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A. PETROCELLI, E. CECERE, N. CANTASANO

Istituto Ambiente Marino Costiero (IAMC), CNR, Talassografico "A. Cerruti"
Via Roma, 3 – 74100 Taranto, Italia.
antonella.petrocelli@iamc.cnr.it

SUMMER MACROALGAL FLORA OF THE BRACKISH LAKE OF ACQUATINA (FRIGOLE, LECCE, SOUTHERN ITALY)

FLORA MACROALGALE ESTIVA DEL LAGO SALMASTRO DI ACQUATINA (FRIGOLE, LECCE)

Abstract *– The brackish lake of Acquatina was studied from a floristic point of view during summer 2006. 24 species were collected in total: 16 Rhodophyta, 2 Ochrophyta, 6 Chlorophyta. Some of these species were reported for the first time from brackish waters.*

Key-words: *Apulia, brackish water, Mediterranean Sea, seaweeds.*

Introduction - This study was undertaken within a project aiming to both characterise the brackish lake of Acquatina (Lecce, southern Italy) from a biocenotic point of view and understand the possible presence of anthropogenic impact. In the present paper, the results of the first floristic census, carried out in summer, are reported. In fact, also according to the Water Framework Directive, macroalgae are considered an important biological quality element even in transitional waters (Orfanidis *et al*., 2001). Moreover, the vegetable component from both a floristic and a vegetational point of view of the lake was completely unknown, till now.

Materials and methods – The Acquatina lake has a surface of 45 ha and reaches a maximum depth of –2 m. In July 2006, quantitative collections were carried out on hard substrates scraping all the attached specimens. On seagrass meadows, qualitative samples were collected in order to identify epiphytes. Four stations with different environmental conditions were chosen: station 1 was the nearest to the sea (salinity 36‰), station 2 was the most confined (salinity 32‰), station 3 was in the middle of the basin (salinity 31‰), station 4 was in the vicinity of the Giammatteo canal, where freshwaters flow (salinity 29‰).

Results – A total of 24 species were found, so distributed: 16 Rhodophyta, 2 Ochrophyta, 6 Chlorophyta (Tab. 1).

Tab. 1 - Floristic list.
Elenco della flora macroalgale.

Rhodophyta
Acanthophora nayadiformis (Delile) Papenfuss
Ceramium flaccidum (Kützing) Ardissone
Champia parvula (C. Agardh) Harvey
Chondrophycus papillosus (C. Agardh) Garbary *et* Harper
Chylocladia verticillata (Lightfoot) Bliding f. *breviarticulata* (Ercegovic) Cormaci *et* G. Furnari
Crouania attenuata (C. Agardh) J. Agardh
Erythrocladia irregularis Rosenvinge
Hydrolithon boreale (Foslie) Y.M. Chamberlain
Hydrolithon farinosum (J.V. Lamouroux) Penrose *et* Y.M. Chamberlain
Laurencia majuscula (Harvey) A.H.S. Lucas

Laurencia minuta Vandermeulen, Garbary *et* Guiry ssp. *scammaccae* G. Furnari *et* Cormaci
Polysiphonia scopulorum Harvey
Rytiphlaea tinctoria (Clemente) C. Agardh
Spermothamnion flabellatum Bornet
Stylonema alsidii (Zanardini) K.M. Drew
Wrangelia penicillata (C. Agardh) C. Agardh
Ochrophyta
Dictyota dichotoma (Hudson) J.V. Lamouroux var. *intricata* (C. Agardh) Greville
Padina pavonica (Linnaeus) J.V. Lamouroux
Chlorophyta
Acetabularia acetabulum (Linnaeus) P.C. Silva
Cladophora dalmatica Kützing
Cladophora liniformis Kützing
Cladophora nigrescens Zanardini *ex* Frauenfeld
Entocladia viridis Reinke
Valonia macrophysa Kützing

Conclusions - Most of the species are typical of lagoonal environments, except for *Hydrolithon boreale*, *Laurencia minuta* ssp. *scammaccae*, *Spermothamnion flabellatum* and *Valonia macrophysa*, which were never previously reported in such environments. A young attached thallus of *Acanthophora nayadiformis* was found at station 2 with a salinity of 32‰; this is the lowest value at which this taxon was observed to live till now. *Chondrophycus papillosus* was found as a tetrasporophyte in all the stations, where it was the dominant species and formed a belt in both the intertidal and upper subtidal levels. Previously, it was reported only in another transitional environment, the Venice Lagoon, where, however, only rare and sterile thalli were collected in the areas nearer to the sea (Sfriso and La Rocca, 2005). These information widen the knowledge on the ecology of these species, in particular, and on the flora of the Italian transitional environments, in general.

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