

First record of the Entoprocta *Pedicellina hispida* Ryland, 1965 in the Mediterranean Sea (Tunisian coastline)

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In the Mediterranean Sea, the Entoprocta phylum has not been studied enough to make an inventory of this fauna living in the area. The very few works on this phylum concern essentially the European fauna (Harmer, 1915; Prenant & Bobin, 1956; Costello *et al.*, 2001; Nielsen, 2008; Tierno de Figueroa & Sánchez-Tocino, 2008, 2009; Sánchez-Tocino & Tierno de Figueroa, 2009a, 2009b). In Mediterranean Tunisian waters only one species of Entoprocta has been cited (d'Hondt & Ben Ismail, 2008), belonging to the genus *Barentsia* Hincks, 1880: *Barentsia macropus* (Ehlers, 1890).

The genus *Pedicellina* Sars, 1835 is represented in world oceans by 7 species (Hayward, 2010) which are *P. cernua* (Pallas, 1774), *P. grandis* Ryland, 1965, *P.*

hispida Ryland, 1965, *P. nutans* Dalyell, 1848, *P. pernae* Ryland, 1965, *P. pyriformis* Ryland, 1965, and *P. whitelegii* Johnston & Walker, 1917. Among these species, *Pedicellina nutans* and *Pedicellina cernua* were reported by Prenant & Bobin (1956) to live along the European coastline. Only the last species was reported for the Mediterranean Sea at Naples, Minorca and Monaco (Marcus, 1941).

One colony was collected by scuba diving at 5 m depth in Gammarth (Sidi Abdel Aziz) locality (36°55'25.23"N; 10°16'27.34"E) in the Tunis Gulf. The specimens were found on *Posidonia oceanica* shoots. The Entoprocta was collected and conserved in 70% ethanol. In the laboratory, specimens were studied and identified under a binocular mag-

Table 1.— Comparative measurements (in mm) of *Pedicellina hispida* from different localities.

Tabla 1.— Cuadro comparativo de las medidas (en mm) de *Pedicellina hispida* procedente de diferentes localidades.

Specimens	French	New-Zeland	Plymouth	Tunisian
Calyx length	0,25-0,45	0,5	0,25-0,30	0,4
Stalk length	0,33-0,55	1-1,5	1	1,2
				(in the expanded state)
Stalk width	-	0,080-0,1	0,080-0,1	0,065-0,07
Stolon diameter	-	0,06	-	0,06
Tentacle number	12-16	20	16-18	18-20

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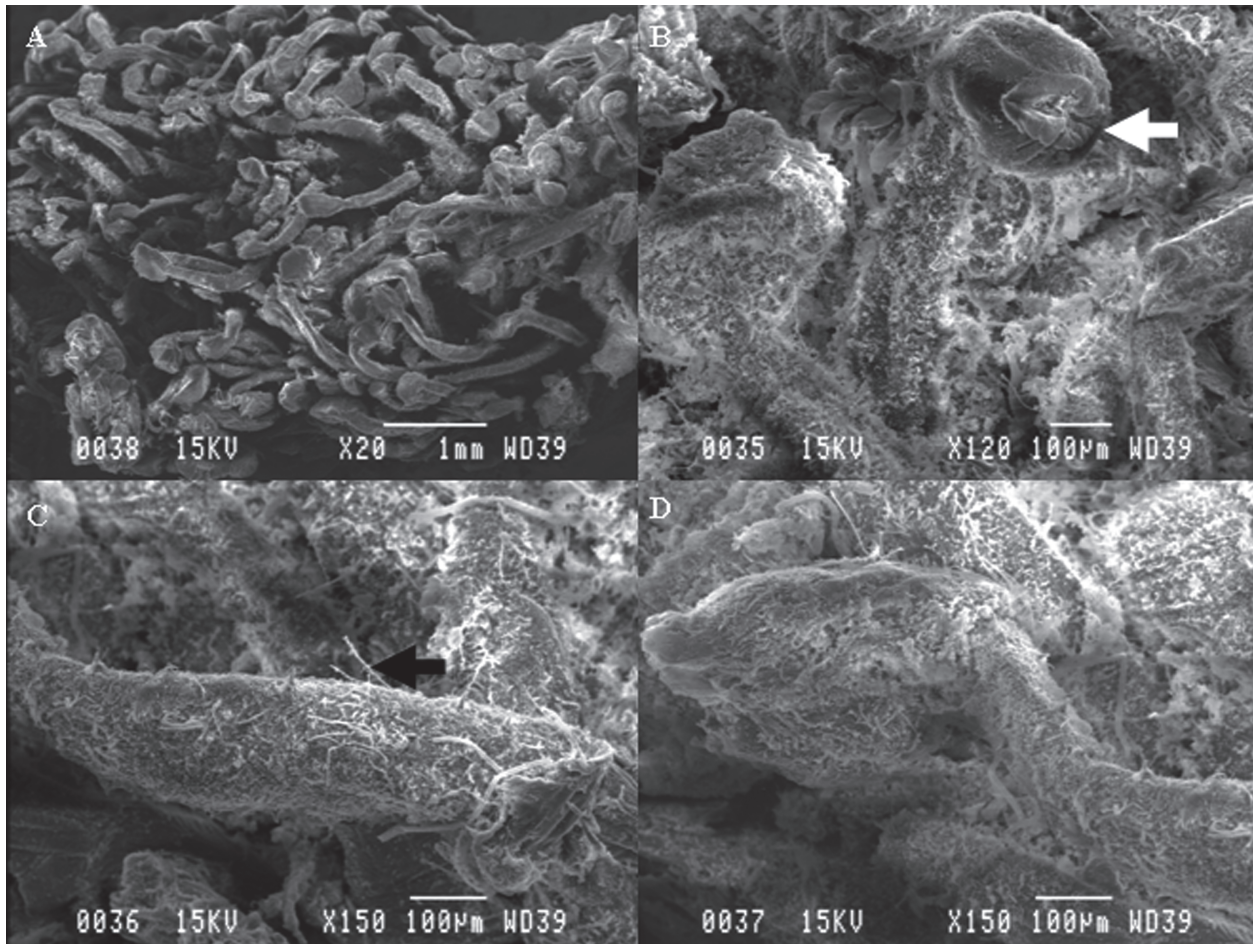


Fig. 1.— A) *Pedicellina hispida* colony; B) zooid (calyx and stalk); C, D) stalk with numerous spines.

