

FIRST RECORD OF THE DIATOM *Chrysanthemodiscus floriatus* MANN 1925, (CHRYSANTHEMODISCAEAE) IN THE CARIBBEAN COAST OF COLOMBIA

PRIMER REGISTRO DE LA DIATOMEA *Chrysanthemodiscus floriatus* MANN 1925, (CHRYSANTHEMODISCAEAE) EN LAS COSTAS DEL CARIBE COLOMBIANO

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ABSTRACT

From the observation of micropreparations of diatoms of epiphytic habits, deposited as reference material in the collection of macroalgae Germán Bula-Meyer, from the Centro de Colecciones Biológicas de Universidad del Magdalena, we obtained the first record of the benthic diatom *Chrysanthemodiscus floriatus* Mann 1925, (Chrysanthemodiscaceae), to the Colombian Caribbean, in the Bay of Cinto in the Tayrona National Park, Magdalena-Colombia; its distribution known so far was in the northern hemisphere between 5 and 30°

KEY WORDS: Colombian Caribbean, *Chrysanthemodiscus floriatus*, Diatoms

RESUMEN

A partir de la observación de micropreparados de diatomeas de hábitos epifíticos, depositados como material de referencia en la colección de macroalgas Germán Bula-Meyer, del Centro de Colecciones Biológicas de la Universidad del Magdalena, se obtuvo un primer registro de la diatomea bentónica *Chrysanthemodiscus floriatus* Mann 1925, (Chrysanthemodiscaceae), para el Caribe colombiano, en la Bahía de Cinto en el Parque Nacional Natural Tayrona, Magdalena-Colombia; su distribución conocida hasta el momento era en el hemisferio Norte entre los 5 y 30°.

PALABRAS CLAVE. Caribe colombiano, *Chrysanthemodiscus floriatus*, Diatomeas

The diatom *Chrysanthemodiscus floriatus* is recorded for first time for the Caribbean coast of Colombia. The sample was collected at Bahía Cinto (Tayrona National Park, Magdalena) by the late Professor German Bula on October 15, 1981. The sample was labeled with the number 470 and stored in a glass jar in his personal collection. The specimens were mounted in Canada balsam and identified with the numbers 177a and 177b, and according to his notes, correspond to the benthic diatoms, epiphytes on thalli of *Heterosiphonia*. Currently, the material is deposited in the Centro de Colecciones de la Universidad del Magdalena (CBUMALG). Photographic records were obtained using a Zeiss Axiocam ERc5S digital camera and a Zeiss AxioLab-A1 microscope with phase contrast.

The cylindrical cells organized in long chains with hyaline frustules, numerous girdle bands, convex valves, and their sizes (Table 1, Fig. 1), confirmed that the specimens belong to *C. floriatus* Mann 1925: Mann, 1925, p. 58, pl. 13, fig. 1; Round, 1978, pp. 157-161, figs. 1-15; Gibson and Navarro, 1981, pp. 338-341, figs. 1-9; Navarro et al., 1989, p. 337; Round et al., 1990, pp. 152-153, figs. A-I. *C. floriatus* is a marine epiphyte diatom that forms colonies by means of mucilage pads arising from the valves. This species is associated to macroscopic algae along the tropical coasts (Round et al., 1990).

Initially, *C. floriatus* was classified in the class Bacillariophyceae, order Centrales, suborder

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Biddulphiinea, family Biddulphiaceae, subfamily Stictodiscoideae (Simonsen, 1979, p. 28; Navarro et al., 1989). Currently, *C. floriatus* belongs to the class

Coscinodiscophyceae, order Chrysanthemodiscales, family Chrysanthemodiscaceae (Round, 1978; Round et al., 1990; Navarro and Hernández-Becerril, 1997).

Table 1. Sizes of *Chrysanthemodiscus floriatus* from five different cells. All measurements are given in micrometers except by the striae density, which corresponds to the number of striae in 10 μm .

No.	Slide number	Celular diameter	Pervalvar width	Girdle bands width	Striae density
1	177a	100	300	18	16
2	177a	88	280		
3	177a				14
4	177b	75	260		
5	177b	120	212		
		75-120	212-300	18	14-16

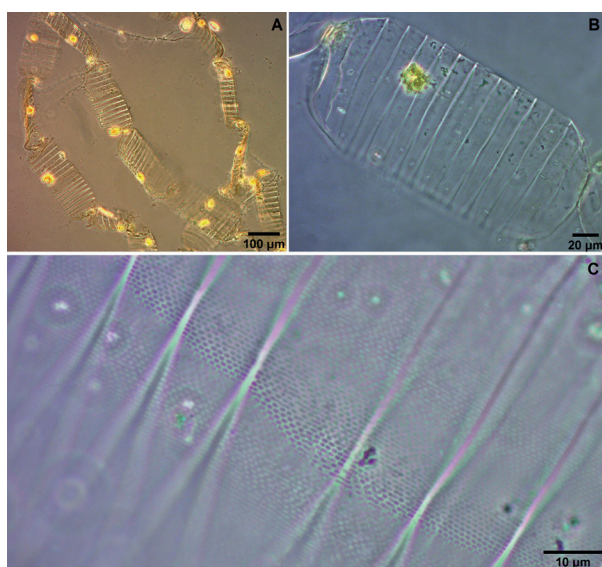


Figure 1. Photographic records of *Chrysanthemodiscus floriatus*. A) Colonies of cells forming chains; girdle view (obj. 10X). B) Single cell in girdle view (obj. 40X). C) Detail of the areolae in the girdle band, girdle view (obj. 100X).

In the Caribbean, this species has been recorded for Isla Caja de Muertos in Puerto Rico (Navarro et al., 1989). Herein, we expand its geographic distribution to the Colombian Caribbean coast. *C. floriatus* is also reported in the continental shelf and slope of the east coast of Florida near to West Palm Beach (Gibson and Navarro, 1981). In the Pacific, it has been found in Oahu, Hawaii (Round, 1978); Philippines (Mann, 1925) and Japan

(mentioned in Round et al., 1990). In the Indian Ocean, in the coast of Oman (mentioned in Round et al., 1990).

Although, there are few records of *C. floriatus* worldwide, it is possible that this species has a wider distribution. The few records of benthic marine diatoms may be due to the limited number of studies that study these species, as well as the fragility of these diatoms and the transparency of their frustules (figs. 1A and 1B), could explain the existence of only few records.

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