

梅崎 勇\* : 志摩半島海産藍藻類 (1)  
 Isamu UMEZAKI\* : Marine Cyanophyceae from  
 the Shima Peninsula (1)

三重県志摩半島及び其の近海産の海藻類(緑, 褐, 紅藻類)の分類学的及び其のフロラの研究調査が幾多の海藻学者に依つて行われ, 其の海藻相が明にされている。殊にフロラの報告に関しては, 瀬木紀男(1944, 1951), 稲垣貫一(1950 a, 1950 b), 高嶺昇, 山田幸男(1950)の各氏が挙げられる。然し本半島に於ける海産藍藻類の報告は全然見られず, 未調査の儘現在に至つている。本半島の藍藻相を調査することは本沿岸産海藻相上より必要であると思われる。

故に筆者は志摩半島の藍藻相の究明の爲, 1952年3, 6, 10月の3回に涉り, 主として其の南端なる賢島, 御座, 越賀, 和具及び和具南沖の大島を採集調査し, 更に的矢の湾の矢へは同年10月1回調査を行つた。其の結果, クロオコツクス科5種, プレウロカブサ科9種, デルモカルパ科4種, イデユアイミドリ科2種, ヒゲモ科7種, ミクロケタ科1種, ステイゴネマ科1種, ユレモ科27種を同定することが出来た。なお, 新種及び若干の未査定種は後程発表する予定である。

茲に筆者は本研究の間御懇篤なる御指導を戴いた米田勇一先生に, 又研究材料採集に際し種々御便宜を計られた三重県立大学水産学部教授瀬木紀男先生に謝意を表します。

Family Chroococcaceae

1. *Chroococcus trugidus* (Kuetz.) Naeg.

Hab. Ō-shima (Mar. 12; Jun. 10), among the tufts of *Calothrix pilosa* Harv. and among other Cyanophycean colonies, scarce; Goza (Jun. 1), among other algae on rocks, scarce.

var. *maximus* Nygaard

Hab. Wagu (Jun. 9), in the stratum of *Calothrix crustacea* Thur., scarce; Ō-shima (Jun. 10), among other Cyanophycean masses, scarce.—New to Japan.

One-celled individuals 23–46  $\mu$  diam., two-celled ones 47–74  $\times$  46–60  $\mu$  in size; teguments 5–9.2  $\mu$  thick, lamellate on the interior layer.

2. *Aphanocapsa littoralis* Hansg.

Hab. Wagu (Jun. 9), on concrete in a tide pool along the high tide level, abundant; Ō-shima (Oct. 5), on rocks, associated with other blue-green algae in the littoral zone, abundant.

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var. **macrococca** Hansg.

Hab. Wagu (Jun. 9), among the filaments of *Calothrix crustacea* Thur., abundant; Goza (Mar. 11), among the fronds of other Cyanophyceae on a pearl-oyster living two meters below the sea-level, abundant.

3. **Aphanocapsa sesciacensis** Frémy

Hab. Goza (Jun. 11), on rocks in the littoral zone, scarce.—New to Japan.

4. **Aphanocapsa concharum** Hansg.

Hab. Ō-shima (Oct. 5), among the strata of other Cyanophyceae, scarce.—New to Japan.

Colonies nearly spherical or slightly expanded, mucous; cells nearly spherical or up to 2 times as long as the diameter, 1–1.5  $\mu$  diam., 1.2–2.7  $\mu$  long; cell contents pale blue-green. Fig. 1 A.

In size of cells the specimens at hand agree well with the description of *Aphanocapsa concharum* Hansg. It seems rather valid that this species is combined into the genus *Aphanothece* in having greater length than diameter in cell shape.

5. **Merismopedia elegans** A. Braun

Hab. Ō-shima (Jun. 10; Oct. 5), among the branches of *Codium coarctatum* Okam. and *Bryopsis* sp., scarce; Wagu (Oct. 4), among various small red algae, scarce.—New record to Japanese marine flora.

Family Pleurocapsaceae

6. **Pleurocapsa fuliginosa** Hauck

Hab. Wagu (Jun. 9), on a fish-shell living near the high tide level, abundant; Ō-shima (Oct. 5), on rocks associating with other blue-green algae, abundant.—New to Japan.

