

A New Species of the Genus *Penares* (Demospongiae: Astrophorida: Ancorinidae) from Korea

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ABSTRACT

A new marine sponge in the family Ancorinidae, *Penares hongdoensis* n. sp. was collected from Hongdo Island, Korea by SCUBA diving in 2004. *P. hongdoensis* n. sp. is closely related to *P. cortius* de Laubenfels, 1930 in their spicules. However, they differ in kind and size of spicules and growth form. The dichotriaene rhabds of new species are larger than that of *P. cortius*. And the new species has oxyaster, but *P. cortius* has oxyspheraster. Although the growth forms of both species are irregular massive, this new species shows conspicuous long projection toward upper part.

Key words: *Penares*, Ancorinidae, Korea

INTRODUCTION

The genus *Penares* is characterized by irregularly massive, having dichotriaenes, oxeas, smooth microrhabds, centrotylote or not, forming a crust in the ectosome and euaster (Hooper and van Soest, 2002). The genus *Penares* is containing about 25 described species worldwide (van Soest, 2008). Three species of *Penares* have been reported from Korean waters (Kim et al., 1968; Sim, 1981). The present taxonomic study on marine sponge was based on the specimens collected by SCUBA from Hongdo Island, Korea in 2004. All procedures were followed the methods of Kim and Sim (2005) and 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 Astrophorida Sollas, 1888

Family Ancorinidae Schmidt, 1870

¹**Penares hongdoensis* n. sp. (Figs. 1-2)

Material examined. Holotype (Por. 95), Hongdo (Nammunbawi), Heuksan-myeon, Sinan-gun, Jeollanam-do, 9 September 2004, SCUBA diving 20 m deep, K.J. Lee, deposited

in HUNHM, Daejeon, Korea. Paratype (Por. 95-1), collected with holotype, deposited in the Department of Biological Sciences, Hannam University, Daejeon, Korea.

Description. Growth form irregular massive, size up to 7.5 × 5 × 6 cm. Texture slightly compressible. Surface smooth densely projection each projection 1-6 cm high, scattered numerous ostia. Oscules apical to each fistulose 0.5-1 mm in diameter. Colour dark gray in life which gradually changed to dark beige in alcohol. Ectosomal skeleton palisade with bicurvate microstrongyle. Choanosomal skeleton confused with dichotriaenes, oxeas and scattered oxyasters. Spicules, megascleres, oxea and dichotriaene. Microscleres, bicurvate microstrongyle and oxyaster.

Spicules.

Megascleres

Oxeas 650-1,300 × 9-30 μm

Dichotriaenes rhabds 560-850 × 37-50 μm

clads 125-290 × 40-50 μm

Table 1. The comparison of characters between *P. hongdoensis* n. sp. and *P. cortius*

Characters	<i>P. hongdoensis</i> n. sp.	<i>P. cortius</i> de Laubenfels, 1930
Growth form	Irregularly massive	Irregularly massive
Colour	Dark gray	Beige
Spicules (μm)		
Oxeas	650-1,300 × 9-30	950 × 22
Dichotriaene		
Rhabds	560-850 × 37-50	400 × 50
Clads	125-290 × 40-50	310 × 50
Bicurvate microstrongyles	50-160 × 3-9	50-160 × 3-8
Oxyasters	20-40	Oxyspherasters 9-25

