

A Taxonomic Study on the Korean Sponges

6. Calcarea

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韓國產 海綿類의 分類에 關하여

6. 石灰海綿類

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摘 要

著者들이 1970년부터 1978년까지 南韓의 三面 島嶼地方에서 채집된 石灰海綿類를 同定 分類한 결과 다음과 같은 4種의 韓國未紀錄種이 밝혀졌다 : *Leucandra sagamiana* Hozawa, 1929, *Leucandra multituba* Hozawa, 1929, *Leucandra foliata* Hozawa, 1918, *Leucandra dura* Hozawa, 1929.

The present investigation is an extensive work for the taxonomic study on the marine sponges in Korea. The following accounts of the Calcarea sponges are based upon the materials collected mainly by the authors from two islands, Ulreung-do and Jeju-do, during the period from 1970 to 1978.

This paper is given four unrecorded species in the Korean fauna of the sponges. Here the authors are deeply grateful to Dr. Byung D. Lee, Director of Korea Ocean Research and Development Institute, for his help with the valuable literatures.

1. *Leucandra sagamiana* Hozawa, 1929 거친나팔해면 (신칭)
(Pl. 1; Figs. 1-9)

Leucandra sagamiana Hozawa, 1929, pp. 353-356, pl. IX, figs. 53, 54, text-fig. 27; 1940, pp. 64-65, figs. 109-111.

Materials examined : Two specimens, Seogwipo, August 8, 1970.

Description: The sponge represents a solitary, sac-like shape, broadly round at base and narrowed towards the upper end. A well developed fringe is found around the osculum. The dermal surface is strongly hispid on account of projecting large oxea and hair-like oxea. Colour is dirty grey but oscular fringe is white. Texture is firm. Total length is 20mm, including the oscular fringe of about 6mm height and 10mm in the greatest breadth. The sponge wall is 4mm thick in the middle part of the body. The canal system is the leuconoid type.

- Spicules 1) Dermal triradiate: basal ray, 340—350 μ long, 20—30 μ thick at base, paired ray, 300—340 μ long, 20—30 μ thick at base.
 2) Gastral triradiate: basal ray, 300—305 μ long, 14 μ thick, paired ray, 150—180 μ long, 14 μ thick.
 3) Gastral quadriradiate: apical ray, 70 μ long, 10 μ thick.
 4) Triradiates of oscular margin: basal ray, 350—490 μ long, 8 μ thick, paired ray, 140—180 μ long, 4 μ thick.
 5) Large oxea of body surface: 1.5—2.3mm long, 56—70 μ thick.
 6) Hair-like oxea of body surface: 2.8mm long, 4 μ thick.
 7) Gastral microxea: 140 μ long, 3 μ thick.
 8) Linear spicules of oscular margin: 3—3.5mm long, 10—18 μ thick.

Distribution: Korea Strait: Sagami Bay (Japan)

2. *Leucandra multituba* Hozawa, 1929 많은나팔해면(신칭)
 (Pl. 2: Figs, 1—9)

Leucandra multituba Hozawa, 1929, pp. 365—367, pl. X, figs. 61, 62, text-fig. 31; 1940, pp. 67—68, figs. 116—117; Tanita, 1942, pp. 55—56, pl. IV, fig. 25.

Materials examined: Many specimens, Ulreung-do, July 27, 1976.

Description: The largest specimen is a colony of many individuals broadly united together at their bases. It is irregularly hemispherical form with a height of 15mm, and maximum diameter of 25mm. The individuality is indicated by the oscular, 1—2mm in diameter. The dermal surface is hispid with projecting spicules. The colour is brownish white and texture is very firm and elastic. The canal system is the leuconoid type.

- Spicules 1) Dermal triradiate: basal ray, 140 μ long, 14 μ thick, paired ray, 112 μ

long, 14μ thick.

- 2) Gastral quadriradiate: apical ray, 40μ long, 14μ thick,
- 3) Quadriradiate: apical ray, 30μ long, 10μ thick.
- 4) Triradiate of oscular margin: basal ray, 224μ long, paired ray, 140μ long, 7μ thick.
- 5) Large oxea: $400-1500\mu$ long, 70μ thick.
- 6) Microxea: $70-100\mu$ long, 3μ thick.
- 7) Linear spicules of oscular margin: 2mm long, 3μ thick.

