Mem. Fac. Educ. Ehime Univ.,Nat. Sci., Vol. 8 127~133 (1988)

Bryzoa from the Danzyo Islands, Nagasaki Prefecture, Kyushu, Japan
Pt. 2. On the Scrupocellariidae Levinsen (Anasca)

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(Received October 12, 1987)

Introduction

I reported on the only *Cellaria* of the Scrupocellariidae from this collection (Kamada, et al., 1975) in 1987. So this report is on the remain genera of this family. Localities, material and others are in Hayami (1987).

Measurements were made on one to three zoaria of each species. Measurements (in mm) given following species descriptions include standard characters: Lz, Wz (zooecia length and width), Lop, Wop (opecia length and width), Lov, Wov (ovicell length and width).

Description and Remarks

Order Cheilostomata Busk, 1852

Suborder Anasca Levinsen, 1909

Family Scrupocellariidae Levinsen, 1909

Genus *Scrupocellaria* van Beneden, 1845

Scrupocellaria maderensis Busk, 1860

Pl. 1, figs. 1, 2

Scrupocellaria maderensis Busk, 1861, p. 77. Harmer, 1926, p. 372. Hastings, 1932, p. 410. Silén, 1941, p. 89. Mawatari, 1952, p. 276. Cheetham & Sandberg, 1964, p. 1025. Rucker, 1967, p. 825.

S. macandrei Busk, Robertson, 1921, p. 36. Busk, 1884, p. 23. Okada & Mawatari, 1937, p. 452.

Material examined: St. nos. 1, 6 and 8. Moderate numbers, less than 50 zoaria from 6 and 8, very few, less than 10 from 1.

Description: Fragmental zoaria serrated by the projection of the marginal avicularia. Zooecium rather small with large scutum which covering almost whole opecium. Internal and external each 2 spine scars. Frontal avicularia usually absent, sometimes occurred. Marginal avicularia conspicuous. Ovicell without pores, wider than long and flat part on the front.

Measurements:	Range	Mean	Numbers
Lz	0.36−0.42	0.37	10
Wz	0.18−0.20	0.20	10
Lop	0.16−0.20	0.18	10
Wop	0.08−0.12	0.10	10
Lov	0.14	0.14	5
Wov	0.18−0.20	0.19	5

Distribution: Northern Atlantic, Australia *via* Indian Ocean to Japan. Pleistocene to Recent.

Scrupocellaria securifera Busk, 1884

Pl. 1, fig. 3

Scrupocellaria securifera Busk, 1884, p. 24. Harmer, 1926, p. 373. Canu & Bassler, 1929, p. 205.

Material examined: St. nos. 6 and 8. Moderate numbers, less than 50 zoaria from both stations.

Description: Fragmental zoaria larger than *S. maderensis*. Zooecia oval with 3 distal oral spines scar. Scutum strong, hatshet-shaped. Frontal avicularia of moderate size, directed obliquely toward the proximal and outer side. Ovicell large with irregular, large pores in marginal part.

Measurements:	Range	Mean	Numbers
Lz	0.46−0.54	0.52	10
Wz	0.28−0.30	0.29	10
Lop	0.24−0.30	0.28	10
Wop	0.20−0.24	0.22	10
Lov	0.20−0.26	0.24	6
Wov	0.20−0.22	0.21	6

Distribution: South East Pacific Ocean to Japan.

Genus *Canda* Lamouroux, 1816

Canda pecten Thornely, 1907

Pl. 1, fig. 4

Canda pecten Thornely. Harmer, 1926, p. 389. Mawatari, 1965, p. 609.

Material examined: St. nos. 1, 6, 8 and 2. Very few from 1 and 2, moderate numbers from 6 and 8.

Description: Fragmental zoaria rather well-preserved. Zooecia elongate and narrow. Opecia

elongate, triangular, broad distally, acutely pointed proximally, its sides asymmetrical. One or two spines on distal part. Scutum wanting. Large elongated avicularium situated at the base of each branch at a bifurcation, oriented distally (fig 4) or proximally. Ovicell large, elongated with flattened frontal fenestra, and distal part with a simillar fenestra.