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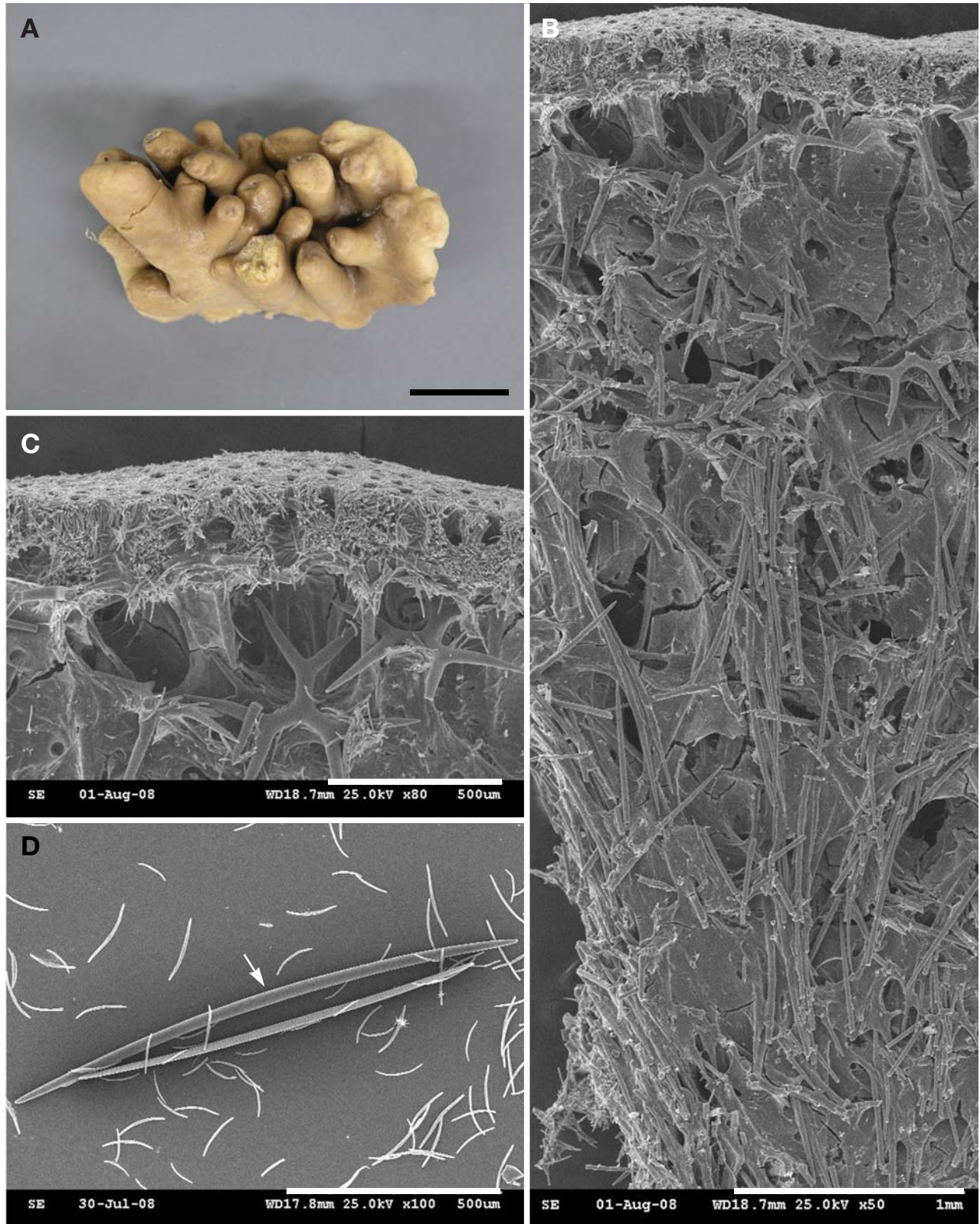


Fig. 1. *Penares hongdoensis* n. sp. A, entire animal; B, skeleton structure; C, ectosomal skeleton (palisade with microstrogyles); D, oxea (arrow). Scale bars=2 cm (A), 1 mm (B), 500 μ m (C, D).

