

## Two New Species of Genus *Suberites* (Hadromerida: Suberitidae) from Korea

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### ABSTRACT

Two new marine sponges in genus *Suberites*, *S. hataedoensis* n. sp and *S. waedoensis* n. sp have been collected from Hataedo Island and Waedo Island, Korea during 2005-2006. *S. hataedoensis* n. sp. is similar to *S. durissimus* in the spicule composition and texture. However, they differ in growth form, skeleton and surface. *S. waedoensis* n. sp. is similar to *S. japonicus* in spicule composition and skeleton. However, they differ in growth form, surface and texture.

**Key words:** new species, *Suberites*, Korea

### INTRODUCTION

The genus *Suberites* belongs to the family Suberitidae. Approximately 80 species have been reported worldwide. Among them, eight species have been reported from Korean waters (Kim et al., 1968; Rho and Sim, 1972; Rho and Sim, 1976; Sim, 1981; Sim et al., 1992). This genus may be characterized by the surface velvety due to the palisade of small tylostyles. The ectosomal skeleton consisting of bouquets of small tylostyles carried by subradiate bundles of large tylostyles. The choanosomal skeleton confused or alveolar arrangement of large tylostyles (Hooper and Van Soest, 2002).

All procedures were followed by the methods of Rützler (1978) and Kim and Sim (2005). Type specimens are deposited in the Natural History Museum, Hannam University (HUNHM) and Department of Biological Science, Hannam University, Daejeon, Korea.

### SYSTEMATIC ACCOUNTS

Phylum Porifera Grant, 1836  
Class Demospongiae Sollas, 1885  
Order Hadromerida Topsent, 1894  
Family Suberitidae Schmidt, 1870

<sup>1</sup>\**Suberites hataedoensis* n. sp. (Fig. 1)

*Material examined.* Holotype (Por. 89), Ganseo, Hatae-ri,

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Sinan-gun, Jeollanam-do, 25 Jul. 2005, SCUBA diving 20 m deep, K.J. Lee and H.J. Kim, deposited in HUNHM, Korea.

*Description.* Body massively encrusting, size up to 12 × 9 cm and 1.5 cm thick. Cortex 1 mm thick. Texture hard and firm. Surface covered with mammila 1-5 mm wide. Color orange in life, gradually changed to beige in alcohol. Oscules 0.5-1 mm diameter, apical on mammila. Ectosomal skeleton densely packed tylostyles to the sponge surface, points outward. Choanosomal skeleton subradiate by bundles of large tylostyles. Megascleres with two sizes of tylostyles. Small tylostyles almost in ectosome. No microscleres.

*Spicules.*

Megascleres

Large tylostyle ..... 500-1,030 × 10-20 μm

Small tylostyle ..... 125-410 × 3-10 μm

*Etymology.* This species is named after the type locality, Hataedo Island, Korea.

