

One New Species of Tetractinomorpha (Spirophorida)
from Chugsan in Korea

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韓國 丑山産 四放海綿類의 一新種에 關하여

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摘 要

저자들이 1975년부터 1980년까지 동해안에서 採集된 四放海綿類를 同定한 結果, 이들 중 스피로포리다 해면目 유두해면科의 한종이 신종으로 밝혀져, *Tetilla koreana*로 命名하고 記載 報告한다. 이 종은 특징있는 태생형 (viviparous)의 유성생식을 하며 성체의 체내 (endosome)에 많은 발생배 (embryo or young sponge)를 품고 있다. 完模式 標本은 梨大 自然史 博物館에 副模式 標本은 梨大 生物學科에 보관하고 있다.

The present investigation is an extensive work for the study on the Tetractinomorpha, based upon the material collected from East Sea during the period from 1975 to 1980.

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Order Spirophorida Levi, 1956 스피로포리다 해면목

Family Tetillida Sollas, 1886 유두해면과

***Tetilla koreana* sp. nov.** 한국유두해면

(pl. 1, figs. 1-4, pl. 2, fig. 1-4)

Occurrence

Seventeen specimens, Chugsan, April 26, 1976

Holotype

Natural History Museum of Ewha Womans University, por. 4 (One specimen) (Apr. 26, 1976)

Paratypes

Department of Biology, Ewha Womans University, por. 4-1 (Sixteen specimens) (Apr. 26, 1976)

Description

Holotype specimen is round or subspherical and has many rooting processes with long hair like spicules.

Dimension: 6 cm high, 6 cm in diameter

Colour: Dirty brown

Texture: Firm but compressible

Surface: Covered with long hair like spicules

Skeleton: Megascleres are arranged with radial bundles and running from the center to the periphery.

Measurement of spicules (μ):

Parent:

Megascleres:

- (a) Small oxea.....1144
- (b) Large oxea6000-83000
- (c) Anatriaenes6000-9000 (clad, 98-140)
- (d) Protriaenes.....4000-6000 (clad, 210-266)

Microscleres:

- (a) Sigmaspirae13

Embryo:

Megascleres:

- (a) Oxea420-630
- (b) Protriaenes.....700-840 (clad, 98-112)
- (c) Anatriaenes560-840-1050 (clad, 42)

Microscleres:

- (a) Sigmaspirae8-10

Remarks

This new species is related to *Tetilla ovata* (Thiele, 1898), (Lendenfeld, 1903; Lebwahl, 1914) in the spicules type, but it is distinguished from the latter by the external feature. *Tetilla ovata* has oscula on the top and its surface is mammillate but present new species smooth and also *Tetilla koreana* sp. nov. is similar to *T. australe*, Bergquist, 1968, (Rho and Sim, 1979) as the pattern of reproduction, young sponges were found within the endosome but the two species are clearly distinguishable when their young sponges within the parent are compared with each other (See Table 1). The spicules of young sponges changes with age as Burton's paper (1931).

