

A Taxonomic Study on the Marine Sponges in Korea  
4. Choristida (Geodiidae)

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韓國產 海產海綿類의 分類學的 研究

4. 코리스티다해면류(조디아해면과)

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摘 要

본인은 축산, 울릉도, 충무, 제주도 등지에서 採集된 四放海綿類를 同定한 결과 다음과 같은 코리스티다해면류에 속하는 5種의 韓國未記錄種이 밝혀졌다. *Geodia variospiculosa* Thiele, *Geodia japonica* (Sollas), *Geodia reniformis* Thiele, *Geodinella cylindrica* (Thiele), *Geodinella hyotania* Tanita.

This paper deals with the Choristida(subclass Tetractinomorpha). Sixteen species belonging to the Choristida were already reported by the author(Sim, 1981).

Specimens for the present study were collected from the coastal areas of the East Sea (Sea of Japan) and the South Sea of Korea during the period from 1971 to 1978.

**Order Choristida** 코리스티다해면목

**Family Geodiidae** 조디아해면과

1. *Geodia variospiculosa* Thiele, 1898 다조디아해면 (Pl. 1, figs. 1-6)

*Geodia variospiculosa* Thiele, 1898, p. 10, pl. 6, figs. 6a-1.

*Geodia variospiculosa*: Lendenfeld, 1903, p. 107.

Material examined: Seongsanpo, Feb. 14, 1976; Chungmu, July 19, 1978.

Description: This sponge is massive, subspherical in shape and measures  $2 \times 1.5 \times 1.3$  cm in dimension. The colour is white in alcohol, texture is hard and incompressible. The surface is very smooth. The cortex has a thick layer of sterrasters, 1mm in extent.

Measurements of spicules ( $\mu$ ): Megascleres

- |                            |           |                       |
|----------------------------|-----------|-----------------------|
| a) Large oxeas.....        | 2000-2500 | $\times$ 20-45        |
| b) Small oxeas.....        | 200       | $\times$ 4            |
| c) Dichotriaenes .....     | rabdome   | 2500-3000 $\times$ 50 |
|                            | clad      | 200-300               |
| d) Orthotriaenes.....      | rabdome   | 2500-3000 $\times$ 50 |
|                            | clad      | 200-300               |
| e) Plagiotriaenes.....     | rabdome   | 2500-3000             |
|                            | clad      | 200                   |
| f) Large anatriaenes ..... | rabdome   | 6000 $\times$ 12      |
|                            | clad      | 70                    |
| g) Small anatriaenes ..... | rabdome   | 3000 $\times$ 8       |
|                            | clad      | 3                     |

## Microscleres

- |                        |        |                |
|------------------------|--------|----------------|
| a) Sterrasters.....    | 80-100 | $\times$ 50-30 |
| b) Large oxyaster..... | 120    |                |
| c) Small oxyaster..... | 30-50  |                |
| d) Sphaerasters.....   | 30     |                |
| e) Strongylaster ..... | 6-8    |                |

Distribution: Korea (Korea Strait, Jeju Isl.), Japan (Yogashima), North Pacific Ocean.

2. *Geodia japonica* (Sollas, 1888) 왜조니아해면 (Pl. 2, figs. 1-4)

*Cydonium japonicum* Sollas, 1888, p. 256.

*Geodia japonica*: Thiele, 1898, p. 7, pl. 2, fig. 1, pl. 6, fig. 3; Lendenfeld, 1903, pp. 111-112.

Material examined: Seogwipo, Nov. 30, 1978.

Description: This sponge is like cup shape, which has many round protuberance. Measures 17  $\times$  15 cm in dimension. The colour in life is light yellow, texture is hard. The surface has pores and oscules. Many spicules look like hair. The cortex has a hard layer of sterrasters, 1 mm thick.

Measurements of spicules ( $\mu$ ): Megascleres

- |                        |           |                          |
|------------------------|-----------|--------------------------|
| a) Large oxeas.....    | 2000-2500 | $\times$ 45              |
| b) Small oxeas.....    | 200       |                          |
| c) Orthotriaenes ..... | rabdome   | 2500-2700 $\times$ 75-85 |
|                        | clad      | 200-300                  |
| d) Anatriaenes.....    | rabdome   | 2500                     |
|                        | clad      | 80                       |

## Microscleres

- |                      |       |
|----------------------|-------|
| a) Sterrasters ..... | 75-90 |
|----------------------|-------|

- b) Oxyasters.....14-30
- c) Sphaerasters.....4-5

Distribution: Korea (Jeju Isl.), Japan (Sagami Bay, Enoshima).

