examinées s' est trouvé un nombre de 100 taxa. Les formes biologiques, le type de la flore et les éléments chlorotiques sont aussi déterminés; les espèces méditerranéennes et sous-tropicales dominant chez le golfe de Pagassai tandis que les espèces sous-tropicales atlantiques dominant aux N. Sporades.

The marine flora of Pagassitikos Gulf and of N. Sporades islands (Skiathos and Skopelos) has occasionally been studied by several researchers (MILIARAKIS, 1887, DIANNELIDIS 1935, 1948, 1953, RECHINGER 1942). Our purpose is to try and complete any knowledge on the marine flora encountered in Pagassitikos Gulf and on N. Sporades islands. The completion of the study has taken on particular significance after the decision the Greek government has made to create a submarine-marine park on N. Sporades.

Sixteen (16) biotops were selected from all the coasts around the infralittoral zone. Five drawings were attempted with the help of a special boat at the depths of 20-45 fathoms inside Pagassitikos Gulf.

The biological forms showed the presence of annual and perennial types of algae. A marked predominance is evident in the representatives of semiphanerophyceae and semicryptophyceae. Several Phanerophyceae not existing in other biotops of the Aegean Sea are also noted here (HARITONIDIS 1978). The ratio of Rhodophyceae to Phaeophyceae (R/P) has determined the type of marine flora up to the present day. Some researchers have been assessing the flora of different biotops for over 50 years now based on the value the relation yielded every time now Cheney (1977)

in order to define the type of flora, has discovered a type including all three classes of marine algae (C+R). According to Cheney's method the type of flora for Pagassitikos and N. Sporades is more mixed than northern (values 2,6-3,3). An exception to this seems to be the biotope of Ag. Giannis which according to value 2 belongs to the temperate or cold-water type. The comparison with the western Mediterranean, the Adriatic and other regions is extremely characteristic since all values in these biotopes are greater than 3 (mixed flora). In Pagassitikos Gulf the floral elements indicate that the Mediterranean-endemic elements prevail together with the Subtropical-atlantic ones. On the contrary, on N. Sporades the Subtropical-atlantic species show an evident predominance with an almost 40% on the whole.

Concluding we may state that the flora of Pagassitikos and N. Sporades islands is sufficiently rich with a lot of annual and perennial forms. The type of flora and the floral elements have classified it into a mixed form of flora characteristic of regions belonging to these geographical latitudes.

#### REFERENCES

- CHENEY, D. P., 1977. A new and improved ratio for comparing Seaweed floras. Abstract published in *J. Phycol., Suppl.* 13:12.
- DIANNELIDIS, TH., 1935. Algues marines du Golf de Pagassai. *Pract. Acad. d' Athènes*, 10, 249.
- DIANNELIDIS, TH., 1948. Sur la flore marine du Golf de Pagassai (2me Comm.). *Pract. Hell. Hydrob. Inst.* 2:89.
- DIANNELIDIS, TH., 1953. Contributions à la connaissance des algues marines des Sporades du Nord. *Pract. Hell. Hydrob. Inst.* 6: 41-84.
- HARITONIDIS, S., 1978. Contribution to the population research of benthic Macrophyceae (Chlorophyceae, Phaeophyceae and Rhodophyceae) of Thermaïkos Gulf. Ph. D. Ann. of Faculty of Physics and Math. 18/6 p. 173 .
- RECHINGER, K. H., 1942. Flora Aegea. Flora der Inseln und Halbinseln des Agaischen Meeres. *Denkschr. Akad. Wissensch. Wien, Math., Naturw.*, 105:1: 73-294.