Measurements:	Range	Mean	Numbers
Lz	0.36−0.42	0.39	10
Wz	0.22−0.24	0.23	10
Lop	0.28−0.30	0.29	10
Wop	0.10−0.12	0.11	10
Lov	0.18−0.24	0.21	6
Wov	0.20	0.20	6

Distribution: East of Indian Ocean to Japan.

Canda foliifera Harmer, 1926

Pl. 1, fig. 5

Canda foliifera Harmer, 1926, p. 386. Mawatari, 1963, p. 8; 1963, p. 609.

Material examined: St. nos. 6 and 8. Moderate numbers from both.

Description: Zoarium slender. Zooecia moderately large. Cryptocyst thick minutely granular, developed proximally. Opecia wider distally, rounded proximally. Spines one or two scars. Scutum scar occurrenced at the middle of opecia. Ovicell large, usually occurring in groups two or three, belonging alternately to opposite side of the branch, with large frontal, and similar one the distal wall. Frontal avicularia not found.

Measurements:	Range	Mean	Numbers
Lz	0.44−0.50	0.47	10
Wz	0.28−0.30	0.29	10
Lop	0.24−0.30	0.26	10
Wop	0.16−0.22	0.19	10
Lov	0.32−0.36	0.33	3
Wov	0.30	0.30	3

Distribution: East of Indian Ocean to Japan.

Genus *Caberea* Lamouroux, 1816

Caberea hataii Okada, 1929

Pl. 1, fig. 6

Caberea hataii Okada, 1929, p. 13. Sakakura, 1935, p. 109. Okada & Mawatari, 1937, p. 437. Silén, 1941, p. 82. Mawatari, 1965, p. 610. Hayami, 1971, p. 80.

Material examined: St. nos. 6, 8 and 2. Moderate numbers from 6 and 8, few from 2.

Description: Zoarium slender. Zooecia elongate. Opecia rectangular with one or two distal spines. Scutum broken, remaining stout. Frontal avicularia pairs, small but conspicuous. Ovicell wider than long with large fenestra. Marginal avicularia larger than frontal one.

Measurements:	Range	Mean	Numbers
Lz	0.40−0.44	0.41	10
Wz	0.28−0.30	0.28	10
Lop	0.24−0.28	0.25	10
Wop	0.18−0.20	0.19	10
Lov	0.18	0.18	10
Wov	0.26−0.30	0.28	10

Distribution: Japan.

Genus *Amastigia* Busk, 1852

Amastigia rudis (Busk), 1852

Pl. 1, figs. 7, 8

Caberea rudis Busk, 1852, p. 38. Ortmann, 1890, p. 23.

Amastigia rudis (Busk), Harmer, 1926, p. 349. Okada, 1934, p. 9. Okada & Mawatari, 1935, p. 137; 1938, p. 453. Sakakura, 1935, p. 109. Silén, 1941, p. 80. Mawatari, 1952, p. 263; 1963, p. 8; 1965, p. 610. Soule & Duff, 1957, p. 102.

A. cf. *rudis* (Busk), Kataoka, 1960, p. 241.

Material examined: St. nos. 1, 6, 8 and 2. A few from 1 and 2, moderate from 6 and 8.

Description: Stout and flat zoarium composed 4 to 10 series of zooecia. Cryptocyst broad. Meadian zooecia have 2 pair of spines. Frontal avicularia paired on the median zooecia directed obliquely proximally except on the distal side of an ovicell, where their direction is reversed. Gigantic frontal avicularia on the marginal zooecia or sometimes submarginal one. Ovicell large elongated, without pores.

Measurements:	Range	Mean	Numbers
Lz	0.46−0.52	0.50	10
Wz	0.24−0.26	0.25	10
Lop	0.22−0.28	0.24	10
Wop	0.16−0.18	0.16	10
Lov	0.18−0.22	0.20	10
Wov	0.22−0.24	0.23	10

Distribution: Australia to Japan. Pleistocene to Recent.

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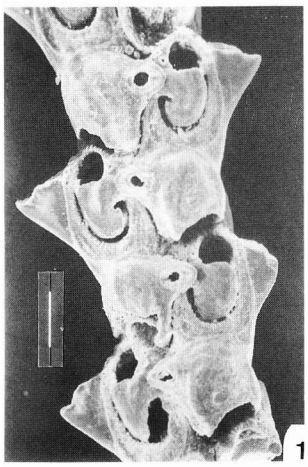
Hayami, T.

