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A New Species of Genus *Clathria* (*Microciona*) (Demospongiae: Poecilosclerida: Microcionidae) from Jejudo Island, Korea

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ABSTRACT

A new species of genus *Clathria* (*Microciona*) (Demospongiae: Poecilosclerida: Microcionidae), *Clathria* (*Microciona*) *sinyangensis* n. sp. was collected from Intertidal zone by hand at Seopjikoji, Sinyang, Jejudo Island, Korea on 15 Oct. 2008. *C.* (*M.*) *sinyangensis* n. sp. is closely related to *C.* (*M.*) *pennata* Lambe, 1895 in their spicules, but thick subtylostyle of new species is smaller than that of *C.* (*M.*) *pennata*'s and has three sizes of toxa. Also, the new species has no dermal membrane.

Key words: *Clathria* (*Microciona*), Microcionidae, Korea

INTRODUCTION

The *Clathria* (*Microciona*) is characterized by encrusting growth form, with hymedesmioid skeletal architecture consisting of a basal layer of spongin, typically with ascending, plumose, and style in megascleres embedded and erect on basal layer. 103 species of subgenus *Microciona* reported from world wide (Hooper, 1996; Hooper and van Soest, 2002). Four species of *Clathria* (*Microciona*) have been reported from Korean waters (Rho and Lee, 1976; Sim and Byeon, 1989; Sim et al., 1992).

The material examined in this study was collected from Intertidal zone by hand at Seopjikoji, Sinyang, Jejudo Island, Korea on 15 Oct. 2008. All procedures were followed the methods of Kim and Sim (2005) and Rützler (1978). The specimens examind were deposited in the Natural History Museum and Department of Biological Sciences, Hannam University, Daejeon, Korea.

SYSTEMATIC ACCOUNTS

Phylum Porifera Grant, 1836
Class Demospongiae Sollas, 1885
Order Poecilosclerida Topsent, 1928
Suborder Microcionina Hajdu, van Soest and Hooper, 1994
Family Microcionidae Cater, 1875

[1]***Clathria* (*Microciona*) *sinyangensis* n. sp. (Figs. 1-2)**

Material examined. Holotype (Por. 93), Sinyang (Seopjikoji) Intertidal Zone, Jejudo Island, 15 Oct. 2008, C.J. Sim, deposited in the National History Museum and Department of Biological Sciences, Hannam University, Daejeon, Korea.

Description. Sponge thinly encrusting, less than 2 mm thick. Sponge tightly attached to rocky substrate. Size up to 3.5 × 3 cm long, 2 mm thick. Oscules common visible. Surface superficially velvety, no dormal membrane. Texture firm. Skeleton structure dendritic structure ascending columns of principal subtylostyles. Choanosome consist of numerous ascending plumose tracts both cored and echinated by large subtylostyles from basal length of sponging measuring 100-240 μm in diameter spongin fibers arise and project up-

Table 1. The comparison of characters between *Clathria* (*Microciona*) *sinyangensis* n. sp. and *C.* (*M.*) *pennata*

Characters \ Species		*Clathria* (*Microciona*) *sinyangensis* n. sp.	*Clathria* (*Microciona*) *pennata*
Growth form		Thin encrusting	Encrusting
Colour		Red	Orange
Spicules (μm)	Thick subtylostyle	180-500 × 10-15	284-917 × 17-36
	Thin subtylostyle	165-430 × 2-5	225-452 × 5-8
	Toxa I	85-120	
	Toxa II	45-70	45-75
	Toxa III	15-30	

