

{rokbox title=|Didymodiclinus sp. parasite ex the gills of the dusky grouper *Epinephelus marginatus* from the Majorca :: Image: Authors| thumb=|images/stories/ieo/imagenespublicaciones/centro-oceanografico-baleares-ieo-aspects-didymodiclinus-parasite-dusky-grouper-mediterranean-sea-polinas-et-al-2018-thumb.jpg|}image s/stories/ieo/imagenespublicaciones/centro-oceanografico-baleares-ieo-aspects-didymodiclinus-parasite-dusky-grouper-mediterranean-sea-polinas-et-al-2018.jpg{/rokbox}

Marta Polinas, Salvatore Mele, Francesc Padrós, Paolo Merella, Elisabetta Antuofermo, Adam Gouraguine, **Olga Reñones**, 2018. [Ecological and histopathological aspects of *Didymodiclinus* sp. \(Trematoda: Didymozoidae\) parasite of the dusky grouper, *Epinephelus marginatus* \(Osteichthyes: Serranidae\), from the western Mediterranean Sea.](#) J Fish Dis. 2018;1–9. DOI: 10.1111/jfd.12836

Abstract: The dusky grouper *Epinephelus marginatus* (Lowe) is an ecologically and commercially important fish species of the Atlantic and Mediterranean coastal rocky habitats. Despite records of didymozoid infections in several grouper species, the identification and pathogenesis of these parasites in *E.*

marginatus

are lacking. The aim of this study is to characterize the didymozoids of

E. marginatus

, particularly their mechanisms of infection and histopathological features. Dusky groupers (n = 205) were caught off Majorca Island (western Mediterranean Sea) and examined for parasites. Of the fish sampled, 45% were infected with white and yellow didymozoid capsules and brown nodules, found on the gills and pseudobranchs. Parasite abundance had a strong positive relationship with the fish length; only fish larger than 20 cm were infected, suggesting infection via consumption of an intermediate host, for which

E. marginatus

size was a limiting factor. The capsules contained two convoluted viable adult trematodes, identified as *Didymodiclinus* sp., in close contact with host capillary vessels, with no evidence of the tissue inflammatory response. Conversely, nodules containing degraded parasites were surrounded by an intense inflammatory infiltrate. The findings suggest that *Didymodiclinus* sp. have the potential to evade the host's immune system by inhibiting the inflammatory response.

Keywords: *Epinephelus marginatus*, Balearic Islands, *Didymodiclinus* sp., Didymozoidae, histopathology