

## Taxonomic and biogeographic observations on some species of the genus *Cystoseira*: *C. sauvageauana*, *C. barbatula* and *C. pelagosae*

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### *Cystoseira sauvageauana* Hamel

*C. sauvageauana* is known as a not-tophulose species. However, a phenological study carried out along Eastern Sicily coast (Motta, 1990), showed that during the winter months the species has a large number of tophules which decrease in size in spring up to disappear at all in summer. The occurrence of tophules in *C. sauvageauana* is therefore linked to the seasonality. That, is of relevant interest for the taxonomy of the genus *Cystoseira*. In fact, it's highly probable that it occurs in other species (e. g. *C. adriatica* Sauvageau s.l., *C. jabukae* Ercegovic, *C. corniculata* Hauck s.l.) considered as tophulose or not-tophulose on the basis of the study of specimens collected only in one season. In such view, a revision of the species of *Cystoseira*, based on the study of specimens collected at the same locality every months, should be effected. Such a study, on the species from Eastern Sicily, is now ongoing in our laboratory.

### *Cystoseira barbatula* Kuetzing

During the study on benthic flora and vegetation of Lampedusa island, a community with a caespitose species of *Cystoseira* extending from 0 to 5 m depth was found. The species shows the following features: not foliose, bearing "bouquets" of adventitious branches on the axis, with smooth naked apices slightly protruding, with compact subulate receptacles provided with spinous outgrowths often caducous. So, it well corresponds to *C. graeca* Gerloff et Nizamuddin described on the basis of Herbarium specimens, some of which labelled as *C. barbatula* Kuetzing. But, the examination of the type material of *C. barbatula*, borrowed from The National Herbarium of Victoria (MEL), showed that both the species from Lampedusa and that one named by Gerloff and Nizamuddin *C. graeca*, well correspond to *C. barbatula*. Therefore, the species *C. barbatula*, for a long time considered as synonym of *C. barbata* C. Agardh, regains full validity. This is the first record of a very large and well structured community with this species, described from the Gulf of Naples, but that seems to be distributed mainly in the eastern Mediterranean (Gerloff and Nizamuddin, 1975 as *C. graeca*) (Fig. 1). In that paper it was also reported from Catania where, however, we never found it.

### *Cystoseira pelagosae* Ercegovic

This species was described by Ercegovic (1952) on specimens collected at Palagruz island (Adriatic Sea) at a depth of 20-40 m. Then it has been recorded from Capo Rizzuto (high Ionian Sea) by Giaccone (1969), from Ustica island, from Scopello (Trapani) by Giaccone et al. (1985) and more recently from the Gulf of Orsei (eastern Sardinia) by Serio (1990) (Fig. 1). It is a quite rare species living in the Adriatic Sea, in the lower infralittoral and circalittoral, while in the other localities, in the upper infralittoral. This bathymetric distribution, different according to the geographic area, raises interesting questions on the ecology of the species. In fact, it seems to occupy habitats shallower and shallower as one goes from East to West, even though it has been recently recorded, but with doubt, from Corsica (Verlaque, 1988) at a depth of 35-40 m. Therefore, the ecology of this species is still not perfectly clear.

In conclusion, the genus *Cystoseira* should be reviewed from both taxonomic and biogeographic points of view, since the diacritic characters as "caespitose", "tophulose", "foliose" are not consistent and that several Ercegovic's adriatic endemisms resulted widely distributed.

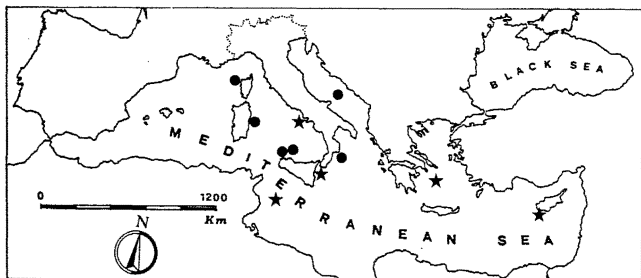


Fig.1. Distribution map of *C. pelagosae* (●) and *C. barbatula* (★).  
The record of *C. pelagosae* from Corsica is doubtful.

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