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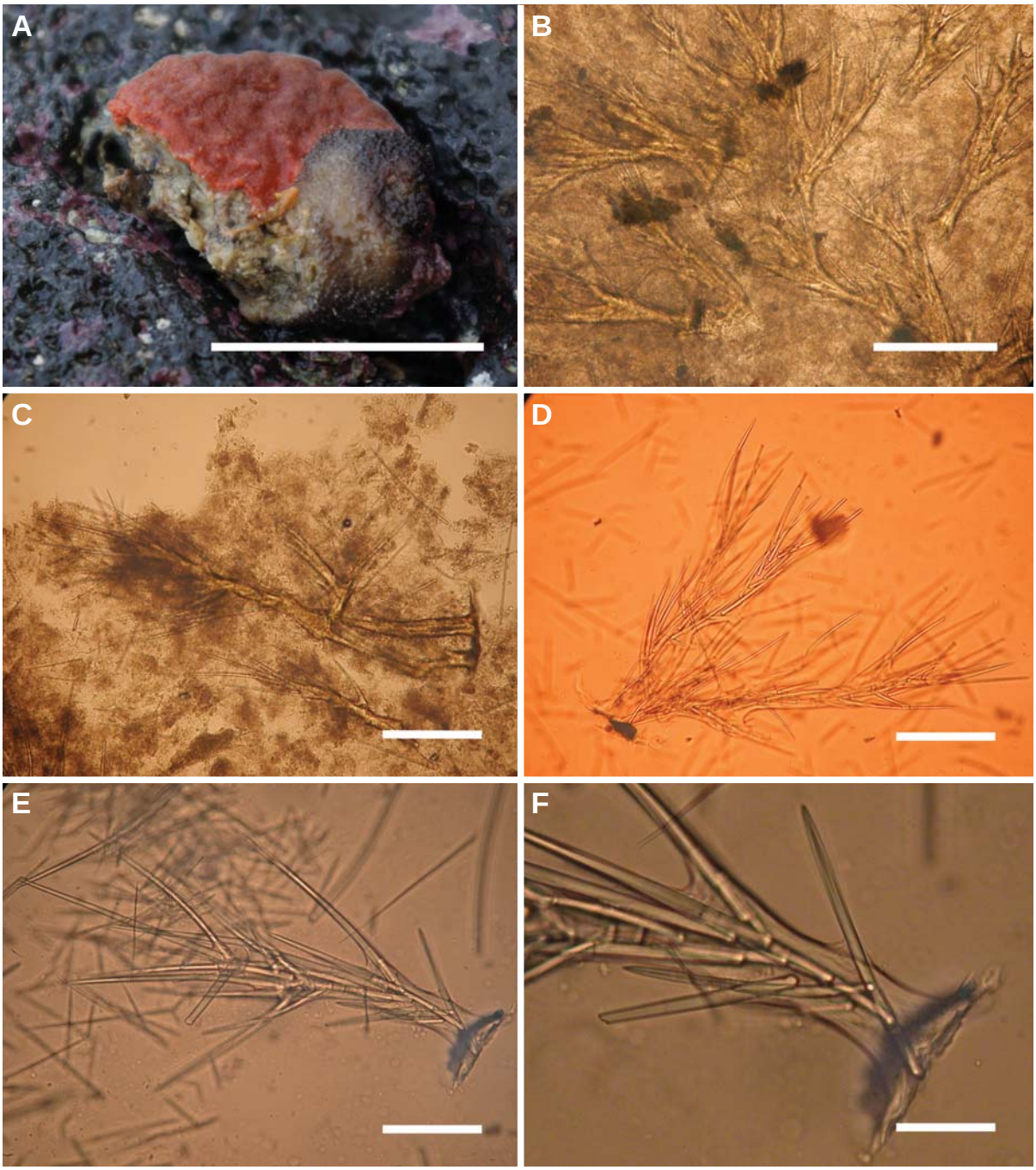

Fig. 1. *Clathria* (*Microciona*) *sinyangensis* n. sp. A, entire animal; B-E, choanosomal skeleton; F, basal layer. Scale bars=3 cm (A), 1 mm (B), 300 μm (C-E), 150 μm (F).

ward. Colour red in life which gradually changes to beige in alcohol. Spicules megascleres, two sizes of subtylostyle. Microscleres, three sizes of toxa.

