

# A New Species of the Genus *Iotrochota* (Demospongiae: Poecilosclerida: Iotrochotidae) from Korea

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## ABSTRACT

A new species *Iotrochota rutzleri* n. sp. (Demospongiae: Poecilosclerida: Iotrochotidae) was collected from intertidal zone, Sinyangri, Seongsanpo, Jejudo Island, Korea during 2008-2009. *Iotrochota rutzleri* n. sp. is similar to *I. baculifera* Ridley, 1884 in composition of spicules and skeletal structure. However, it is different in size of spicules, growth form and colour. All spicules of this new species are smaller than those of the latter.

**Keywords:** *Iotrochota*, Iotrochotidae, Korea

## INTRODUCTION

The family Iotrochotidae Dendy, 1922 contains six genera, *Amphistrella*, *Hymetrochota*, *Iotroata*, *Iotrochopsamma*, *Rotuloplocamia*, and *Iotrochota*. This family is characterized by birotulae. The genus *Iotrochota* consist of style and strongyle as megascleres. Ectosomal skeleton formed by an organic crust with scattered loose megascleres. Choanosomal skeleton has regular regulation of thick spicule tracts. Spongin is usually dark pigmented. About 15 species of this genus *Iotrochota* have been reported worldwide (Hooper and van Soest, 2002). Only one species of *Iotrochota* has been reported from Korean waters (Rho and Sim, 1976). This new sponge was collected by hand from intertidal zone, Sinyangri, Seongsanpo, Jejudo Island, Korea. All procedures were followed the methods of Rützler (1978) and Kim and Sim (2005). The materials examined in this study were deposited in the Natural History Museum, Hannam University, Daejeon, Korea.

## SYSTEMATIC ACCOUNTS

Phylum Porifera Grant, 1836  
Class Demospongiae Sollas, 1885  
Order Poecilosclerida Topsent, 1928  
Suborder Myxillina Hajdu, Van Soest & Hooper, 1994  
Family Iotrochotidae Dendy, 1922

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### <sup>1</sup>\**Iotrochota rutzleri* n. sp. (Figs. 1, 2)

**Material examined.** Holotype (Por. 102), Intertidal zone, Sinyangri, Seongsanpo, Jejudo Island, 15, Oct. 2008, C.J. Sim, Paratype (Por. 102-1), Intertidal zone, Sinyangri, Seongsanpo, Jejudo Island, 4, Jun. 2009, C.J. Sim.

**Description.** Thinly encrusting on the rock, size up to 5 × 5 cm, 5 mm thick. Surface rough owing to projecting bundle of spicules, partially covered with thin membrane. Oscules and pores invisible. Colour black in life. Texture smooth and slightly compressible. Skeleton regular reticulation of thick spicule tracts, mesh size 500-600 μm. Spicules two types of megascleres with style and strongyle. Strongyles more numerous in spongin, styles more numerous in fibre. Microscleres umbrella-shaped birotulae with six clads.