Plate 1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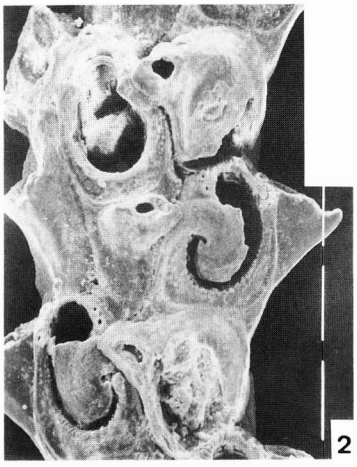
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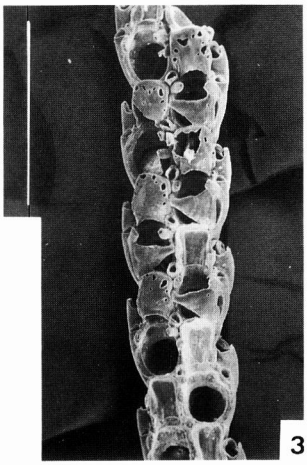
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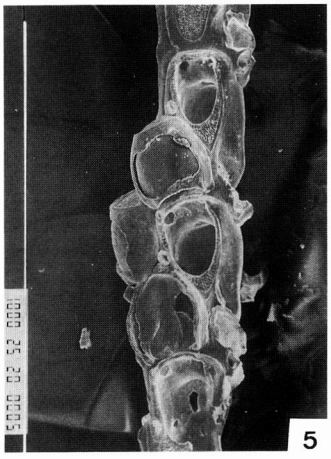
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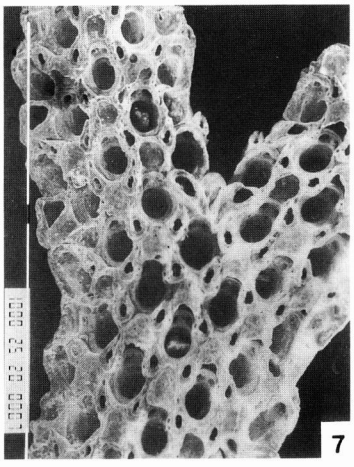
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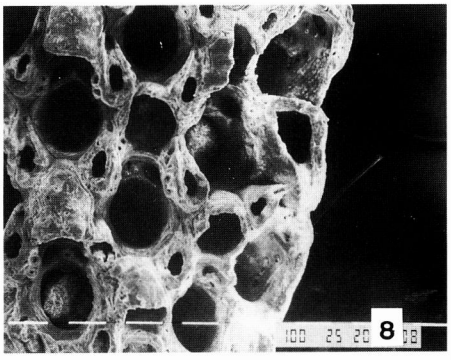
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Expalanation of Plate 1

Figs. 1 and 2. *Scrupocellaria maderensis* Busk. A part of zoarium, showing marginal avicularia, ovicelled Zooecia, frontal avicularia and scutum. Scale bar=100μm for Fig. 1 and 1000μm for Fig. 2. Dz−8−0001.

Fig. 3. *Scrupocellaria securifera* Busk. A part of zoarium, showing complete and broken ovicells, scutum and avicularia. Scale bar=1000μm. Dz−8−0002.

Fig. 4. *Canda pecten* Thornely. A part of bifurcation. showing one ovicelled zooecium and avicularium. Scale bar=1000μm. Dz−6−0002.

Fig. 5. *Canda foliifera* Harmer. A part of zoarium, showing three ovicells. Scale bar=1000μm. Dz−6−0003.

Fig. 6. *Caberea hataii* Okada. Many ovicelled zooecia with broken scuta. Scale bar=1000μm. Dz−6−0004.

Figs. 7 and 8. *Amastigia rudis* (Busk). Fig. 7. A part of bifrucation. Fig. 8. The same specimen of Fig. 7, showing ovicelled zooecia and a gigantic avicularium at marginal zooecia.. Scale bar=1000μm for Fig. 7 and 100μm for Fig. 8. Dz−8−0003.