3. *Geodia reniformis* Thiele, 1898 앞쪼디아해면 (Pl. 3, figs. 1-6)

*Geodia reniformis* Thiele, 1898, p. 9, pl. 1, fig. 3, pl. 6, fig. 5.

*Geodia reniformis*: Lendenfeld, 1903, p. 108

Material examined: Seogwipo, Feb. 7, 1971.

Description: This sponge is a massive, subspherical to reniform in shape. The convex surface has many pores. Measures  $13 \times 10 \times 5$  cm in dimension. The colour in alcohol is pale yellow, texture is hard and incompressible. The surface of the sponge looks smooth but rough to the touch owing to the projecting pile of cortical oxea. The cortex has a thick layer of sterrasters, 1.5 mm in extent.

Measurements of spicules ( $\mu$ ): Megascleres

- a) Large oxeas.....4000  $\times$  56
- b) Small oxeas.....250-280  $\times$  5
- c) Orthotriaenes .....4000-5000  $\times$  80
- d) Protriaenes .....3000-4000
- e) Anatriaenes .....6000

Microscleres

- a) Sterrasters .....120  $\times$  90
- b) Large oxyasters.....40-60
- c) Small oxyasters.....16-25
- d) Sphaerasters .....14
- e) Pycnasters .....5

Distribution: Korea (Jeju Isl.), Japan (Sagami Bay, Enoshima).

4. *Geodinella cylindrica* (Thiele, 1898) 기둥쪼디넬라해면 (Pl. 4, figs. 1-3)

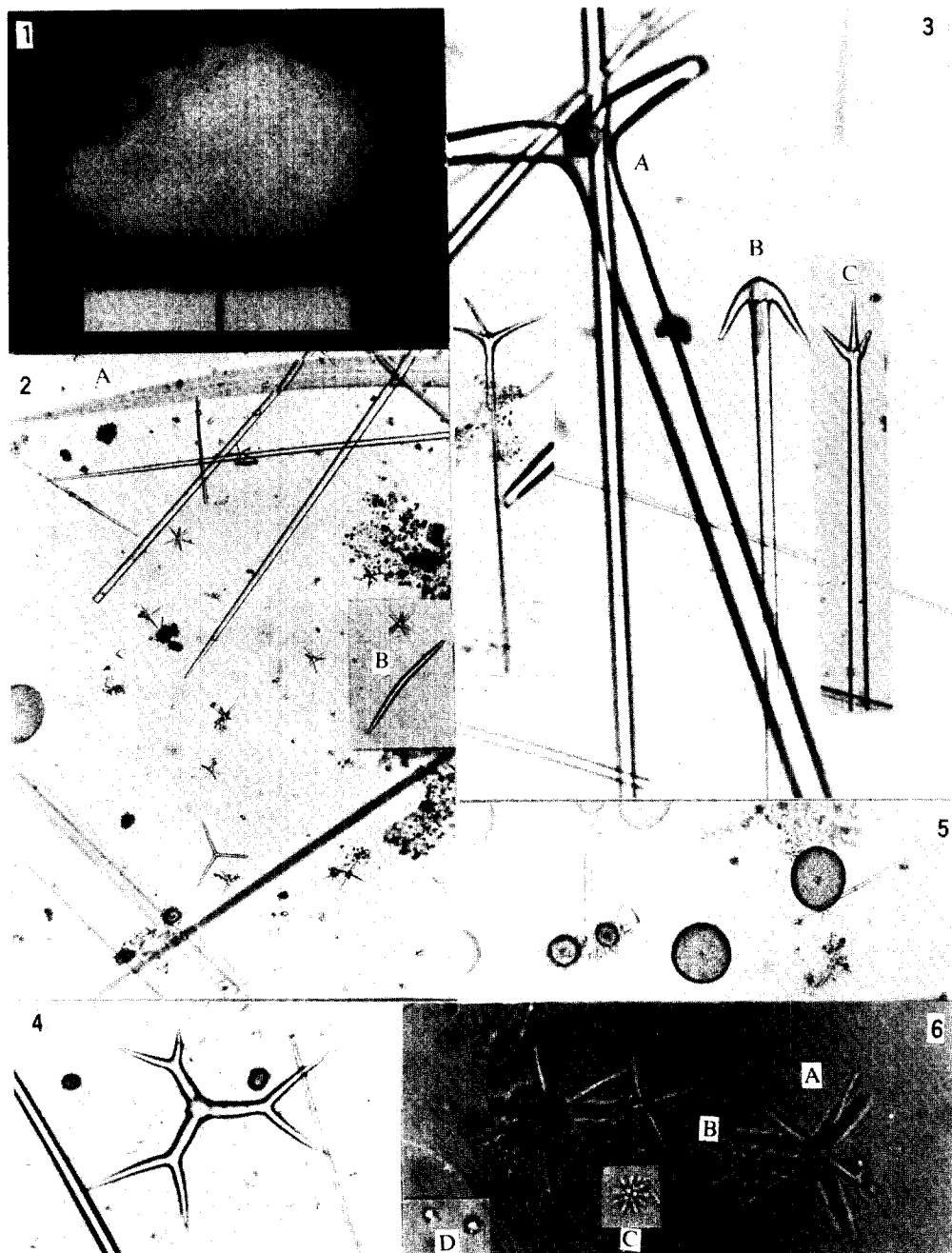
*Geodinella cylindrica* Thiele, 1898, p. 12, pl. 1, fig. 2, pl. 6, fig. 9.