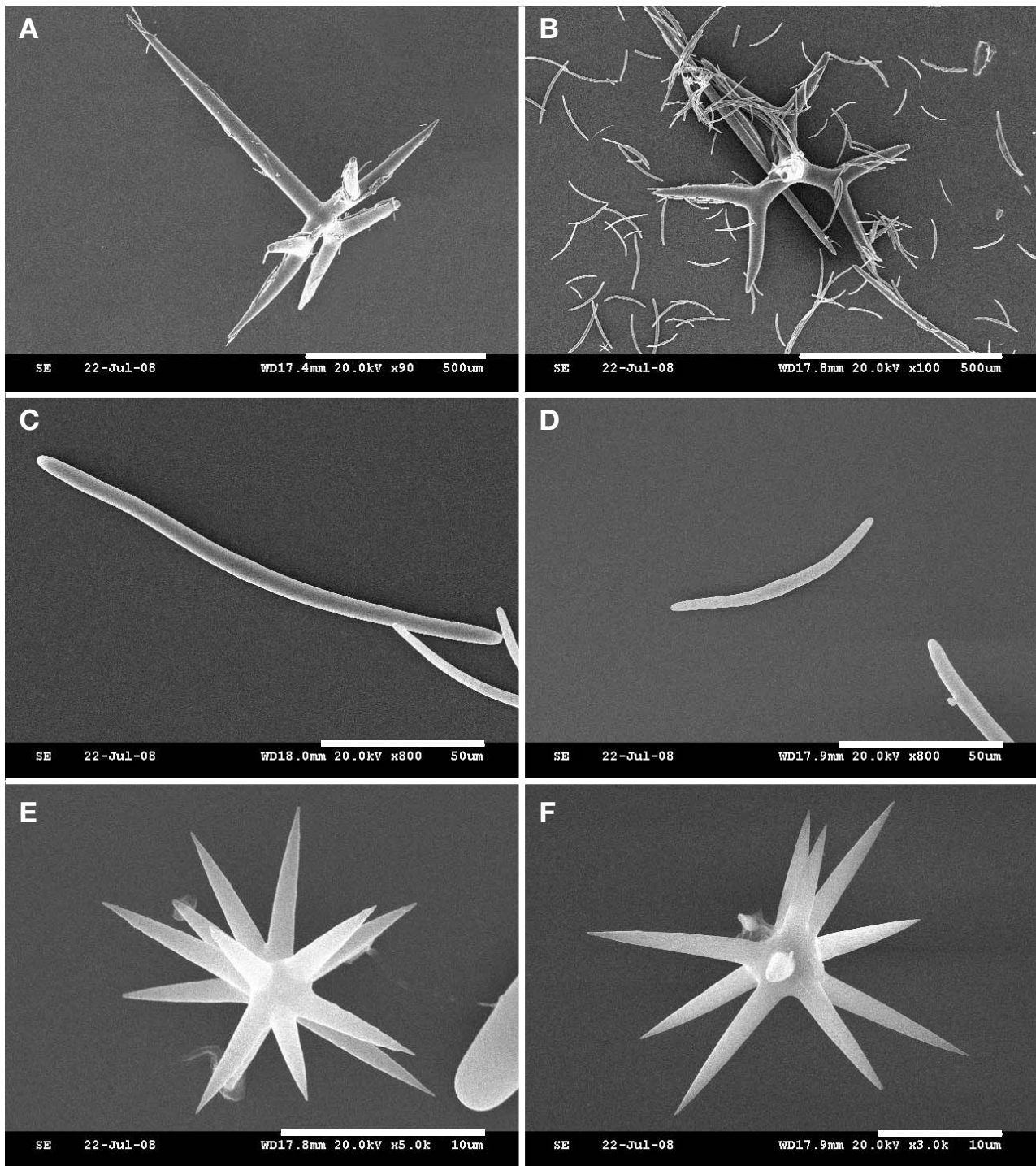


Fig. 2. *Penares hongdoensis* n. sp. A, dichotriaene; B, clad of dichotriaene; C, D, bicurvate microstrongyle; E, F, oxyaster. Scale bars=500 μ m (A, B), 50 μ m (C, D), 10 μ m (E, F).

Microscleres

Bicurvate microstrongyles 50-160 \times 3-9 μ m

Oxyasters 20-40 μ m

Etymology. This species is named after the type locality,

Hongdo Island, Korea.

Remarks. *P. hongdoensis* n. sp. is closely related to *P. cortius* in their spicules. However, they differ in kind and size of spicules. The dichotriaene rhabd of new species is larger than

that of *P. cortius*. And the new species has oxyaster, but *P. cortius* has oxyspheraster. Although the growth forms of both species are irregular massive, this new species shows conspicuous long projection towards upper part (Table 1).

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