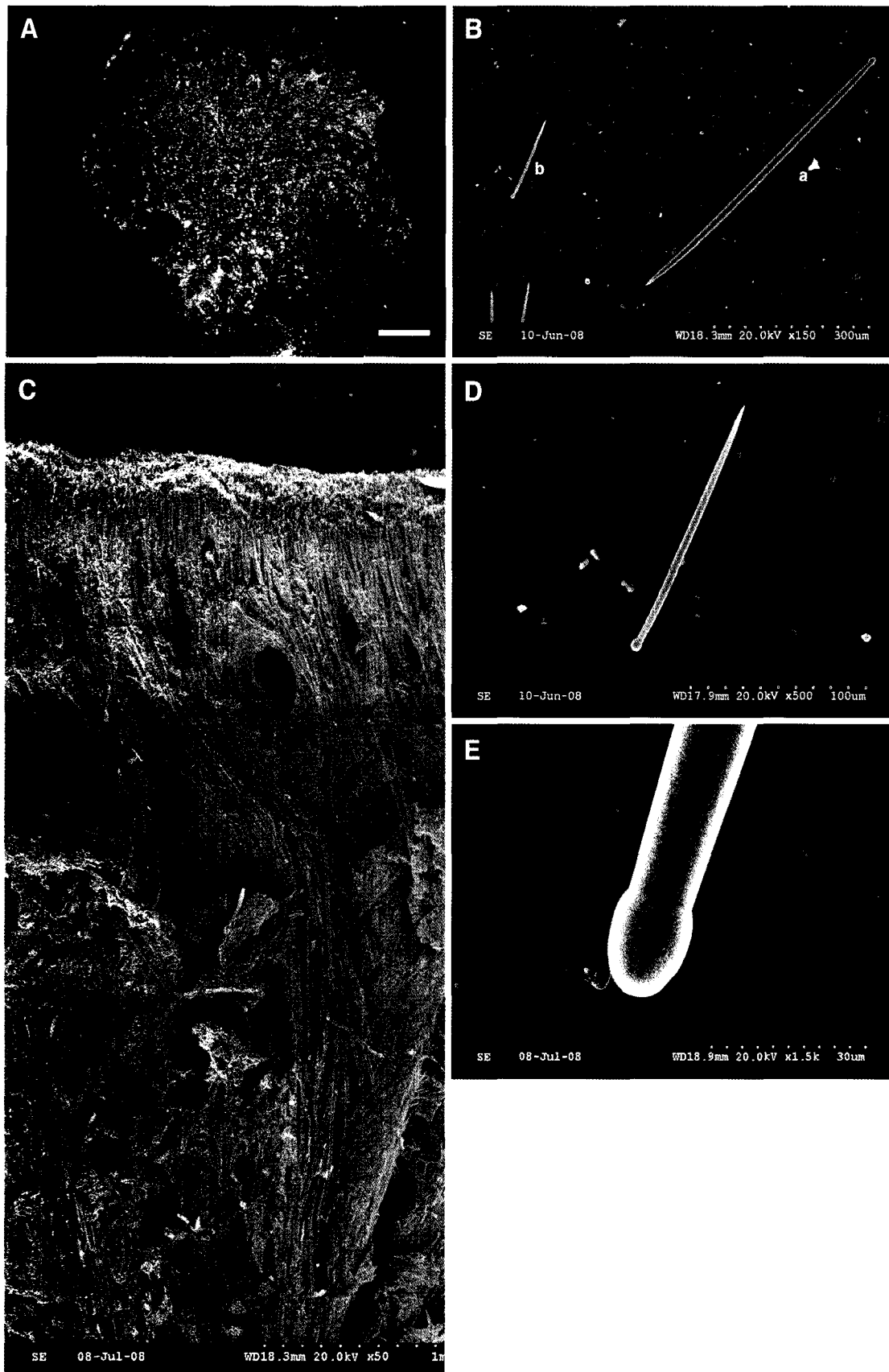
*Remarks.* This new species is similar to *S. durissimus* De Laudenfels, 1935 in spicule composition but they differ in growth form, skeleton and surface (Table 1).

<sup>2</sup>\**Suberites waedoensis* n. sp. (Fig. 2)