*Geodinella cylindrica*: Lendenfeld, 1903, p. 117; Tanita, 1978, p. 236, pl. 1, fig. 4, text-fig. 2.

Material examined: Ulreung I., July 23, 1976.

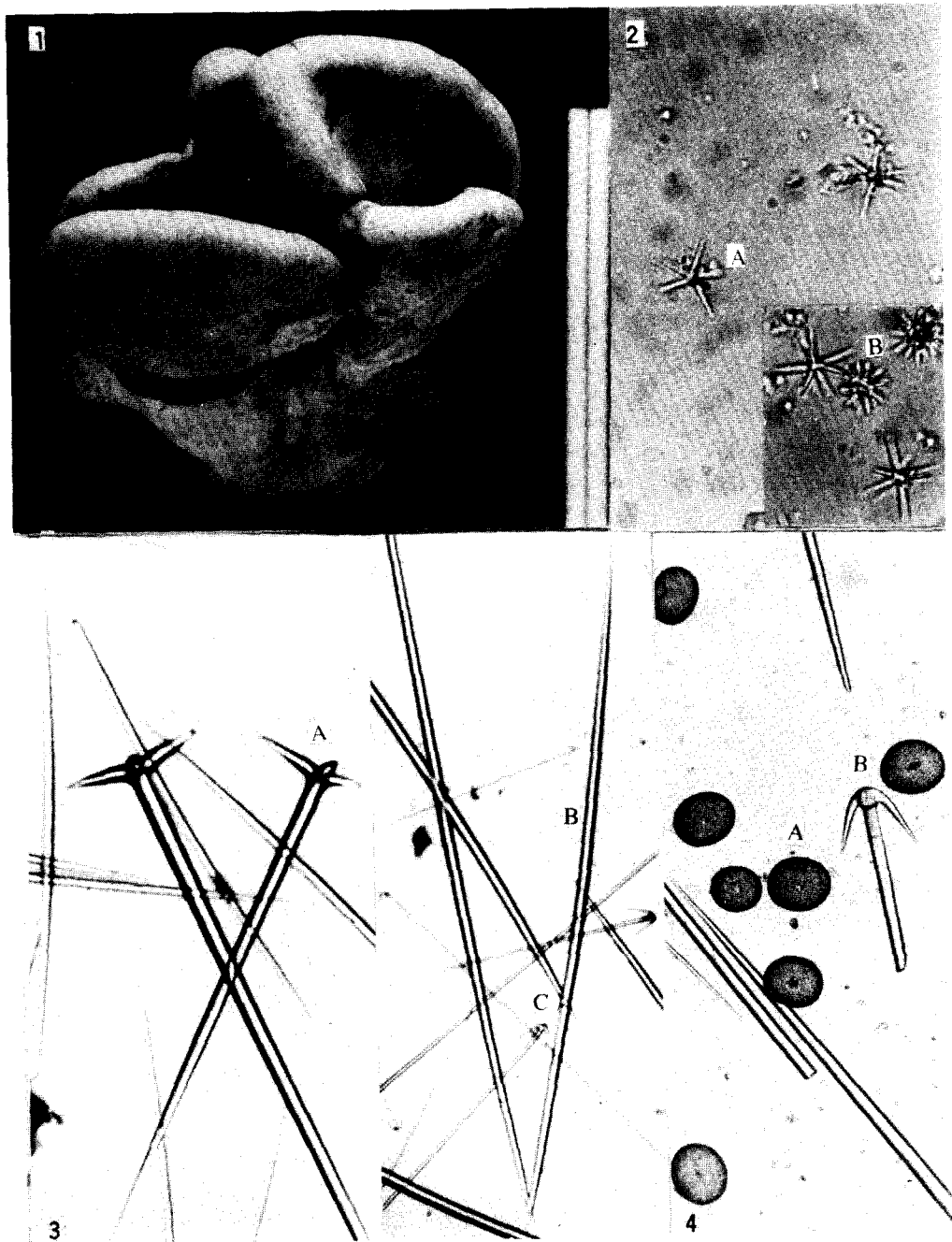
Description: This sponge is irregularly long tuberos in shape and measures  $70 \times 5$  mm in dimension. The lower part of the long tube is bulkier than the upper part. The colour of the surface is light brown or paly yellow, texture is hard and incompressible. The surface of the sponge is smooth, without hispidation. The cortex is about 0.5 mm thick and occupied by a layer of sterrasters.