7. **Pleurocapsa minuta** Geitler

Hab. Wagu (Mar. 12), on a fish-shell, near the high tide level, scarce; Ō-shima (Oct. 5), on rocks in the upper littoral zone, scarce.

Fronds expanded, light brown; filaments dense, parallel, up to 70  $\mu$  high; cells of lower parts in 2–3 rows, 2.8–7  $\mu$  diam., cells of lower parts in a single row; sheaths colourless or yellowish; endospores unknown.

8. **Oncobyrsa adriatica** Hauck Jap. name. Iwahige-no-kobu (K. Inagaki, 1950).

Hab. Ō-shima (Mar. 12; Oct. 5), on *Myelophycus caespitosus* (Harv.) Kjellm., abundant.

9. **Myxohyella socialis** (Setch. et Gardn.) Geitler

Hab. Wagu (Jun. 9), in a red alga *Gracilaria* sp. in the littoral zone, scarce.

10. **Hyella caespitosa** Born. et Flah. Jap. name. Kaitsuki-hiera (n. n.).

Hab. Ō-shima (Oct. 5), in the shell of a mollusc, associated with *Mastigocoleus testarum* Lagerh., scarce.—New to Japan.

No endosporangium has been found in the present specimen.

11. **Xenococcus Laysanensis** Lemmerm.

Hab. Ō-shima (Oct. 5), on the sheaths of *Lyngbya* sp., scarce.—New to Japan.

12. **Xenococcus acervatus** Setch. et Gardn.

Hab. Wagu (Jun. 9), on the filaments of *Calothrix* sp., scarce; Ō-shima (Oct. 5), on *Lyngbya aestuarii* Liebm., scarce.

13. **Xenococcus Schousboei** Thuret

Hab. Goza (Jun. 11), on *Rhodochorton* sp., scarce; Ō-shima (Mar. 12), on *Calothrix pilosa* Harv., scarce.

14. **Xenococcus pyriformis** Setch. et Gardn.

Hab. Ō-shima (Mar. 12), on *Calothrix pilosa* Harv., abundant; Wagu (Oct. 4), on *Calothrix* sp., abundant.

Family Dermocarpaceae

15. **Dermocarpella hemisphaerica** Lemmerm.

Hab. Ō-shima (Oct. 5), on *Caulacanthus Okamurai* Yam., abundant; Wagu (Oct. 4), on *Gelidium* sp., abundant.

Cells 18–30  $\mu$  diam., 9.5–15.5  $\mu$  high; membrane 1.5–3  $\mu$  thick; endospores ca. 3  $\mu$  diam.

16. **Dermocarpa sphaerica** Setch. et Gardn.

Hab. Goza (Mar. 11), on *Calothrix crustacea* Thur. and *Lyngbya* sp., abundant.

17. **Dermocarpa protea** Setch. et Gardn. Jap. name. Kikka-awoko (J. Tokida, 1938).

Hab. Ō-shima (Mar. 12), on *Myelophycus caespitosus* (Harv.) Kjellm.,

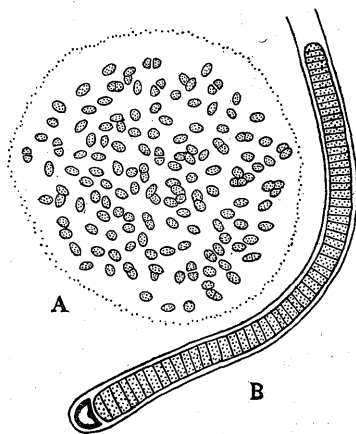


Fig. 1. A. *Aphanocapsa concharum* Hansg. ( $\times 750$ ).  
B. *Microchaete aeruginea* Batters. ( $\times 300$ ).

scarce; Wagu (Oct. 4), on *Caulacanthus Okamurai* Yam., scarce.

Ō-shima specimens—Cells 24.5–80  $\mu$  long, 6–26  $\mu$  diam. at the apices, 4–5  $\mu$  diam. at the bases; endospores 2.5–3  $\mu$  diam. Wagu specimens—Cells 18–30.5  $\mu$  long, 12.5–18.5  $\mu$  diam. at the apices, 5–7  $\mu$  diam. at the bases; endospores not yet formed.

