

島根県産リボンアオサについて

梶村光男*

M. KAJIMURA: On *Ulva fasciata* DELILE
from Shimane Prefecture

本種の繁殖と生育については GAYRAL¹⁾, SUBBARAMAIAH, KALE, & KRISHNAMURTHY²⁾, 及び SUBBARAMAIAH³⁾, の報告が有り, 遊走子, 配偶子とその異形接合及び単為生殖が報告されている。島根県産の本種の生育と生殖について, 筆者が観察したところをここに報告する。

材料及方法

材料は八東郡鹿島町惠曇湾古浦の波浪の強く当る潮間帯下部の岩石上に密生する植物体で, 現地観察の他に室内培養も行なった。室内培養は YAMADA SAITO⁴⁾ の方法によったが, 遊走細胞の形態については, 成熟葉状部 (Fig. 1, Fig. 2-1, 2, 3) 表面を剃刀で切開してとり出しても観察した。こうして得た葉体の切片 (Fig. 2-4, 5, 6) では未だ運動性のない遊走細胞に充ちた細胞が多いので観察が容易であった。

結果及び考察

生育は6月中旬~7月中旬に始まり翌年2月下旬には完全に流失する。水温(10-28°C)⁵⁾ に対する適応は広温性である。体の長さとは幅はそれぞれ最長140cm, 4cmにもなり, 体が螺旋状にねじれるこ

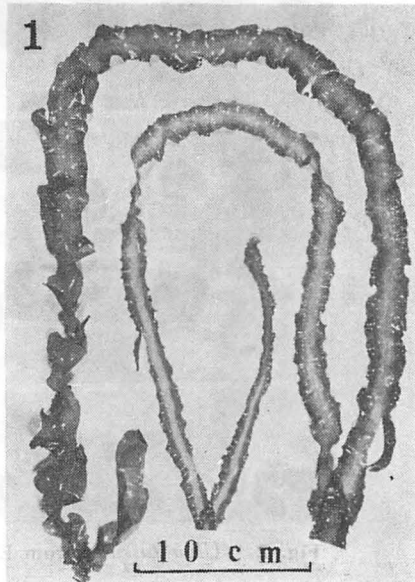


Fig. 1. *Ulva fasciata* from Etomo, Shimane Prefecture. Habit of a fresh mature specimen collected on October 17th, 1970.

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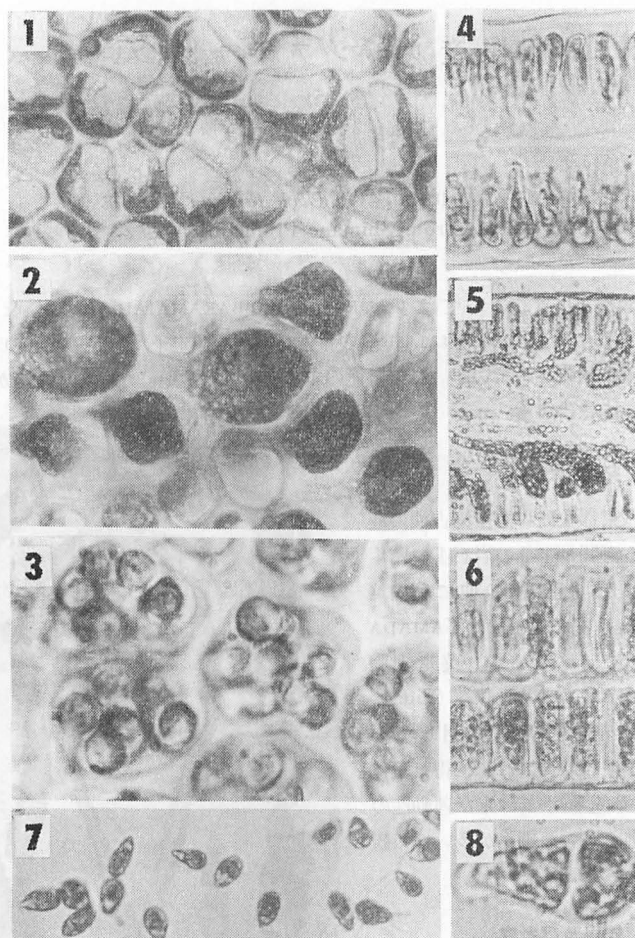


Fig. 2. *Ulva fasciata* from Etomo, Shimane Prefecture.