Distribution: East Sea; Misaki, Sagami Bay (Japan)

3. *Leucandra foliata* Hozawa, 1918 일나팔해면 (신칭)
(Pl. 1; Figs. 10—15)

Leucandra foliata Hozawa, 1918, pp. 547—549, pl. 84, fig. 5, text-fig. 9; 1929, pp. 370—371, pl. XI, fig. 65; 1940, p. 73, figs. 127—128; Tanita, 1942, p. 47, pl. IV, fig. 21.

Material examined: One specimen, Seogwipo, April 4, 1975.

Description: The sponge is foliate shape of 10mm diameter and the one side of specimen is broken off. The wall of sponge is 4mm in the middle part and it becomes gradually thinner towards the oscular margin. The dermal surface is smooth but minutely punctuated. The colour is white and texture is hard.

- Spicules
- 1) Dermal regula triradiate: 300μ long, 30μ thick.
 - 2) Dermal sagittal triradiate: basal ray, $116-200\mu$ long, 25μ thick. paired ray, $80-110\mu$ long, 25μ thick.
 - 3) Gastral quadriradiate: apical ray, 40μ long, 14μ thick.
 - 4) Microxea: $56-70\mu$ long.

Distribution: Korea Strait; Off Osezaki, Kyushu, Off Wiigima, Sagami Bay (Japan)

4. *Leucandra dura* Hozawa, 1929 나무나팔해면 (신칭)
(Pl. 2; Figs. 10—16)

Leucandra dura Hozawa, 1929, pp. 371—374, pl. XII, figs. 66—68, text-fig. 33; 1933, p. 15, pl. I, fig. 7; 1940, p. 74, figs. 129—130; Tanita, 1942, p. 47, pl. III,

fig. 20.

Material examined: One specimen, Seogwipo, December 26, 1971.

Description: The sponge forms amorphous mass with a height of 28mm and a breadth of 35mm. The osculum is not observed. The dermal surface appears nearly smooth. The colour in alcohol is greyish white and texture is compact and woody. The canal system is the leuconoid type and very narrow gastral cavity is only 2mm in calibre.

Spicules 1) Dermal triradiate: 70—280 μ long, 10—25 μ thick.

2) Triradiate of chamber layer: 500—900 μ long, 60—90 μ thick.

3) Quadriradiate: apical ray, 50 μ long.

4) Gastral triradiate: basal ray, 98 μ long, 14 μ thick, paired ray, 238 μ long, 25 μ thick.

5) Gastral quadriradiate: apical ray, 70 μ long.

6) Microxea: 30—70 μ long, 4 μ thick.

Distribution: Korea Strait; Misaki, Sagami Bay (Japan)

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EXPLANATION OF PLATES**Plate 1****Figs. 1-9.** *Leucandra sagamiana* Hozawa, 1929

1. Entire animal (one scale=1cm)
2. Linear spicules of oscular margin X100
3. Gastral microxea X450
4. Large oxea of body surface X40
5. Gastral triradiate X100
6. Triradiate of oscular margin X100
7. Hairlike oxea of body surface X40
8. Dermal triradiate X100
9. Gastral quadriradiate X100

Figs. 10-15. *Leucandra foliata* Hozawa, 1918

10. Entire animal, surface part (one scale=1cm)
11. Entire animal, gastral part
12. Microxea X450
13. Gastral quadriradiate X100
14. Dermal sagittal triradiate X100
15. Dermal regular triradiate X100

Plate 2**Figs. 1-9.** *Leucandra multituba* Hozawa, 1929

1. Entire animal, upper part (one scale=1cm)
2. Entire animal, side part (one scale=1cm.)
3. Large oxea X100
4. Dermal triradiate X100
5. Linear spicules of oscular margin X100
6. Triradiate of oscular margin X100
7. Gastral quadriradiate X100
8. Quadriradiate X100
9. Microxea X100

