

A New Species of Genus *Diplastrella* (Demospongiae: Hadromerida: Spirastrellidae) from Korea

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ABSTRACT

A new species *Diplastrella yongmeoriensis* n. sp. was collected from Jeju Island, Korea in 2008. This new species is similar to *D. bistellata* (Schmidt, 1862) in growth form and skeletal structure but differs in the composition and size of spicules. The genus *Diplastrella* is reported for the first time in Korea.

Key words: *Diplastrella*, Spirastrellidae, Korea

INTRODUCTION

The family Spirastrellidae Ridley & Dendy, 1886 (Demospongiae, Hadromerida) is characterized by encrusting growth form and microscleres. The genus *Diplastrella* consist of diplaster and spiraster as microscleres. Skeleton formed by megascleres in ascending bundle and dense layer of microscleres in the ectosomal region. Two species of this genus *Diplastrella* have been reported worldwide (Hooper and van Soest, 2002). In the present study, we discovered this genus for the first time in Korea. The sponge was collected by hand from intertidal zone, tide pool at Yongmeori, Sagyeri, Jeju Island, Korea. All procedures were followed the methods of Rützler (1978). The materials examined in this study 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 Hadromerida Topsent, 1894
Family Spirastrellidae Ridley & Dendy, 1886
¹**Diplastrella yongmeoriensis* n. sp. (Figs. 1-2)

Material examined. Holotype (Por. 94). Intertidal zone, Tide

pool, Yongmeori, Sagyeri, Jeju Island, 5 Aug. 2008, C.J. Sim. Paratype (Por. 94-1). Intertidal zone, Tide pool, Yongmeori, Sagyeri, Jeju Island, 15 Oct. 2008, C.J. Sim.

Description. Encrusting growth form, size up to 3 × 2 cm, 0.2 cm thick. Texture soft and fragile. Surface smooth and uneven. Oscules 0.5-1 mm in diameter, open on surface. Colour dark brown in life, beige in alcohol. Ectosomal skeleton crust of small diplasters. Choanosomal skeleton formed by tylostyles in ascending bundle. Basal layer consist of large diplasters and large spirasters. Spicules, megascleres with tylostyle. Tylostyles have circular or oval head outline and taper to a rounded, stepped (rare), or sharp point. Microscleres, diplasters and spirasters, very variable in shape and size.

Spicules.

Megascleres	
Tylostyles	240-412 × 5-12 μm
Microscleres	
Large	23-30 μm
Small diplasters	6-12 μm
Large spirasters	32-35 μm
Small spirasters	11-23 μm

Etymology. This species is named after the type locality, Yongmeori, Jeju Island, Korea.

Remarks. *Diplastrella yongmeoriensis* n. sp. is closely related to *Diplastrella bistellata* (Schmidt, 1862) in growth form and skeleton structure but differs in the composition and size of spicules. Tylostyles of this new species are smaller than the latter. This new species has diplaster and spiraster, but the latter has only diplasters (Table 1).

