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## **Progressing the invasion of the hydrozoan *Macrorhynchia philippina* (Kirchenpauer, 1872) in Atlantic archipelagos**

RIERA, R., F. ESPINO & L. MORO. Avance de la invasión del hidrozoo *Macrorhynchia philippina* (Kirchenbauer, 1872) en los archipiélagos atlánticos. *VIERAEA* 44: 117-120.

The hydrozoan *Macrorhynchia philippina* is considered a circumtropical and subtropical species (AnsínAgís et al. 2001[*Zoologische Verhandelingen Leiden*, 333: 3-263]). In the last years, its distribution has been spread at higher latitudes because of global warming (Gravili et al. 2013[*Marine Ecology*, 34: 41-62]), facilitated by its invasive character (Çinar et al. 2006[*Aquatic Invasions*, 1: 84-90]; Morri et al. 2009[*Journal of the Marine Biological Association of the United Kingdom*, 89: 49-62]). *Macrorhynchia philippina* develops prominent colonies that have the potential to colonize rapidly new substrates, showing invasive potential. This species has probably been introduced via transport on ship-hulls or in ballast waters, becoming invasive in the eastern Mediterranean (Çinar et al. 2006[*Aquatic Invasions*, 1: 84-90]; Zenetos et al. 2010[*Mediterranean Marine Science*, 11:381-493]).

In the Atlantic Ocean, *M. philippina* has been previously recorded in Madeira and Selvagens islands, 400 and 165 km to the north of the Canaries, respectively (Ansín-Agís et al. 2001[*Zoologische Verhandelingen Leiden*, 333: 3-263]). In Atlantic tropical waters this species has been observed in Cape Verde (Ritchie, 1907[*Proceedings of the Zoological Society of London*, 488-514]) and the coasts of Guinea Bissau (Billard, 1931[*Bulletin du Muséum National d'Histoire Naturelle*, 3: 248-250]) at the beginning of the 20<sup>th</sup> century. This species is considered circumglobal in tropical and subtropical waters (AnsínAgís et al. 2001[*Zoologische Verhandelingen Leiden*, 333: 3-263]), being extensively reported in western Atlantic Ocean (i.e. Bermudas, Florida, Jamaica and the Brazilian coast) (Migotto, 1996[*Zoologische Verhandelingen Leiden*, 306: 1-125]; Calder, 1997[*Royal Ontario Museum Life Sciences Contributions*, 161: 1-85]) and less frequently in the eastern part (i.e. Madeira, Cape Verde and Guinea Bissau) (e.g. Ansín-Agís et al. 2001[*Zoologische Verhandelingen Leiden*, 333: 3-263]). In the Indian Ocean it has been recorded from South Africa (Millard, 1978[*Annals of South African Museum*, 74(6): 159-200]) to the coasts of India (Mammen, 1965[*Journal of the Marine Biological Association of India*, 7: 1-57]) and western coast of Australia (Stechow, 1925[*Wissenschaftliche Ergebnisse der Deutschen Tiefsee-Expedition "Valdivia" 1898-1899*, 27: 383-546]). In the Pacific Ocean this species has been observed from the coasts of Indonesia (Vervoort, 1941[*Biological results of the Snellius Expedition IX. Temminckia*, 6: 186-240]) and Japan (Hirohito, 1983[*Biological Laboratory of the Imperial Household, Tokyo*, 83 pp]) to western Central America (Fraser, 1948[*Allan Hancock Pacific Expeditions*, 4. 179-343]).

*Macrorhynchia philippina* has been observed in four localities on the east coast of Gran Canaria, (i) Three 20-cm height colonies, Punta de Gando (Gran Canaria), coordinates 465098x/3089188y, depth: 20-25 m, on a shipwreck, October 2015;(ii) Five 20-25 cm height colonies, 500 m south Punta de Gando (Gran Canaria), coordinates 464790x/3088775y, depth: 25 m, maërl bottom, October 2015;(iii) Three colonies 10-cm height colonies, Punta de La Sal (Gran Canaria), coordinates 462661x/3083435y, depth: 27 m, rocky substrate, November 2015; (iv) Six colonies with variable height (5-20 cm), Arinaga bay, coordinates: 461173x/3080771y, depth: 8-10 m, edges of a *Cymodocea nodosa* meadow, and one colony not attached to substratum, August-September 2016.