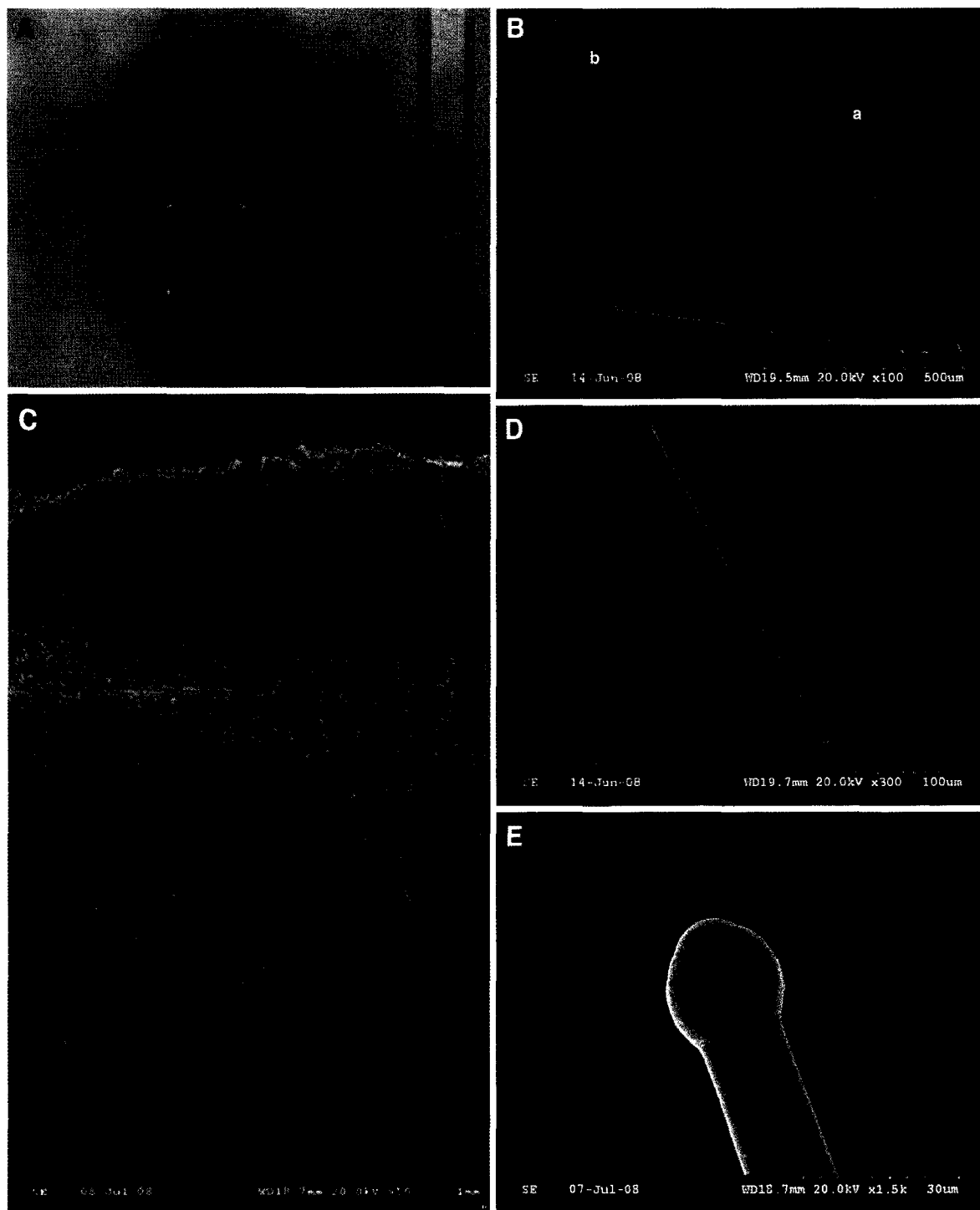
*Material examined.* Holotype (Por. 90), Namhyungjeseom, Waedo, Busan, 16 Oct. 2006. SCUBA diving 20 m deep, J.H. Jeong, deposited in HUNHM, Korea.

*Description.* Body cushion shape, size up to 12 × 6.5 cm and 4 cm thick. Texture soft. Surface covered with wrinkles. Oscule 2-4 mm in diameter appear rarely. Ectosomal skeleton tylostyles arranged to the sponge surface, points outward. Choanosomal skeleton densely packed large tylo-

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**Fig. 1.** *Suberites hataedoensis* n. sp. A, entire animal; B, spicules (a, large tylostyle; b, small tylostyle); C, skeletal structure; D, small tylostyle; E, head of large tylostyle. Scale bars=2 cm (A), 300  $\mu$ m (B), 1 mm (C), 100  $\mu$ m (D), 30  $\mu$ m (E).



**Fig. 2.** *Suberites waedoensis* n. sp. A, entire animal; B, spicules (a, large tylostyle; b, small tylostyle); C, skeletal structure; D, small tylostyle; E, head of large tylostyle. Scale bars=3 cm (A), 500  $\mu$ m (B), 1 mm (C), 100  $\mu$ m (D), 30  $\mu$ m (E).

styles in confusion. Color orange in life and in alcohol. Megascleres with two sizes of tylostyles. Small tylostyles almost in ectosome. No microscleres.

*Spicules.*

Megascleres

Large tylostyle ..... 510-900  $\times$  10-16  $\mu$ m

Small tylostyle ..... 160-340  $\times$  5-6  $\mu$ m

*Etymology.* This species is named after the type locality, Waedo Island., Korea.

*Remark.* This new species is similar to *S. japonicus* Thiele, 1898 in spicule composition and skeleton but they differ in growth form, surface and texture. The small gastropod,

**Table 1.** The comparison of characters both *S. hataedoensis* n. sp. and *S. durissimus*

Species	<i>S. hataedoensis</i> n. sp.	<i>S. durissimus</i>
Growth form	Massively encrusting	Subspherical
Skeleton	Subradiate	Between radiate and semiplumose
Surface	Mammilla	Even

**Table 2.** The comparison of characters both of *S. waedoensis* n. sp. and *S. japonicus*

Species	<i>S. waedoensis</i> n. sp.	<i>S. japonicus</i>
Growth form	Subspherical	Cushion
Surface	Finely wrinkled	Smooth
Texture	Hard and compressible	Hard

crustacea and starfishes lodged in the surface cavity of *S. waedoensis*. The color of *Suberites* is gradually changed in alcohol but *S. waedoensis* continued original color in alcohol (Table 2).

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