18. **Dermocarpa clavata** (Setch. et Gardn.) Geitler

Hab. Ō-shima (Oct. 5), on *Caulacanthus Okamurai* Yam., scarce; Koshika (Mar. 11), on *Caulacanthus Okamurai* Yam., scarce.—New to Japan.

Ō-shima specimens—Cells and sporangia 18–37  $\mu$  long, 6–7  $\mu$  diam. at the apices; endospores 4–10 within the sporangium, 5–7  $\mu$  diam. Koshika specimens—Sporangium 46  $\mu$  long, 7  $\mu$  diam. at the base, 18  $\mu$  diam. at the apex; endospores 5–6  $\mu$  diam.

Family Mastigocladaceae

19. **Brachytrichia Quoyi** (C. Ag.) Born. et Flah. Jap. name. Aimidori (K. Okamura, 1915).

Hab. Ō-shima (Mar. 11), on rocks in the littoral zone, abundant (common); Wagu (Mar. 11), on rocks in the littoral zone, abundant (common).

20. **Kyrtuthrix dalmatica** Ercegović Jap. name. Iwasome-aimo (n. n.).

Hab. Wagu, Ō-shima and Goza (always found in March, June and October respectively), on rocks along the high tide level or in the upper littoral zone, abundant (common).

Family Rivulariaceae

21. **Calothrix parasitica** (Chauv.) Thuret

Hab. Ō-shima (Jun. 10; Oct. 5), among the fronds of *Hydrocoleum lyngbyaceum* Kuetz., in *Nemalion helminthoides* (Vellay) Batters and *Oncobyrsa adriatica* Hauck, scarce.

22. **Calothrix aeruginea** (Kuetz.) Thuret

Hab. Ō-shima (Oct. 5), on *Gelidium pusillum* (Stackh.) Le Jol., scarce.—New to Japan.

23. **Calothrix scopulorum** (Web. et Mohr.) Agardh

Hab. Goza (Mar. 11), on concrete, a little above the high tide level, abundant; Wagu (Jun. 9), on concrete, one meter above the high tide level, abundant.

24. **Calothrix pilosa** Harvey Jap. name. Mosa-higemo (n. n.).

Hab. Ō-shima (Mar. 12), on rocks in the littoral zone or near the high tide level, abundant.

25. **Calothrix crustacea** Thuret Jap. name. Ō-higemo (n. n.).

Hab. Goza (Mar. 11), on rocks near the high tide level, abundant; Koshika (Mar. 11), on rocks in the upper littoral zone, abundant; Wagu (Jun. 9), on rocks or on *Caulacanthus Okamurai* Yam.; abundant; Ō-shima (Jun. 9; Oct. 5), on rocks in the littoral zone, abundant; Matoya (Oct. 6), on rocks in a little above the high tide level, abundant.

The present species is fair commonly distributed in the coast of Shima Peninsula. The plants which are epiphytic on *Caulacanthus Okamurai* Yamada, especially their young ones, bear some resemblances to *Calothrix rectangularis* Setch. et Gardn. reported by N. Gardner from East Sound, Orcas Island, Washington, in 1918. Moreover, *C. crustacea* collected from the present Peninsula shows great variations in the length and diameter of the filaments. Probably *C. rectangularis* is an epiphytic or a young form of *C. crustacea*.

26. **Rivularia atra** Roth Jap. name. Ōtsubu-riburaria (n. n.).

Hab. Goza (Mar. 12), on rocks near the high tide level, abundant (common); Wagu (Jun. 9), on rocks along the the high tide level, abundant (common); Ō-shima (Oct. 5), on rocks near the low tide level, scarce.

27. **Isactis plana** (Harv.) Thuret var. **fissurata** Born. et Flah.

Hab. Ō-shima (Jun. 10), on rocks in the littoral zone, scarce.

var. **plana** Born. et Flah.