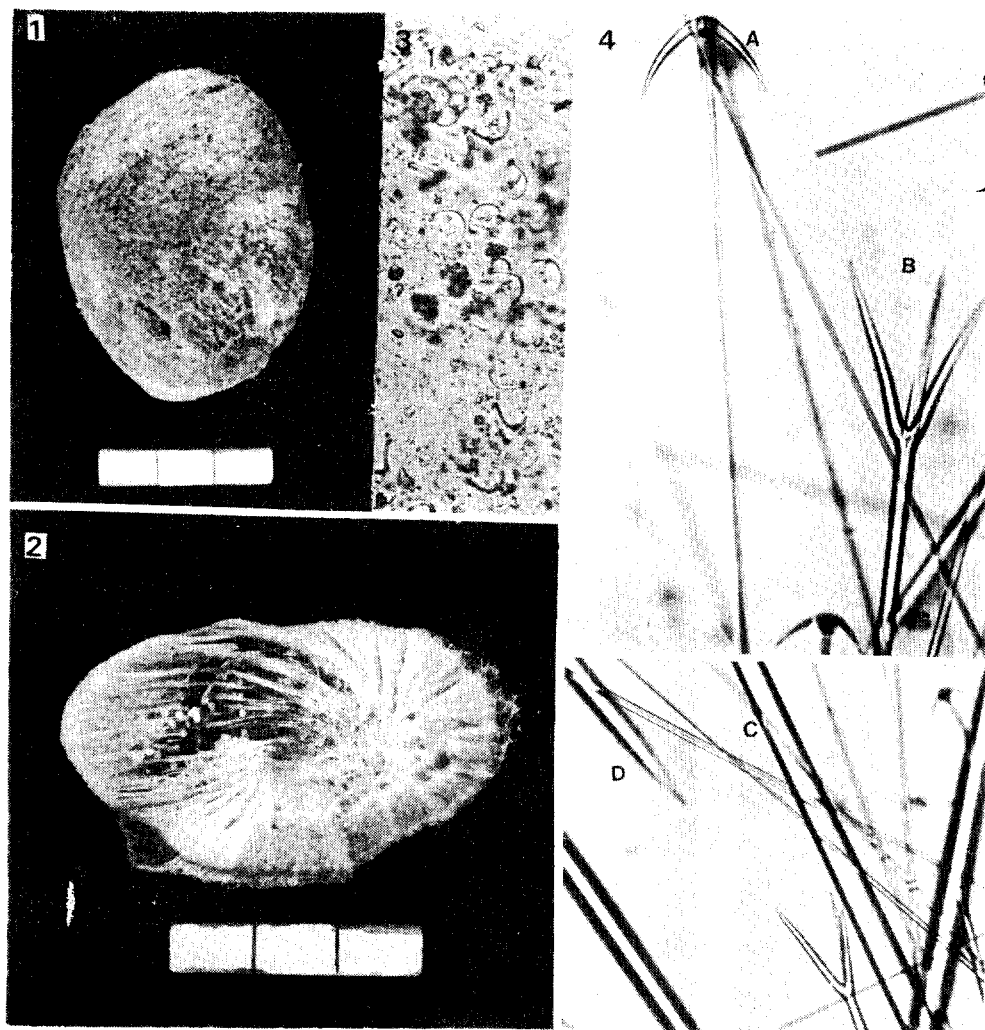
Table 1. Comparison between the *Tetilla koreana* and *T. australe*

	Parent		Embryo	
	<i>Tetilla koreana</i>	<i>Tetilla australe</i>	<i>T. koreana</i>	<i>T. australe</i>
Size	6cm long, 6cm wide	5cm long, 4cm wide	0.8~1mm long 0.8~1mm wide	1.5mm long 1.1mm wide
Surface	Smooth	Rough	Rough	Smooth
Spicule	Megascleres:	Megascleres:	Megascleres:	Megascleres:
Dimension (μ)	large oxea 6000-8300×	large oxea 4000-6000×55	oxea 420-630	large oxea 1000×12
	small oxea 1144×	small oxea 900-1200×45-50		small oxea 400-600×6
	protriaenes 4000-6000 (clad 210-266)	protriaenes 3110-3165 (clad 110-165)	protriaenes 700-840 (clad 98-112)	protriaenes 726-730 (clad 26-30)
	anatriaenes 6000-9000 (clad 98-140)	anatriaenes 5000-6000 (clad 110-130)	anatriaenes 560-84-1050 (clad 42)	anamonaenes 1200
	Microscleres: sigmaspirae 13	Microscleres: sigmaspirae 12	Microscleres: sigmaspirae 8-10	Microscleres: sigmaspirae 12

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PLATE 1



(one scale measures 1cm)

Fig. 1. *Tetilla koreana* sp. nov.