#### *Spicules.*

##### Megascleres

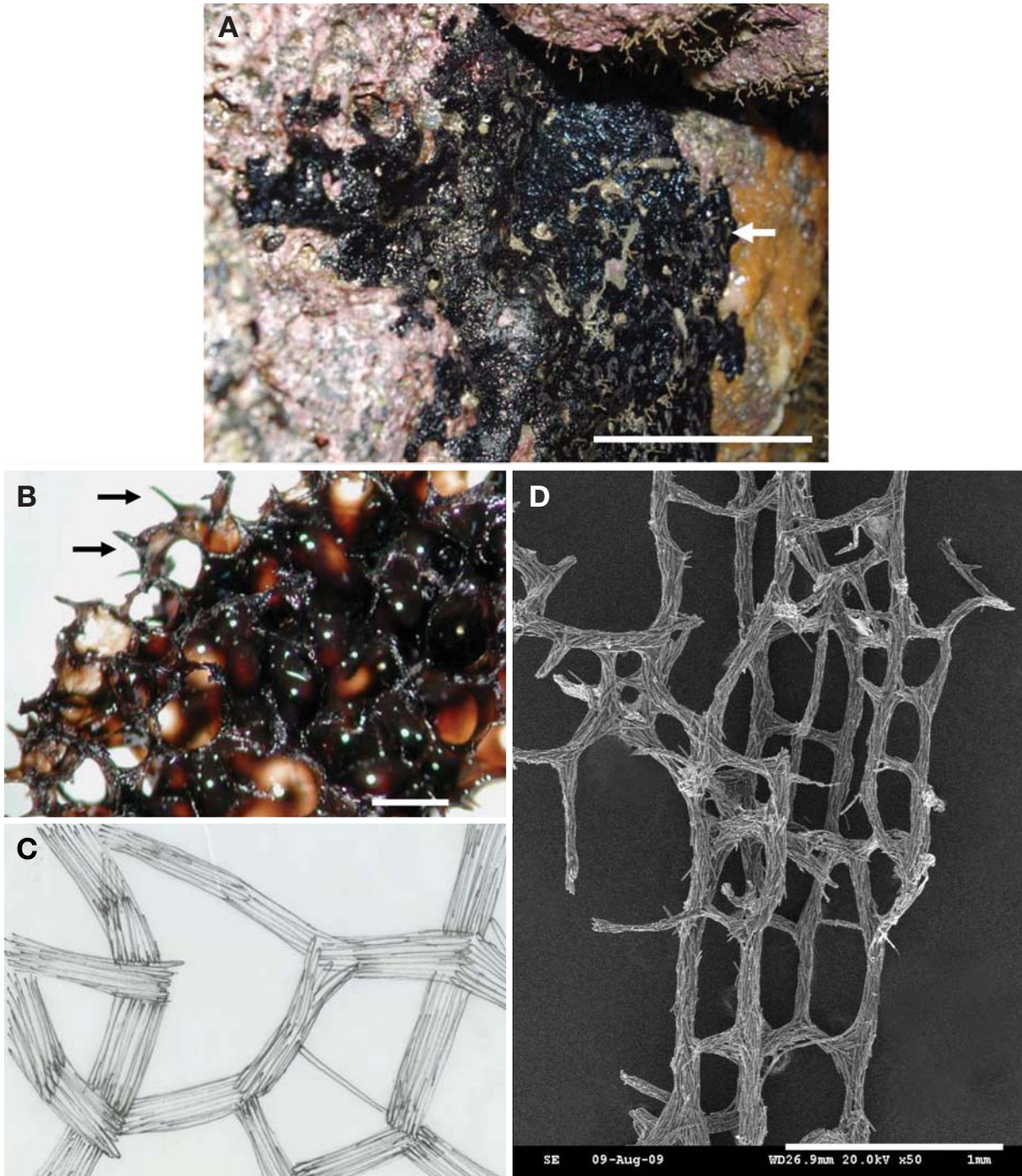
Thick style ..... 135-170 × 5-10 μm  
Thin style ..... 120-150 × 2.5 μm  
Thick strongyle ..... 150 × 7 μm  
Thin strongyle ..... 200-260 × 3-5 μm

##### Microscleres

Birotulae ..... 12.5-15 μm

**Remarks.** This species is similar to *Iotrochota baculifera* Ridley, 1884 in composition of spicules and skeletal structure but it differs in size of spicules, growth form and colour. All spicules of this new species are smaller than those of the latter. Also, megascleres are differentiated in longer-thinner and shorter-thicker categories. The growth form in new species is encrusting but erect in the latter. The colour is black in new species but dark crimson in the latter (Table 1).

