

Hiroshi YABU and Hirotoishi YAMAMOTO: Chromosome number of *Gracilaria chorda* and *G. vermiculophylla*

Key Index Words: chromosome number—*Gracilaria chorda*—*Gracilaria vermiculophylla*—*Gracilariaceae*—*Rhodophyta*.

Hiroshi Yabu, Faculty of Fisheries, Hokkaido University, Hakodate, Hokkaido, 041 Japan

Hirotoishi Yamamoto, Usujiri Fisheries Laboratory, Hokkaido University, Minami-Kayabe, Hokkaido, 041-16 Japan

In the Gracilariaceae (Rhodophyta), the chromosome numbers have been recorded for two species as shown in Table 1. This communication gives the chromosome count on two Japanese *Gracilaria* species from Hokkaido.

The tetrasporophytes of *G. chorda* HOLMES obtained on the shore at Kamiiso near Hakodate in September 1987 and those of *G. vermiculophylla* (OHMI) PAPANFUSS obtained in the lagoon of Akkeshi near Kushiro in

July 1987 were employed as materials. Fixing was made immediately after collection for *G. vermiculophylla*, but made after half-day preservation in the filtered seawater with aeration in the laboratory for *G. chorda*. Acetic alcohol (1:3) was used for fixing. Staining was done with aceto-iron-haematoxylin-chloral hydrate solution recommended by WITTMANN (1965).

The chromosome counts were possible at late prophase I in the tetrasporangia, and

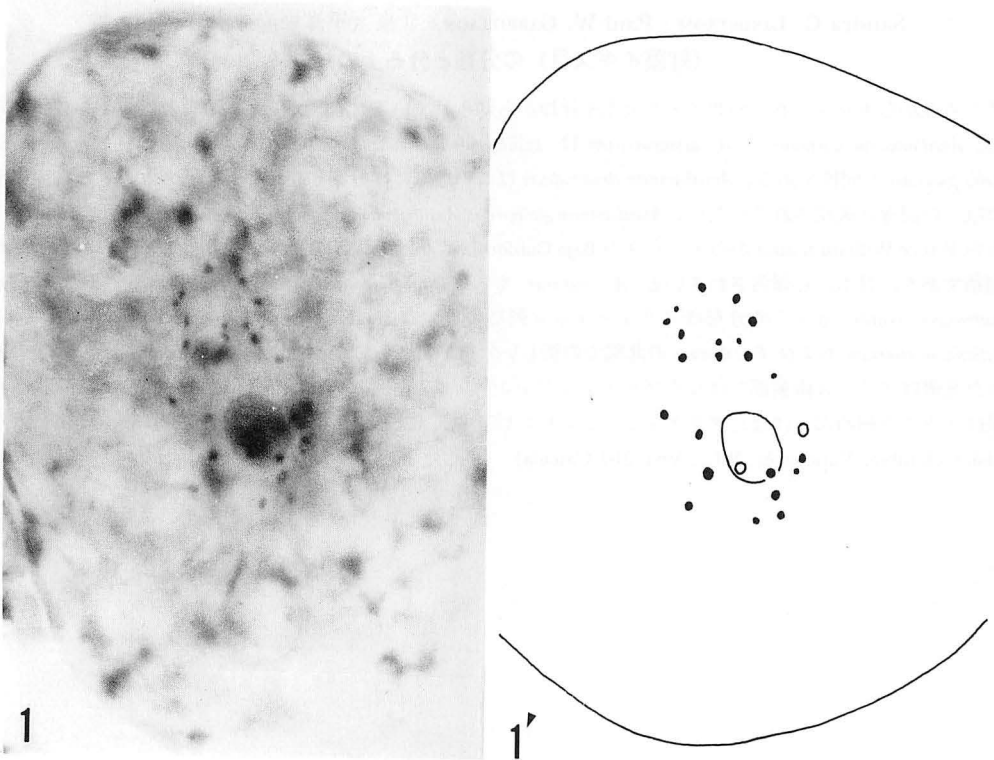


Fig. 1. Late prophase I in the tetrasporangium of *Gracilaria chorda* Holmes. $\times 2,800$. Fig. 1'. Drawing of Fig. 1.