Figs. 10-16. *Leucandra dura* Hozawa, 1929

10. Entire animal (one scale=1cm.)
11. Microxea X450
12. Chamber layer triradiate X100
13. Gastral triradiate X100
14. Gastral quadriradiate X100
15. Quadriradiate X100
16. Dermal triradiate X100

Plate 1

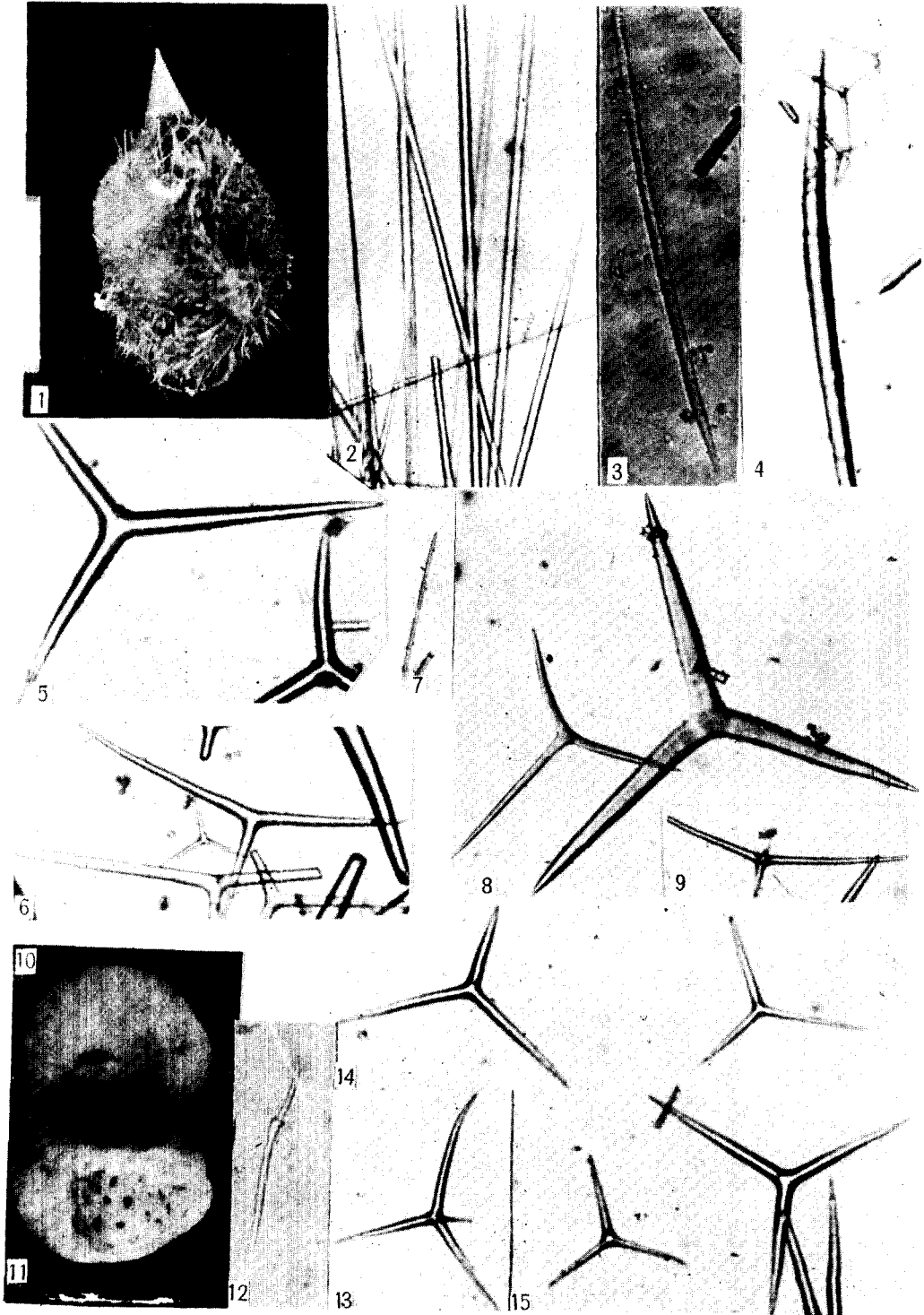


Plate 2