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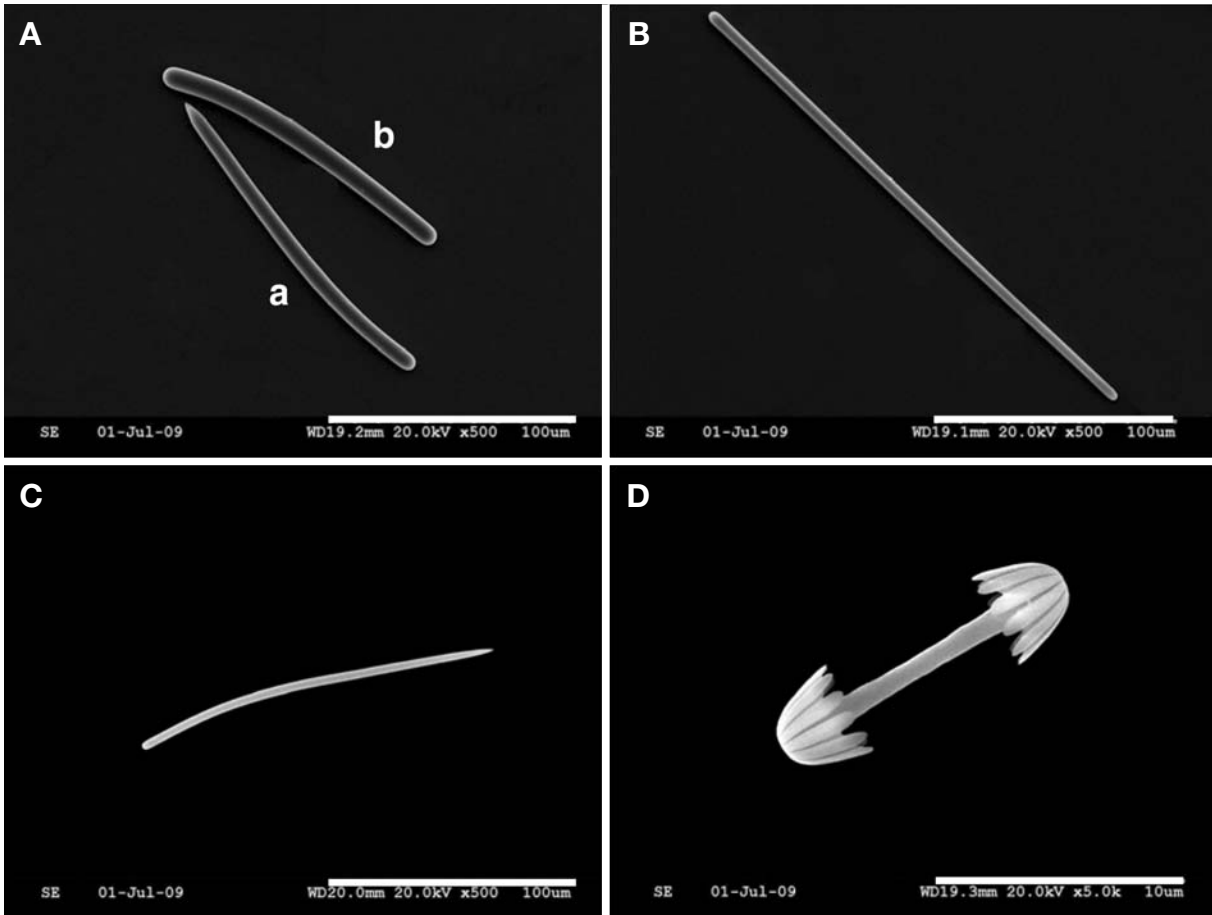


**Fig. 1.** *Iotrochota rutzleri* n. sp. A, entire animal (arrow); B, surface with spicule bundle (arrow); C, spicule tracts; D, skeletal structure. Scale bars=2 cm (A); 1 cm (B); 1 mm (D).

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**Fig. 2.** *Iotrochota rutzleri* n. sp. A, a, thick style; b, thick strongyle; B, thin strongyle; C, thin style; D, birotulae. Scale bars=100 µm (A-C); 10 µm (D).

**Table 1.** The characters comparison between *I. rutzleri* n. sp. and *I. baculifera*.

Characters			Species	
			<i>I. rutzleri</i> n. sp.	<i>I. baculifera</i> Ridley, 1884
Growth form			Thinly encrusting	Erect in subcylindrical lobes
Colour			Black	Dark crimson
Spicules (µm)	Style	Thick	135-170×5-10	200×9.5-12.7
		Thin	120-150×2.5	–
	Strongyle	Thick	150×7	220-280×6.3
		Thin	200-260×3-5	–
Biotulae			12.5-15	16

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