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sence of Sieve Plates in *Cystoseira* (Fucales, Fucophyceae)

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The presence of sieve plates in the cells of Fucophyceae been observed by a number of authors, in particular in Lamiiales (PARKER & HUBER, 1965; SCHMITZ & SRIVASTAVA, 1974, 5, 1976; SIDEMAN & SCHEIRER, 1977) and Fucales (BISALPUTRA, 6, FULCHER & McCULLY, 1968; MOSS, 1983; FIELDING **et al.** 1987). latter works deal principally with diferent species of the us **Fucus** but, on the other hand, no description of these uctures have been found in species of the genus **Cystoseira.** only data for **Cystoseira** are two photographs of the sieve tes in **C. stricta** (pictures by L. and M. Pellegrini) shown by ARDY-HALOS **et al.** (1984).

This study deals with the description of sieve plates in **editerranea.** The samples were collected in Blanes (Gerona, NE in) in February 1990. In the preparation for TEM a number of es from the middle zone of the cauloid of this species were arated and fixed in 4% paraformaldehyde and 4% gluteraldehyde 0.1 M sodium cacodylate buffer in sea water for 2 hours. The ples were washed four times in the buffer and post-fixed osmium tetroxide (1%) in the same buffer for 1 hour. The imens were dehydrated through a graded acetone series and edded in Spurr's resin. Cut sections were then post-stained in nyl acetate and lead citrate, and examined with a Phillips 301 . The sieve plates were observed in the cells of the inner tex.

The thickness of the sieve plates is about 0.41 um (0.33-- 1 um). This value is slightly higher than the values found by er authors in other species of Fucales and Laminariales (0.2 FIELDING **et al.**, 1987 for **F. vesiculosus, F. serratus** and **F. alis;** 0.3 um: FULCHER & McCULLY, 1971 for **F. vesiculosus;** 0.2 SCHMITZ & SRIVASTAVA, 1975 for **Alaria marginata;** 0.2-0.4 um: EMAN & SCHEIRER for **Laminaria saccharina**). The pores have a meter of aproximately 0.11 um (0.10-0.12 um). This value is ier than the estimates values measured by other authors in **us** spp. (0.037 um: BISALPUTRA, 1966 for **F. evanescens;** 0.04 FIELDING **et al.**, 1987 for **F. vesiculosus, F. serratus** and **F. alis;** 0.05 um: FULCHER & McCULLY, 1971 for **F. vesiculosus**) lower than the values found in Laminariales (0.11-0.30 um: MITZ & SRIVASTAVA, 1975 for **A. marginata;** 0.70 um: SIDEMAN & EIRER, 1977 for **L. saccharina;** 2.40-6.00 um: PARKER & HUBER, 5 for **Macrocystis pyrifera**).

MOSS (1983) considered the pattern of pores in the sieve tes of **F. vesiculosus** to be irregularly distributed while LDING **et al.** (1987) suggest that the pores have an even disbution across the plate. Our observations tend to agree with se of the former author, as the pores in the plates of **C. iterranea** appear much more irregularly and infrequently disbuted than those of **F. vesiculosus** (FIELDING **et al.**, 1987), a t which can also be readily seen in one of the photographs of se plates in **C. stricta** (L'HARDY-HALOS **et al.**, 1984).

Studies of the part of the cell wall where the sieve tes are located are currently being undertaken. We can state, ever, that the plasmalemma fibres, which pass through the es, connect with the inner layers of the cell wall and penete them. The same observation has been reported by FIELDING **et** (1987) for **Fucus** spp.

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The *Posidonia oceanica* (L.) Delile Meadows of Egyptian Waters Preliminary Survey

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A survey of the *Posidonia oceanica* beds along the Egyptian coast has been carried out since 1986. The work is focussed on the growth dynamics of the plant and on its associated fauna and flora. Preliminary results are reported. *Posidonia oceanica* communities represent the most productive of all marine ecosystems in the south eastern Mediterranean waters along the Egyptian coast from the Lybian desert in the west to El Arish in the east (Fig. 1), as well in the north west Mediterranean (Molinier and Picard, 1952).

The western desert coast is characterized by large meadows of *Posidonia* exposed to open sea, to waves and water currents. The leaves are healthy, long, green all over and with only a slight epiphytic cover. The animal associations are also poor. Dead mattes of old *Posidonia* meadows are found covered with sand near green meadows in shallow areas (3-6 meters depth). The green meadows of *Posidonia* at shallow depths (5-8 meters) are patchy and scattered while the deeper meadows cover more extensive areas. Aleem (1955) mentioned the presence of two parallel belts of *Posidonia* in the western area off El Agami, the first, a shallow bed at 8-10 meters depth was interspersed with *Cymodocea*, while the second at 20 meters depth was occupied mainly by *Posidonia*. The present survey showed the existence of both belts but the second at 26 meters. Aleem (1955) also reported that *Posidonia* beds were most abundant at Burg El Arab, 50 km west of Alexandria, where the sediment is of coarse calcareous sand completely devoid of fixed algae. Thelin *et al.* (1985), located and studied *Posidonia* near the El Dabba area, west from El Alamein, at depths down to 27 meters. They gave some data about extension, leaf biometery, flowering and leaf epiphytes. Meadows are also extensive in Mersa-Matrouh harbour, where the Red Sea eel-grass *Halophila* sp. is also recorded (Aleem, 1955). Shallow *Posidonia* meadows were also located at Sidi Abd El Rahman, west of El Alamein.

The *Posidonia* meadows in front of Alexandria are formed in scattered patches located in the semi-closed bays specially at Miami, El Asafra and Montazah, (Fig. 1). The patches are found at depths ranging between 5-7 meters and are in most cases protected by rocks but subjected to the eastward flowing current. They are also subjected to direct and indirect organic pollution from city effluents. Adults leaves are heavily covered with epiphytes and are yellow-green to brown-green in colour. Heavy associations of animal groups inhabit the meadows. Some of these associations are reported elsewhere in this volume (Amphipoda, Polychaeta). Aleem (1955), reported the area between Rosetta and Damietta (delta coast) to be scarse in *Posidonia* meadows, *Cymodocea* being more frequent. From Port-Said to El-Arish, *Posidonia* meadows are abundant, located at the few rocky places between the two Ports.

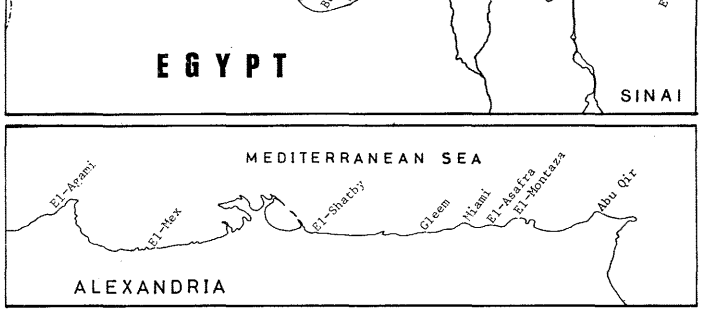

Fig. 1 - Showing Different Locations Along The Egyptian Coast.

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