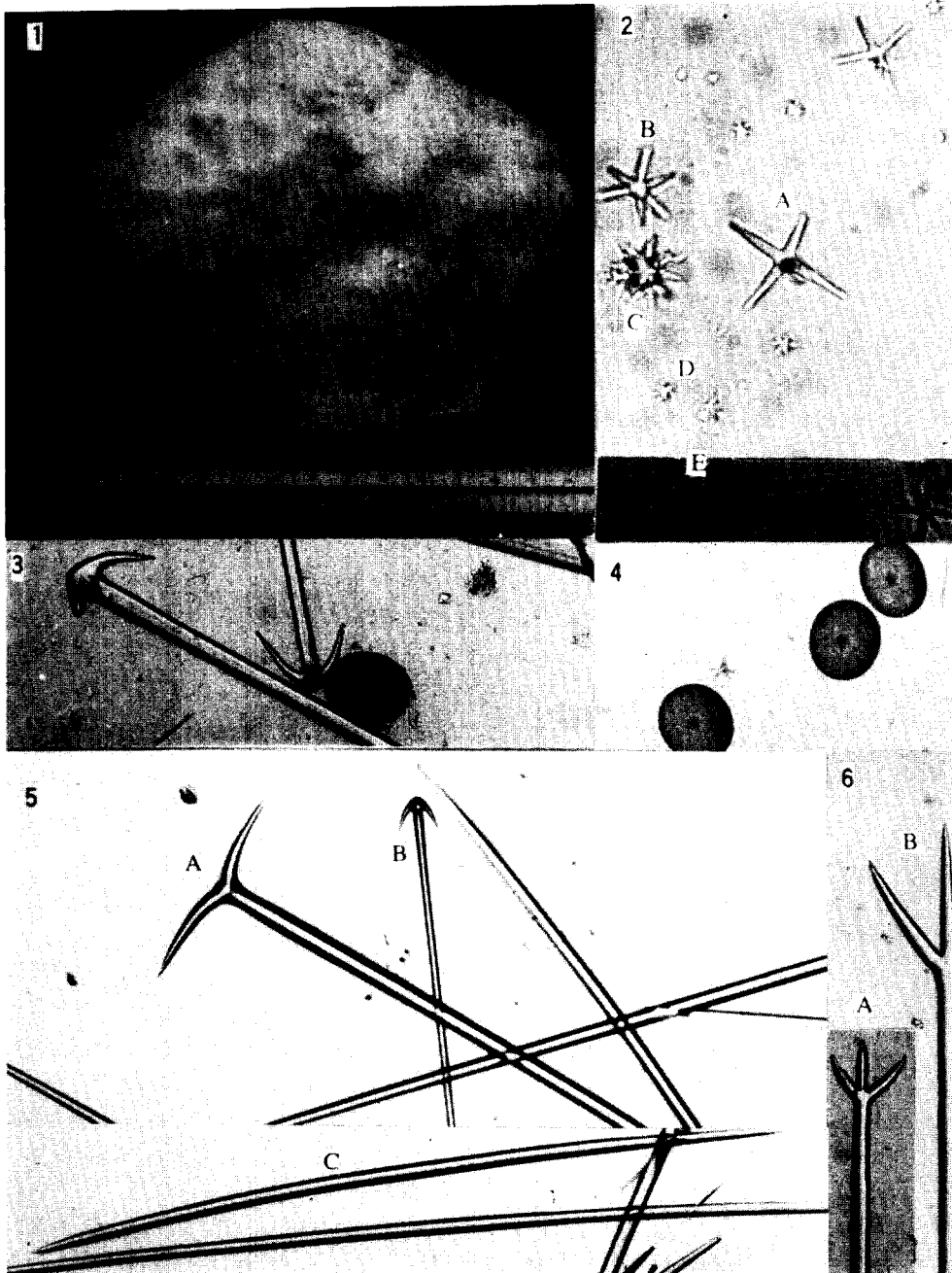
**Figs. 1-6.** *Geodia variospiculosa* Thiele, 1898

