

Notes on *Spirocladia loochooensis* (YENDO) YOSHIDA, comb. nov. (Rhodomelaceae, Rhodophyta)

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Examination of newly collected materials of *Wrightiella loochooensis* YENDO showed that this species is properly accommodated in the genus *Spirocladia* BOERGESEN, because it has no spinous adventitious branchlet. Therefore, a new combination, *Spirocladia loochooensis* (YENDO) YOSHIDA, is proposed.

Key Index Words: Rhodomelaceae—Rhodophyta—*Spirocladia loochooensis*—taxonomy—*Wrightiella loochooensis*.

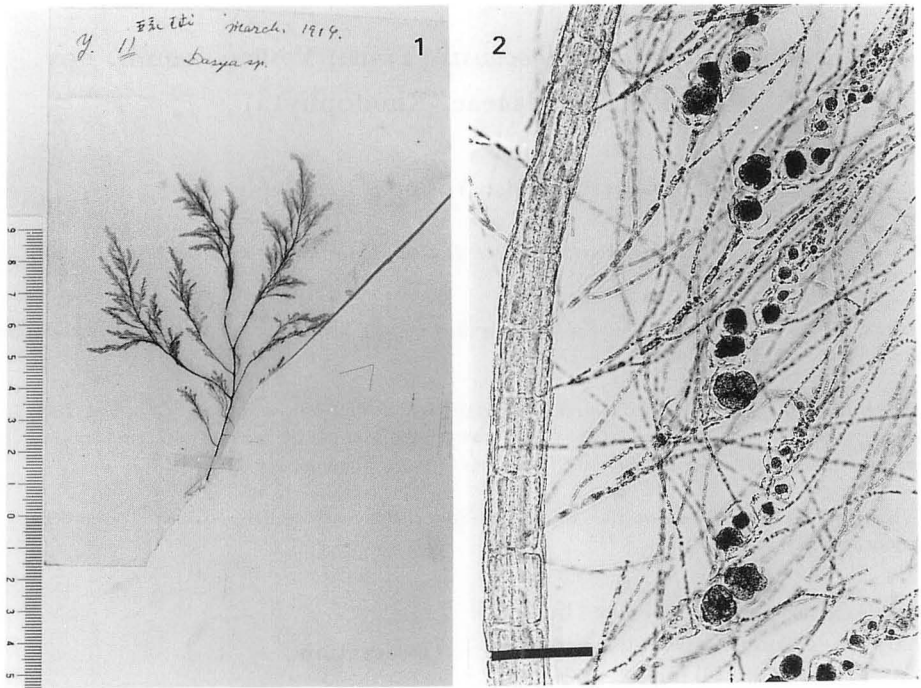
Wrightiella loochooensis was described by YENDO (1920) on a single specimen from an unknown locality of Okinawa Prefecture (Loochoo=Ryukyu), southern Japan. He gave a brief description without a figure. This species was rarely encountered since that time (YAMADA and TANAKA 1938, SEGAWA and YOSHIDA 1961). A recent collection of an alga identifiable to this species afforded a chance to consider generic attribution of this taxon.

Materials

In addition to the holotype [Ryukyu (Okinawa Prefecture), March 1914, anonymous, ex herb. S. Narita, Yendo collection in TI, Fig. 1], following specimens deposited in the herbarium (SAP) of Faculty of Science, Hokkaido University were examined: Ryukyu, no data, anonymous (herb. Okamura). Kimu-wan, Okinawa Prefecture, February 3, 1989, anonymous (SAP 052366). Yonakuni Island, Okinawa Prefecture, April 1935, leg. T. TANAKA (SAP 21173). Amakusa, Kumamoto Prefecture, April 1933, leg. T. TANAKA (SAP 024213). Tomioka, Kumamoto Prefecture, July 1, 1957, leg. T. YOSHIDA (SAP 049889).

Observation

Tetrasporophytes only are available for study, including the holotype. The holotype specimen is 9.5 cm high without a basal part (Fig. 1). Thalli collected recently are up to about 10 cm high, terete throughout, irregularly branched. Basal parts are buried in coral sand. Terete fronds branch several times with wide angle, up to 1.5 mm in diameter. Erect axes are composed of a central cell and 4 pericentral cells, thickly corticated below. On the upper part of the thallus, many trichoblasts about 2 mm long are issued spirally from the nodes. Trichoblasts are uniseriate, sending off spirally uniseriate side branches from each cell of the axial filament, except the basal cell, and every cell of the trichoblast contains plastids. These deciduous trichoblasts fall off from the lower parts of the thallus, leaving basal cell. Tetrasporangial stichidia (Fig. 2) are formed by the transformation of an axial filament of the trichoblast, so that uniseriate lateral filaments are issued from the surface of stichidia. Tetrasporangia are produced spirally in the stichidia, one in each segment.



Figs. 1-2. *Spirocladia loochooensis* (YENDO) YOSHIDA.

Fig. 1. The holotype specimen, TI. Fig. 2. A part of branch bearing stichidia. Scale 200 μ m.

Discussion

In describing this species, YENDO (1920) stated that "Affinis *Wrightiella tumanowiczia* SCHMITZ, sed ramulis spinaeformibus destitutis eadem facile diagnoscitur (similar to *W. tumanowiczia*, but easily distinguished by the absence of spinous branchlets)", as a distinction from the type species of the genus *Wrightiella*. Later, BOERGESEN (1933) established his new genus *Spirocladia*, with the type and only species, *S. barodensis*, from Okhamandal, in the State of Baroda, India, basing on the difference in that his genus had no spinous short branchlets of adventitious endogenous origin on the branches. In comparison with Yendo's species, it is clear that his species is properly accommodated to *Spirocladia*, not to *Wrightiella*. BOERGESEN (1933) observed only male individual. As the specimens at hand are all tetrasporic, identity with Indian species is not certain for the moment. Therefore, I propose the following

combination:

Spirocladia loochooensis (YENDO) YOSHIDA, comb. nov.

Basionym: *Wrightiella loochooensis* YENDO, Bot. Mag. Tokyo 34: 8. 1920.

Holotype: Loochoo (Okinawa Prefecture), March 1914, ex herb. Narita, TI (Fig. 1).

Another species of the genus *Spirocladia*, *S. minuta* NASR (1939), from the Red Sea is very small (up to 3 mm high), and has decumbent lower parts and poorly corticated branches. These characters quite differ from our material.

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吉田忠生：新組合せ *Spirocladia loochoensis* (ヒゲヨレミグサ, 新称) について

ライチエラ *Wrightiella loochoensis* YENDO の記載後, BOERGESEN はインド産の材料について刺状の不定内生枝がないことを主な特徴として1933年に *Spirocladia* 属を設立した。日本産の種もそのような刺状小枝がないことから, *Spirocladia* 属に移すべきであるので, *Spirocladia loochoensis* (YENDO) comb. nov. の新組合せを提案し, あわせてヒゲヨレミグサの新和名も提案する。(060 札幌市北区北10条西8丁目 北海道大学理学部植物学教室)