Spicules

Megascleres

Thick ····· 180-500 × 10-15 μm

Thin subtylostyle ····· 165-430 × 2-5 μm

Microscleres

Toxa I ····· 85-120 μm

Toxa II ····· 45-70 μm

Toxa III ····· 15-30 μm

Etymology. This species is named after type locality, Supji-

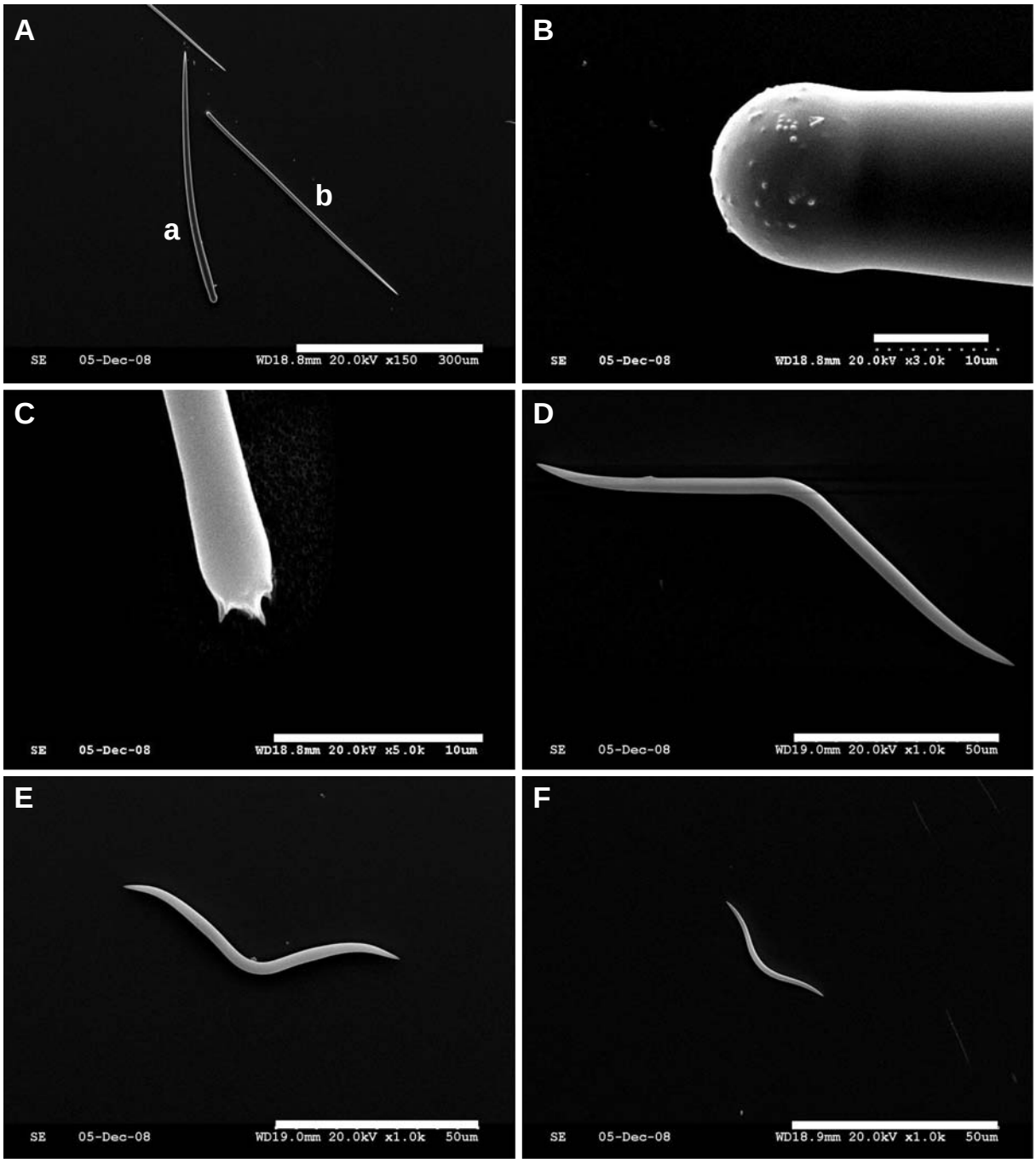

Fig. 2. *Clathria* (*Microciona*) *sinyangensis* n. sp. A, Megascleres (a, thick subtylostyle; b, thin subtylostyle); B, head of thick subtylostyle; C, head of thin subtylostyle; D, toxa I; E, toxa II; F, toxa III. Scale bars=300 μm (A, E), 50 μm (D, F), 10 μm (B, C).

koji, Sinyang, Jejudo Island, Korea.

Remarks. Clathria (*Microciona*) *sinyangensis* n. sp. is closely related to *C.* (*M.*) *pennata* Lambe, 1895 in their spicules, but the thick subtylostyle of *C.* (*M.*) *sinyangensis* n. sp. is smaller than that of *C.* (*M.*) *pennata*'s. And the new species has toxa I and toxa III (Table 1), dermal membrane and oscules.

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