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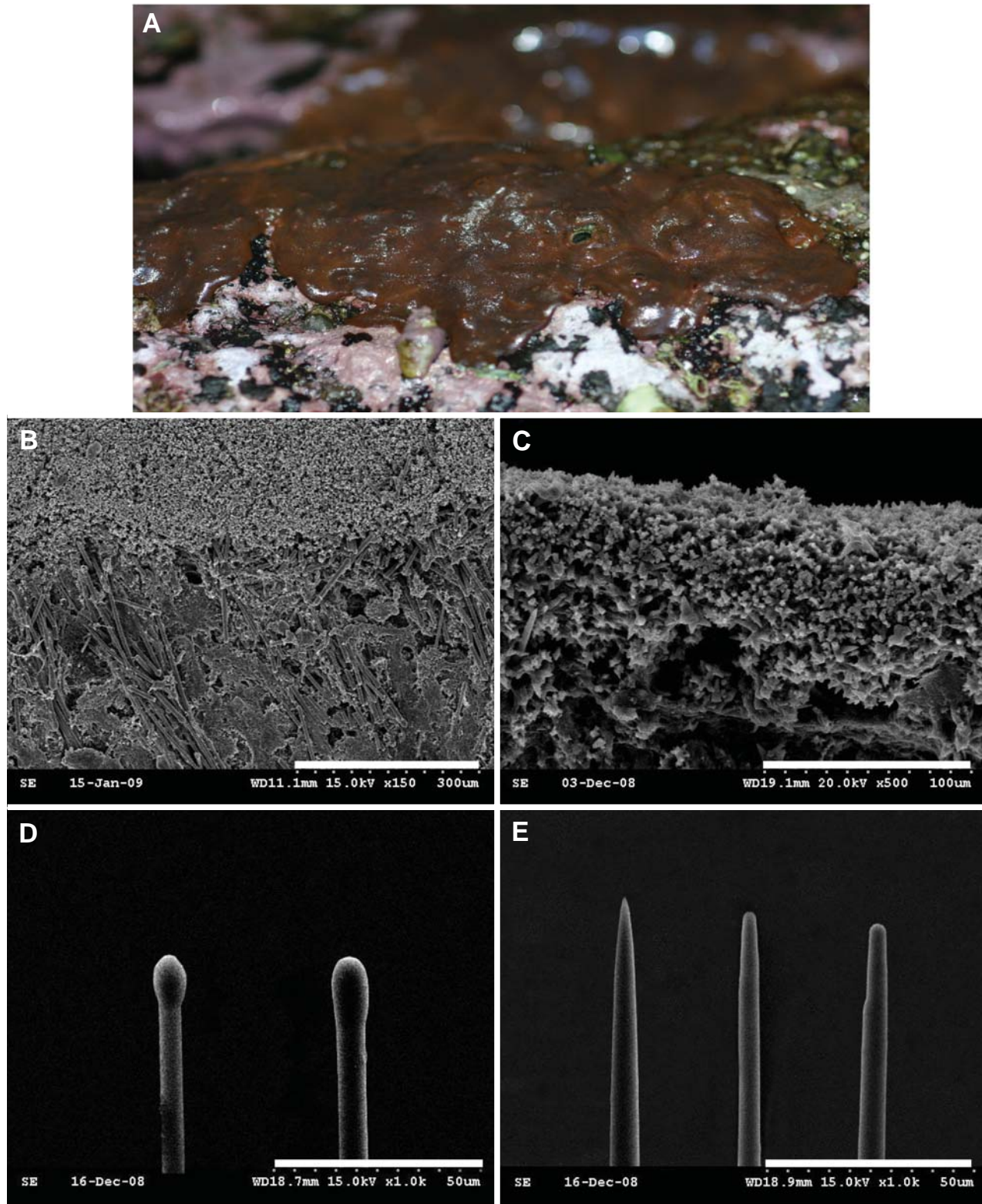


Fig. 1. *Diplastrella yongmeoriensis* n. sp. A, entire animal; B, skeletal structure; C, magnification of ectosomal region showing the small diplasters; D, heads of tylostyles; E, ends of tylostyles. Scale bars=300 µm (B), 100 µm (C), 50 µm (D, E).