Fig. 2. Embryos embedded in parent endosome

Fig. 3. Types of parent spicules Sigmaspirae $\times 450$

Fig. 4. A. Anatriaen $\times 100$

B. Protriaene $\times 100$

C. Large oxea $\times 100$

D. Small oxea $\times 100$

PLATE 2

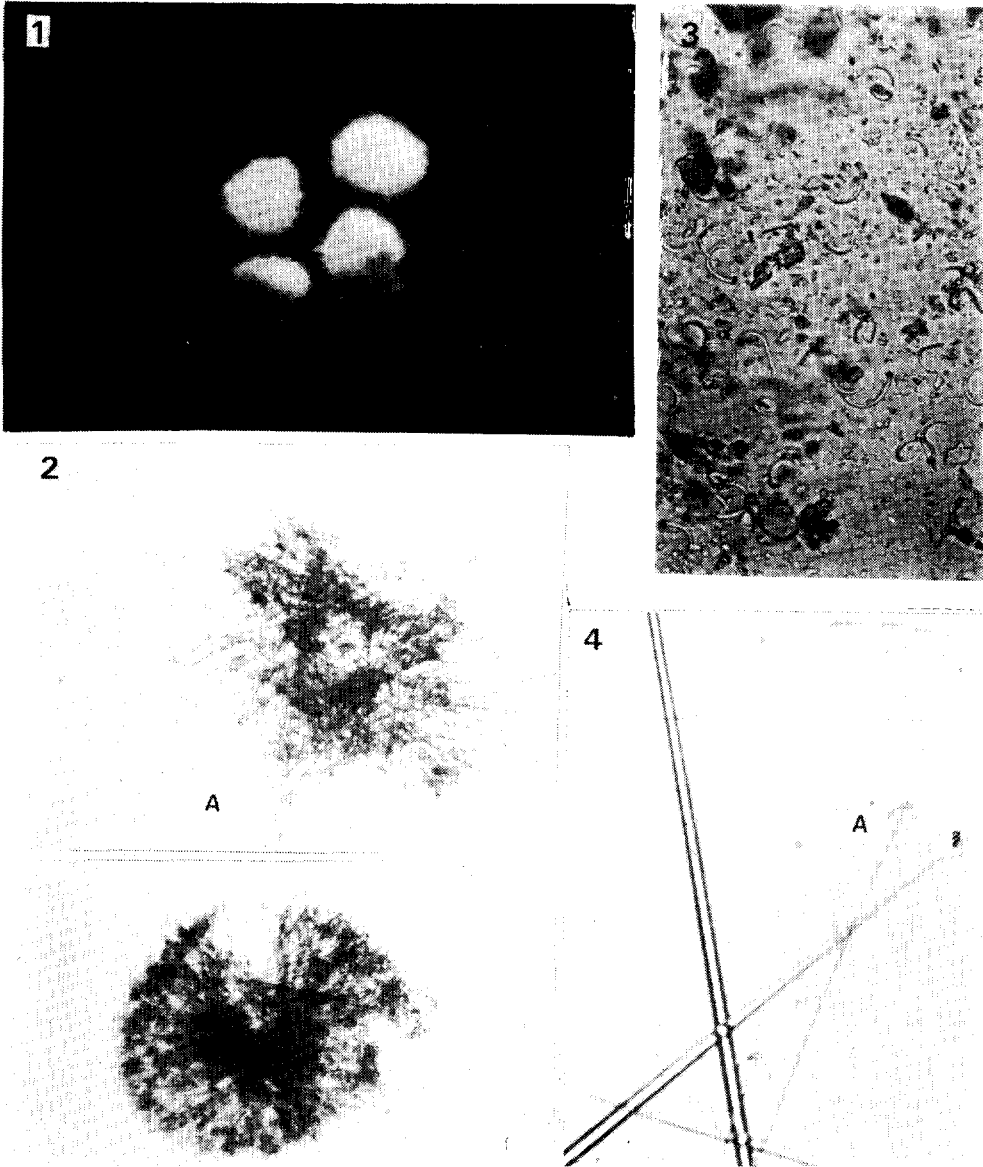


Fig. 1. Embryos of *Tetilla koreana* $\times 60$

Fig. 2. Types of embryo spicules

A. Protriaen $\times 40$

Fig. 3. Sigmaspirae $\times 450$

Fig. 4. A. Anatriaen $\times 100$