1. Entire animal 2. A. Large oxea, B. Small oxea,  $\times 100$  3. A. Plagiotriaene, B. Anatriaene, C. Prototriaene,  $\times 40$  4. Dichotriaene,  $\times 40$  5. Sterrasters,  $\times 100$  6. A. Large oxyaster; B. Small oxyaster, C. Sphaeraster, D. Pyncaster,  $\times 450$ .



**Figs. 1-4.** *Geodia japonica* (Sollas, 1888)

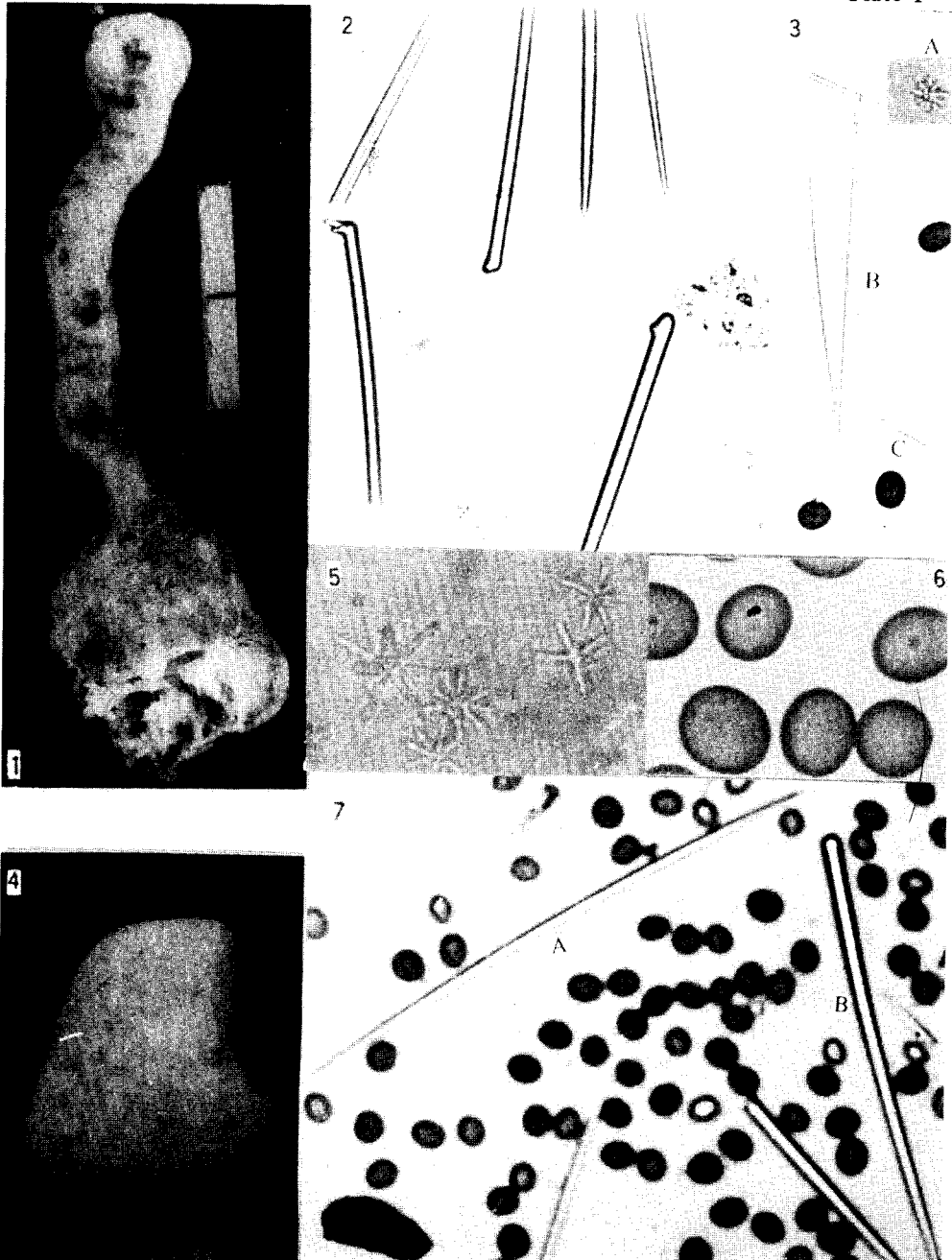
1. Entire animal 2. A. Oxyaster, B. Sphaeraster,  $\times 450$  3. A. Orthotriaene, B. Oxea, C. Anatriaen,  $\times 40$  4. A. Sterraster, B. Anatriaen,  $\times 100$ .