1. Surface view of the middle sterile portion of a fresh mature frond, showing cell arrangement; $\times 380$. 2. Surface view of the rhizoid-bearing sterile portion of a fresh mature frond, showing cell arrangement; $\times 300$. 3. Surface view of the marginal middle portion of a fresh mature frond, showing gametes in gametangia; $\times 730$. 4. Transverse sectional view of the middle sterile portion of a fresh mature frond, showing cell arrangement; $\times 180$. 5. Vertical sectional view of the rhizoid-bearing sterile portion of a fresh mature frond, showing cell arrangement; $\times 150$. 6. Transverse sectional view of the marginal middle portion of a fresh mature frond, showing gametes in gametangia; $\times 180$. 7. Swimmers discharged on September 23rd, 1971 $\times 380$. 8. A two-celled germling derived parthenogenetically from a gamete, 6 days after discharge; $\times 850$.

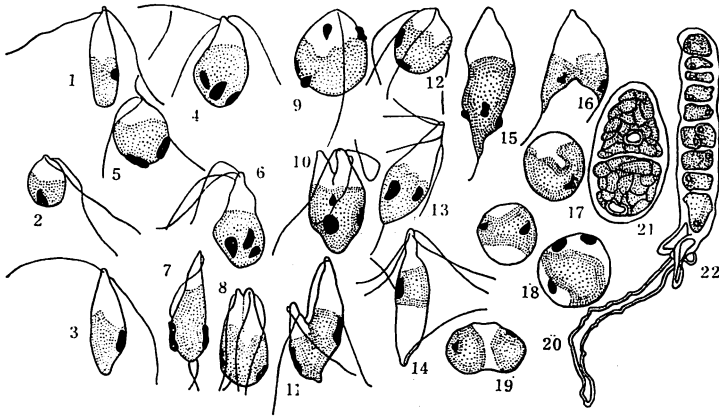


Fig. 3. *Ulva fasciata* from Etomo, Shimane Prefecture.

1-20. Gametes took out from gametangia on September 22nd, 1971, showing their variations in shape and size, and in the position and number of stigma as well as in the number and shape of flagella. 21, 22. Germlings derived parthenogenetically from gametes, 6 and 22 days after discharge respectively. 1-21 $\times 1150$, 22 $\times 350$.

とは冬季より夏季に著しく、色彩は夏季に薄く冬季には濃くなる。

遊走細胞は放出された場合にも眼点1~4個を有し (Fig. 3-1, 4, 5, 9, 10), 鞭毛は2~6本で分岐したのも有り (Fig. 3-1, 6, 8, 12, 13, 14), 細胞の頭部は2~3個に分れているものもあり (Fig. 3-8, 10, 11, 16), 細胞にはくびれの有るものがあり、鞭毛を有しない球形~橢円体のものもあり (Fig. 3-17, 18, 19, 20), 一見接合子の観を呈するものもあるが、細胞の分裂途中のものか、分裂不完全のものと考えられる。遊走細胞には大小二種の別はなく、接合過程は全く見られなかった。以上の観察により本県産本種の繁殖は配偶子の単為生殖のみによって行われるものと結論した。

尚本種に於ける配偶子の単為生殖による発芽形式は *U. pertusa*⁴⁾, *U. conglobata*⁶⁾, *U. fenestrata*⁷⁾, *U. lactuca*⁸⁾, *U. olivascens*⁹⁾ に見られる如く直接型のみであり (Fig. 2-8, Fig. 3-21, 22), この点で *U. scagelii*⁷⁾ 及び *U. arasakii*¹⁰⁾ と異なる。

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Summary

Ulva fasciata DELILE from Etomo Bay, Shimane Prefecture (35°31' N.L., 132°59' E.L.), is reported herein to be found mature throughout its growing period of the year from middle June-middle July to late February of the following year. Immotile swimmers taken out from gametangia by cutting open the surface walls with a razor blade prior to their discharge were effectively

provided for the morphological observations. The plants are observed to be spirally twisted more frequently and thinner in fresh color during summer than in winter. Morphological variations of the swarmers and evidences showing that the swarmers are isogametes, that reproduction observed is only parthenogenetic and that the type of germination of the swarmers is typically immediate are described in this report.

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