Fig. 1.— A) Colonia de *Pedicellina hispida*; B) Zooide (caliz y pedúnculo); C, D) Pedúnculo con algunas espinas.

nifying glass using suitable guides and illustrated articles.

The colony shows zoarium of medium size, zooids arranged along a slender stolon. The stolon diameter is about 55-60 μm ; the stalk is hispid for 65-70 μm of width. In very young individuals, the calyx has almost the same diameter as the stalk to 60 μm is enlarged with age; the stalk is obviously narrower at the top; stolon approximately two times narrower than the stalk. The stalk is contractile and with transversal striations. The calyx is 400 μm long and the stalk length in the expanded state is about 1200 μm (Fig. 1). Contours of the calyx nearly symmetrical, without a marked bulge on the sides. Implantation of the stalk in the longitudinal

axis of the chalice; consequently it is symmetrical compared to the insertion point of the stalk. Frontal face hardly less convex than the distal face. stolon distinctly narrower than the stalk (in some specimens, sometimes approximately two times narrower). The stalk has numerous small spines. The lophophore has 18-20 tentacles.

The Tunisian specimen is consistent with the redescription and the figures of Nielsen (1989) and Hayward & Ryland (1995), except for the polypidal anatomy which cannot be observed. The shape of the calyx, the number of tentacles, and the stalk are very closely similar to the New Zealand (Ryland, 1965) specimens thus confirming the presence of this species along Tunisian coasts. Comparisons

with other species and the differences between them are mentioned in Table 1.

Pedicellina hispida was recorded from Europe (French coastline: Finistère; British coastline: Plymouth) and New Zealand. The species lives on Algae, Bryozoa and Hydrozoa.

References

- Costello, M. J., Emblow, C. & White, R. (eds.), 2001. *European register of marine species: a check-list of the marine species in Europe and a bibliography of guides to their identification*. Collection Patrimoine Naturels, 50. Muséum national d'Histoire naturelle. Paris. 463 pp.
- Harmer, S. F., 1915. The Polyzoa of the Siboga Expedition. Part 1. Entoprocta, Ctenostomata and Cyclostomata. *Siboga Expedition Reports*, 28A: 1-180.
- Hayward, P. J., 2010. *Pedicellina*. Accessed through: World Register of Marine Species at <http://www.marine-species.org/aphia.php?p=taxdetails&id=111796> on 2010-10-20.
- Hayward, P. J. & Ryland, J. S. (eds.), 1995. *Handbook of the marine fauna of north-west Europe*. Oxford University Press. Oxford & New York. 800 pp.
- Hondt, J. L. d' & Ben Ismail, D., 2008. Bryozoaires des côtes Algériennes. Compléments aux Bryozoaires de Tunisie. *Bulletin de la Société Zoologique de France*, 133(1-3): 55-71.
- Marcus, E., 1941. Sobre Bryozoa do Brasil. *Boletim da Faculdade de Filosofia, Ciências e Letras, Universidade de São Paulo*. *Zoologia*, 5: 3-208.
- Nielsen, C., 1989. Entoprocts. *Synopses of the British Fauna*, N.S., 41: 1-131.
- Nielsen, C., 2008. A review of the solitary entoprocts reported from sponges from Napoli (Italy), with designation of the neotype of *Loxosoma pes* Schmidt, 1878. *Journal of Natural History*, 42(23-24): 1573-1579.
- Prenant, M. & Bobin, G., 1956. *Bryozoaires, 1^{ère} partie. Entoproctes, Phylactolèmes, Cténostomes*. Faune de France, 60. P. Lechevalier. Paris. 398 pp.
- Ryland, J. S., 1965. Some New Zealand Pedicellinidae (Entoprocta), and a species new to Europe. *Transactions of the Royal Society of New Zealand (Zoology)*, 6(19): 189-205.
- Sánchez-Tocino, L. & Tierno de Figueroa, J. M., 2009a. Contribution to the knowledge of Loxosomatidae (Entoprocta) from the Chafarinas Islands (Alboran Sea, Western Mediterranean). *Graellsia*, 65(1): 71-74.
- Sánchez-Tocino, L. & Tierno de Figueroa, J. M., 2009b. Contribution to the knowledge of the genus *Loxosomella* (Entoprocta) from the Spanish Mediterranean Sea, with the description of a new species: *Loxosomella ameliae* sp. n. *Marine Biology Research*, 5: 404-407.
- Tierno de Figueroa, J. M. & Sánchez-Tocino, L., 2008. First record of *Loxosomella crassicauda* (Salensky, 1877) (Entoprocta, Loxosomatidae) in the Mediterranean Spanish waters. *Zoologica Baetica*, 19: 89-93.
- Tierno de Figueroa, J. M. & Sánchez-Tocino, L., 2009. *Loxosomella almugnecarensis* n. sp. (Entoprocta: Loxosomatidae) - a new sponge epizoite from the Iberian Mediterranean Sea. *Zootaxa*, 2236: 65-68.

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