**Figs. 1-6.** *Geodia reniformis* Thiele, 1898

1. Entire animal 2. A. Large oxyaster, B. Small oxyaster, C. Sphaeraster, D. Pyncaster, E. Small oxea,  $\times 450$  3. Anatriaen,  $\times 100$  4. Sterraster,  $\times 100$  5. A. Orthotriaene, B. Anatriaen, C. Largeoxea,  $\times 40$  6. A. Protriaene, B. Abnormal triaen,  $\times 100$ .

Plate 4



**Figs. 1-3.** *Geodinella cylindrica* (Thiele, 1898)

1. Entire animal 2. Reduced triaene,  $\times 100$  3. A. Pyncaster,  $\times 450$ , B. Oxea,  $\times 40$ , C. Sterraster,  $\times 40$ .

**Figs. 4-7.** *Geodinella hyotania* Tanita, 1965

4. Entire animal 5. Sphaerasters,  $\times 450$  6. Sterrasters,  $\times 100$  7. A. Oxea, B. Style,  $\times 40$ .



發情週期에 따른 Guinea Pig의 子宮內膜 表層上皮細胞의  
微細構造 및 細胞化學의 研究

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Ultrastructural and Cytochemical Studies on the Endometrial  
Surface Epithelial Cells of Guinea Pig During Estrous Cycle

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SUMMARY

Cyclical changes in the fine structures of the surface epithelial, stroma and glandular cells of guinea pig endometrium during the estrous cycle were studied by transmission and scanning electron microscopy. Cytochemical studies were made in order to investigate the ultrastructural localization of the acid phosphatase, alkaline phosphatase and ATPase in these cells.

The results obtained are as follows:

1. The endometrial surface epithelium was pseudostratified columnar during estrus and metestrus, and simple columnar during proestrus and diestrus. The characteristic features observed in these cells include increased nucleocytoplasmic ratio at proestrus, elongated shapes of both the nucleus and the entire cell, increased volume of the cytoplasm and cytoplasmic bulging into the lumen during estrus, and smaller surface epithelial cells during metestrus.
2. In the cytoplasm of surface epithelial cells, the numbers of mitochondria and free ribosomes were increased, and rough endoplasmic reticulum and Golgi complex appeared during estrus, and the degenerated cells, lipid droplets, multilamellated bodies and lysosomes appeared during diestrus.
3. During estrus, scanning electron microscopic observations of endometrial

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