Hab. Goza (Mar. 11; Jun. 11), on rocks in the littoral zone or near the high tide level, abundant; Koshika (Mar. 11; Jun. 9), on fish-shells living in the littoral zone, abundant; Wagu (Oct. 4), on rocks in the littoral zone, abundant; Ō-shima (Mar. 12; Jun. 9; Oct. 5), on rocks in the littoral zone, abundant.

## Family Microchaetaceae

28. **Microchaete aeruginea** Batters (?)

Hab. Ō-shima (Oct. 5), on *Caulacanthus Okamurai* Yam. and on *Corallina* sp., scarce.—New to Japan.

Filaments 90–200  $\mu$  long, slightly curved, 8–12  $\mu$  diam.; sheaths hyaline, rather thin; trichomes aeruginous, 6–8 (9)  $\mu$  diam. at the middle; cross walls not constricted; cells ca. two or three times shorter than the diameter; heterocysts basal only, hemispherical or nearly spherical. Fig. 1 B.

The present alga agrees on the whole with the characters of *Microchaete aeruginea*, although the sheath is rather thin instead of being thick as shown in the description of *M. aeruginea* Batters.

## Family Stigonemataceae

29. *Mastigocoleus testarum* Lagerh. Jap. name. Kaitsuki-aimo (n. n.).

Hab. Ō-shima (Oct. 5), on a mollusc shell, scarce.—New to Japan.

Filaments 6–7.5  $\mu$  diam.; trichomes 3.5–6  $\mu$  diam.; cells 4–12.5  $\mu$  long.

The late Dr. K. Okamura in his “Syumi kara mita Kaisō to Jinsei” (1923) described that the pearl-oysters for pearl culture were often badly damaged by growth of *Mastigocoleus testarum*. But the present writer could not find shells damaged by this alga, at a pearl culture farm in Goza Bay.

**〇熊による森林組成の変化** (小清水卓二) Takuji KOSHIMIZU: Forest flora may be changed by bear.

植物の分布相を変化させる要因として従来から、温度・湿度・土質・水質・光・植物相互関係・動植物相互関係などがあげられているが、これらの要因中、動植物相互に関しては、各地にしばしば起る特殊昆虫の異常発生或は飛来による植物相の変化を始めとして、ノネズミ (モグラネズミ) によるササの大群落の壊滅〔植物研究雑誌 12 (12), 1936. 同上 29 (3), 1954〕, 鹿群の棲息による特殊植物相の形成〔日本植物学会京都支部特別講演要旨, 1949〕などが特によく知られている事実である。

たまたま筆者は、1954年8月奈良県大台ヶ原山頂の天然林 (1500 m 内外) に於て、熊がこの地帯の特殊樹種のみを選択してその樹皮を食害し、このために相当多数の樹木を枯死に瀕せしめて植物分布相を変化せしめつつある事実を調査したので、熊が植物相を変化せしめる一要因となることを報告する。

1953年の終頃から1954年の初春にかけて、中南部日本の各地に、熊が人里近くまで出現して農作物や人畜に危害を頻々として加えた事は当時の新聞紙上を通じて一般によく知られている近來珍らしい現象であつた。この原因については1953年の冷寒凶作気候に結びつけて考える人があるが然し未だ確証はされていない。

問題の大台ヶ原山頂牛石ヶ原及び正木ヶ原の高原地帯 (1500 m 内外) には、イトザサ *Sasa tenuissima* Makino et Nakai の大群落があり、その所々に天然生の概して巨樹のみからなるトウヒ、ウラジロモミ、バラモミ、コメツガ、シラベの如き針葉樹が散在し、更に局部的にコウヤマキ、ゴウマツなどが分布している。

牛石ヶ原及び正木ヶ原に特殊な高原の風景を添える要素となつているこれらの樹種中、特にシラベ、ウラジロモミの巨樹の樹皮が、明らかに熊の爪痕、齒痕を残して地上約 1.6 m の所から根の露出部にかけて、木質部に達するまで完全に環状に剥がされ、樹の根元のイトザサが食害樹を中心として円形に著しく踏み圧せられて、そのあとには一片の樹皮さえも残さず食いつくされている状態のものが牛石ヶ原附近だけでも相当多数に及んでいる。