The studied material of *Macrorhynchia philippina* Kirchenpauer, 1872 from the Canary Islands shows a high similarity to other Macaronesian archipelagos (Madeira and Cape Verde). The studied colonies are small (< 25 cm). The canarian colonies of *M. philippina* have been found on artificial substrates (shipwreck and associated ropes), with a high anfractuosity, with crevices and outcrops, colonized by corals (*Gerardia* sp., *Stichopathes* sp. and *Anthipatella wollastoni*). This species has been also reported in natural seabeds, such as maërl seabed with the alga *Lophocladia trichoclados*, sea-barren bottoms dominated by the sea urchin *Diadema africanum* and edges of *Cymodocea nodosa* meadows. The infaunal community from maërl seabeds is composed by sipunculids, sea urchins and crustaceans (schrimps and crabs), together with a dominant goby (*Vanneaugobius canariensis*).

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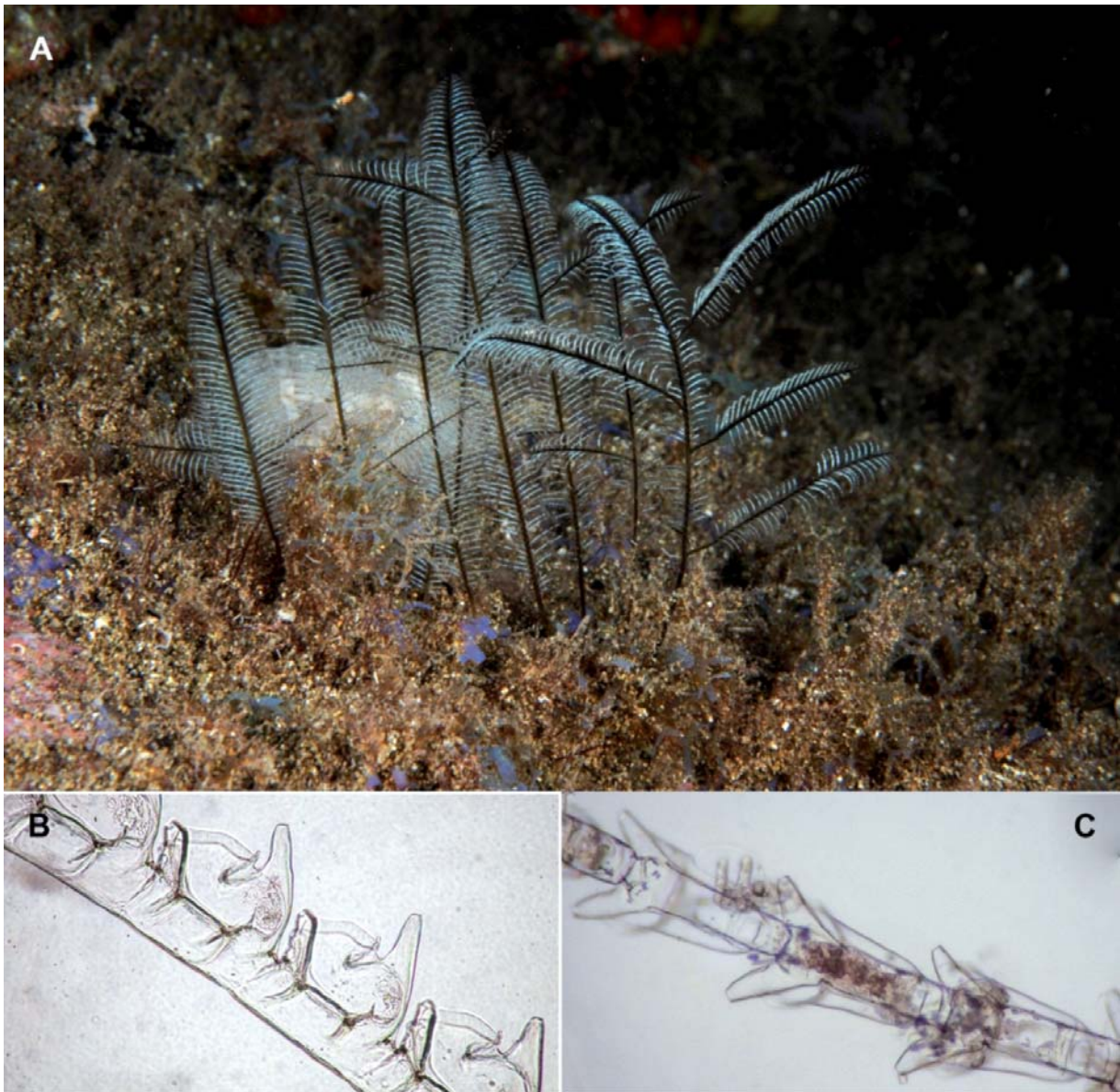
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**Figure 1.-** A. General aspect of the colonies of *Macrorhynchia philippina* in the field. B. Detail of hydrocladium, lateral view. C. Hydrocladium showing internodes, dorsal view.