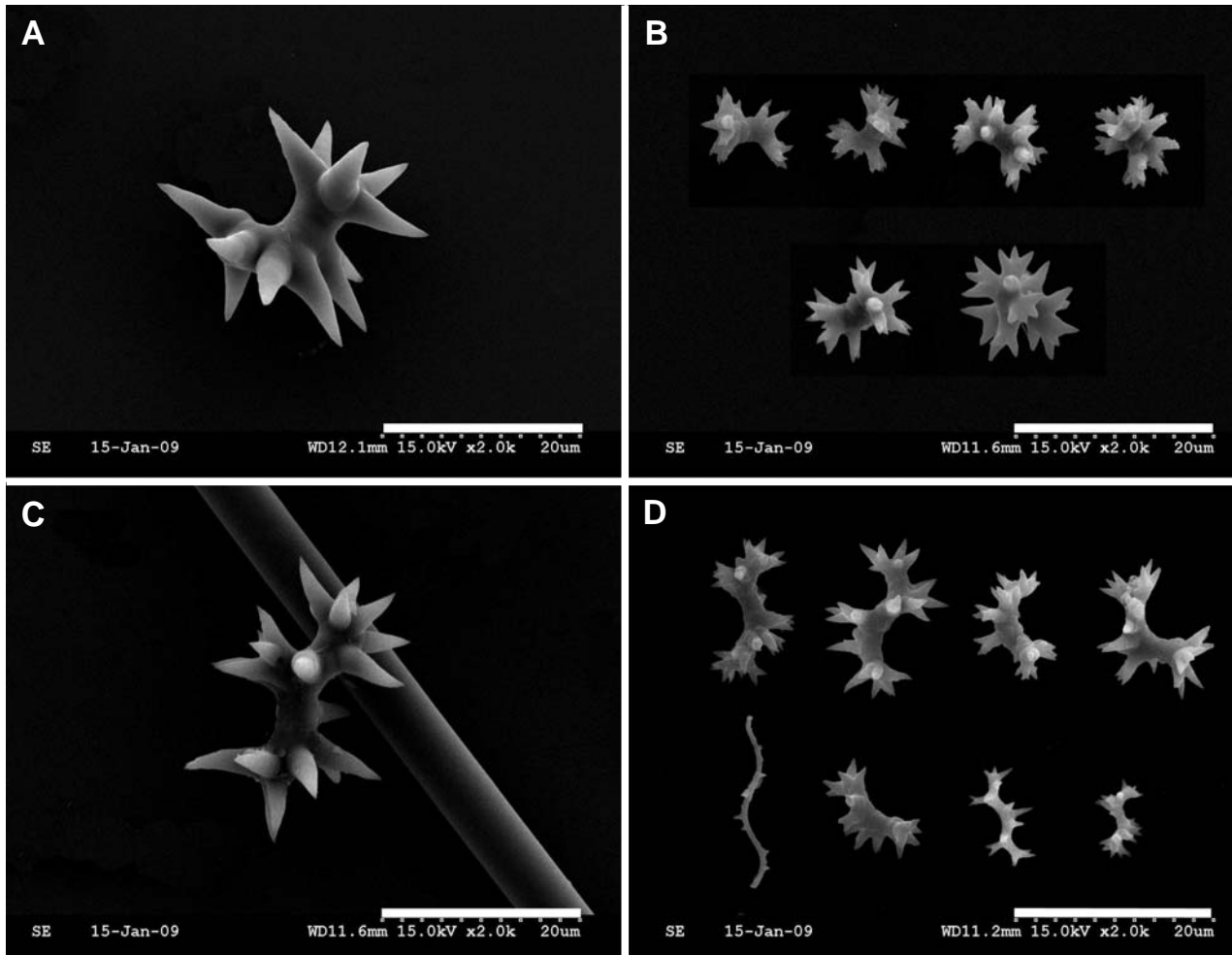


Fig. 2. *Diplastrella yongmeoriensis* n. sp. A, large diplaster; B, small diplasters; C, large spiraster; D, small spirasters. Scale bars =20 μ m (A-D).

Table 1. The character comparison between *D. yongmeoriensis* n. sp. and *D. bistellata*

Characters		Species	<i>D. yongmeoriensis</i> n. sp.	<i>D. bistellata</i>
	Growth form		Encrusting	Encrusting
	Colour		Brown	Red
	Tylostyle		240-412 \times 5-12	450-630 \times 10-13
Spicules (μ m)	Diplaster	Large	23-30	25-45
		Small	6-12	11-20
	Spiraster	Large	32-35	—
		Small	11-23	—

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