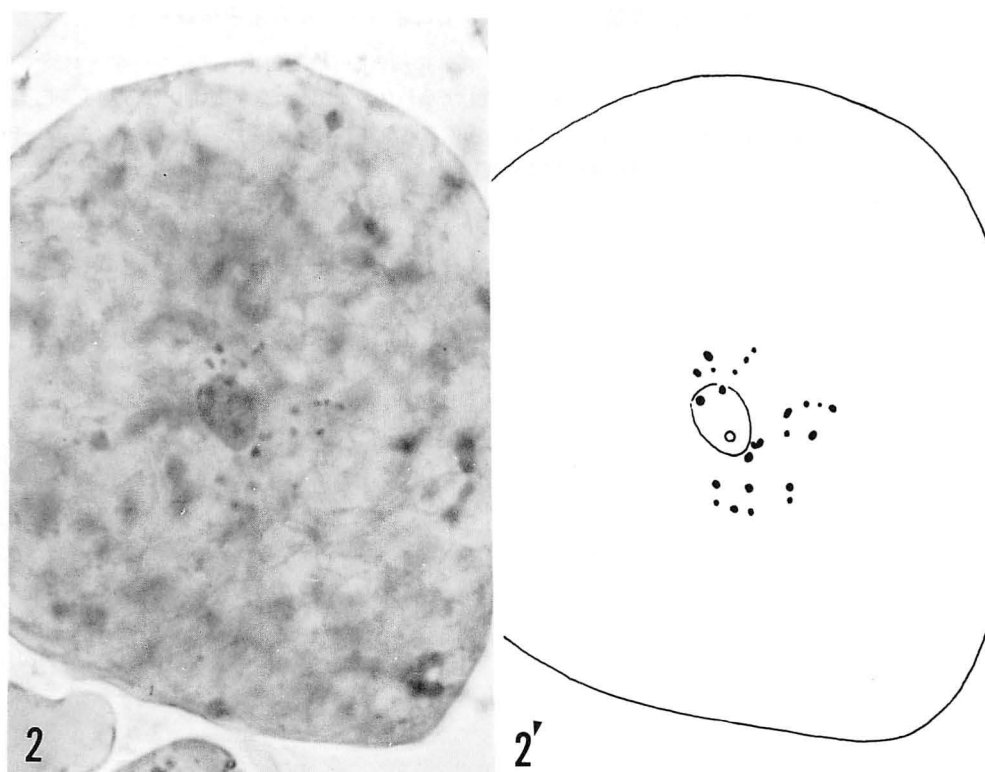


Fig. 2. Late prophase I in the tetrasporangium of *Gracilaria vermiculophylla* (OHMI) PAPENFUSS. $\times 2,800$. Fig. 2'. Drawing of Fig. 2.

Table 1. Chromosome counts in Gracilariaceae.

Species	Locality	Chromosome number	Investigator
<i>Gracilaria multipartita</i>	not cited	n=6-7	GREIG-SMITH 1954
<i>G. verrucosa</i>	Roscoff (France)	n=32	MAGNE 1964
<i>G. verrucosa</i>	South Devon (England)	n=32	BIRD <i>et al.</i> 1982
<i>G. verrucosa</i>	Barkley Sound (Vancouver Is, Canada)	n=24	BIRD <i>et al.</i> 1982
<i>G. verrucosa</i>	Vicinity of Hakodate (Japan)	n=24	YABU and YAMAMOTO 1988

both species showed to have $n=24$ chromosomes (Figs. 1 & 2), being the same as the count for the materials of *G. verrucosa* in the Vancouver Island by BIRD *et al.* (1982) and in the vicinity of Hakodate, Japan by YABU and YAMAMOTO (1988).

References

- BIRD, C. J., VAN DER MEER, J. P. and McLACHLAN, J. (1982). A comment on *Gracilaria verrucosa* (HUDS.) PAPENF. (Rhodophyta; Gigartinales). *J. mar. biol. Ass. U.K.* **62**: 453-495.
- GREIG-SMITH, E. (1954). Cytological observation on *Gracilaria multipartita*. *Brit. Phycol. Bull.* **1**: 4-5.
- MAGNE, F. (1964). Recherches caryologiques chez les Floridées. *Cahiers de biologie marine* **5**: 461-671.
- YABU, H. and YAMAMOTO, H. (1988). Chromosome number of *Gracilaria verrucosa* (HUDS.) PAPENFUSS in the vicinity of Hakodate, Hokkaido. *Bull. Fac. Fish. Hokkaido Univ.* **39**: 4-5.
- WETTMANN, W. (1965). Aceto-iron-haematoxylin-chloral hydrate for chromosome staining. *Stain Tech.* **40**: 161-164.

藪 熙*・山本弘敏**：ツルシラモとオゴモドキの染色体数

北海道産のオゴノリ属植物2種（ツルシラモとオゴモドキ）の四分胞子体を酢酸・アルコール（1:3）で固定し，酢酸・鉄・ヘマトキシリン・抱水クロラル液で染色して染色体数を調べた。両種共に四分胞子嚢内第一核分裂前期の末期で $n=24$ の染色体数が得られた。（*041 函館市港町3-1-1 北海道大学水産学部；**041-16 北海道茅部郡南茅部町 北海道大学水産学部付属白尻水産実験所）