

A New Variety of *Sargassum* (Phaeophyta) in Taiwan

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ABSTRACT: A new variety of *Sargassum*, *S. polycystum* C. Ag. var. *linearifolium* Yang & Chiang var. nov. is reported in Taiwan. It differs from *S. polycystum* C. Ag. by having linear leaves and long male receptacles. It was found only at Chiu-peng, Pingtung county, Taiwan in the tidal pools of mid-intertidal zone, the same niche as that of *S. polycystum* C. Ag..

KEY WORDS: new variety, *Sargassum*, Phaeophyta, Taiwan.

INTRODUCTION

The genus *Sargassum*, the largest genus in the Phaeophyta with nearly five hundred described species (Yoshida, 1989) is distributed in the tropical to temperate seas. Along the coasts of Taiwan, plants of this genus usually form a large population growing on rocks from mid-intertidal to shallow subtidal zones during November to May in the southern and March to September in the northern Taiwan. A taxonomic study of this genus has been done recently (Yang, 1995) and all together forty-one taxa were reported. Among those taxa, a new variety of *S. polycystum* C. Ag. was recorded. This account describes this variety and its distribution.

MATERIALS AND METHODS

The specimens studied were collected at Chiu-peng, Pingtung county, Taiwan (121°06' E, 22°07'N) on April 16, 1992 and March 30, 1994. All materials examined were preserved in 10% formalin-seawater or as dried herbarium specimens. The morphological study was done with aid of Wild microscope and Zeiss SV8 stereo-microscope. The specimens used are kept in the Herbarium of Department of Botany, National Taiwan University (TAI).

RESULTS AND DISCUSSION

Sargassum polycystum C. Ag. var. *linearifolium* Yang & Chiang var. nov.

Figs. 1-2

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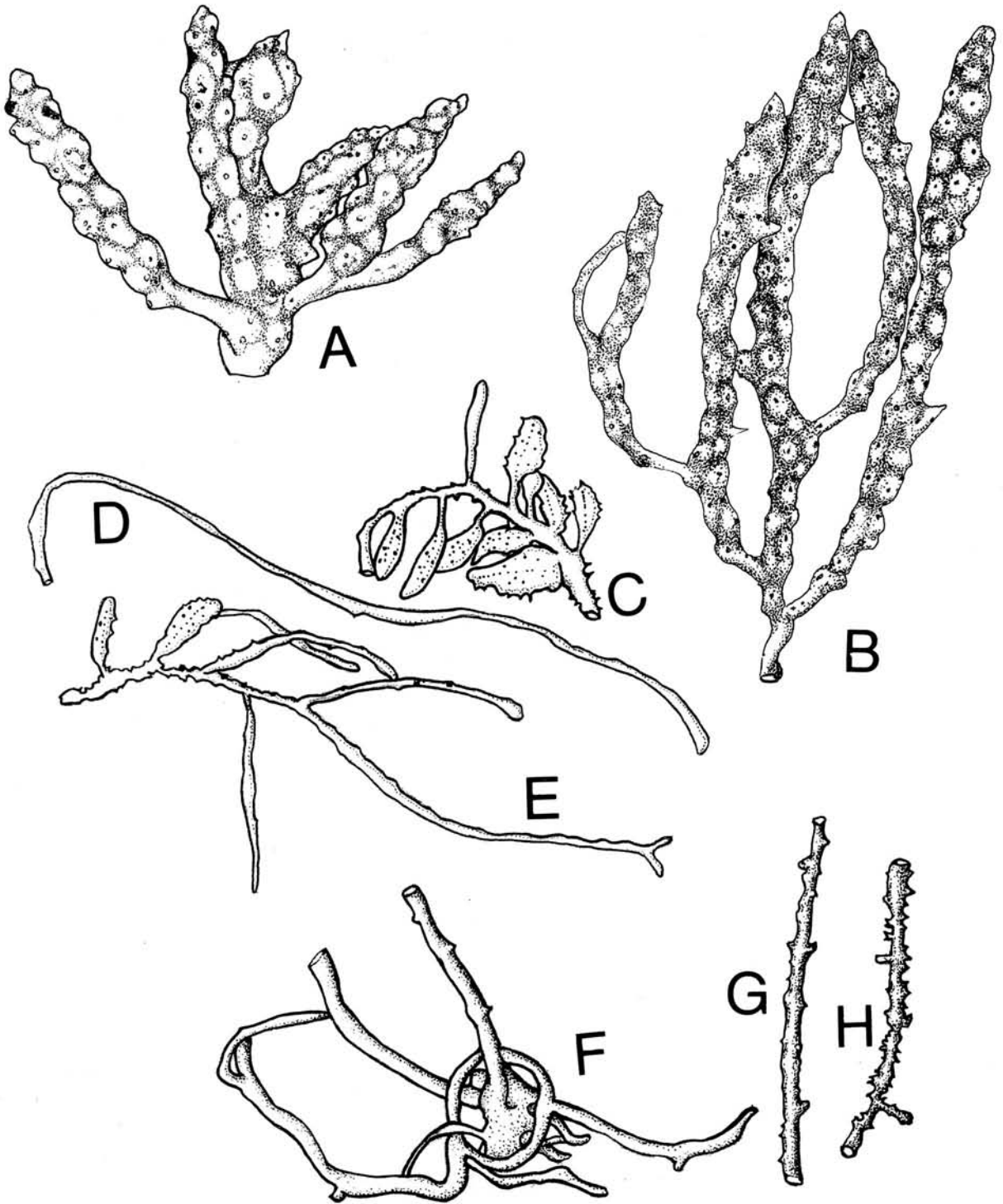


Fig. 1: Morphology of *S. polycystum* C. Ag. var. *linearifolium* Yang & Chiang var. nov. A: female receptacle (x 14); B: male receptacle (x 14); C-E: leaves (x 2); F: holdfast (x 2); G-H: main branches (x 2).

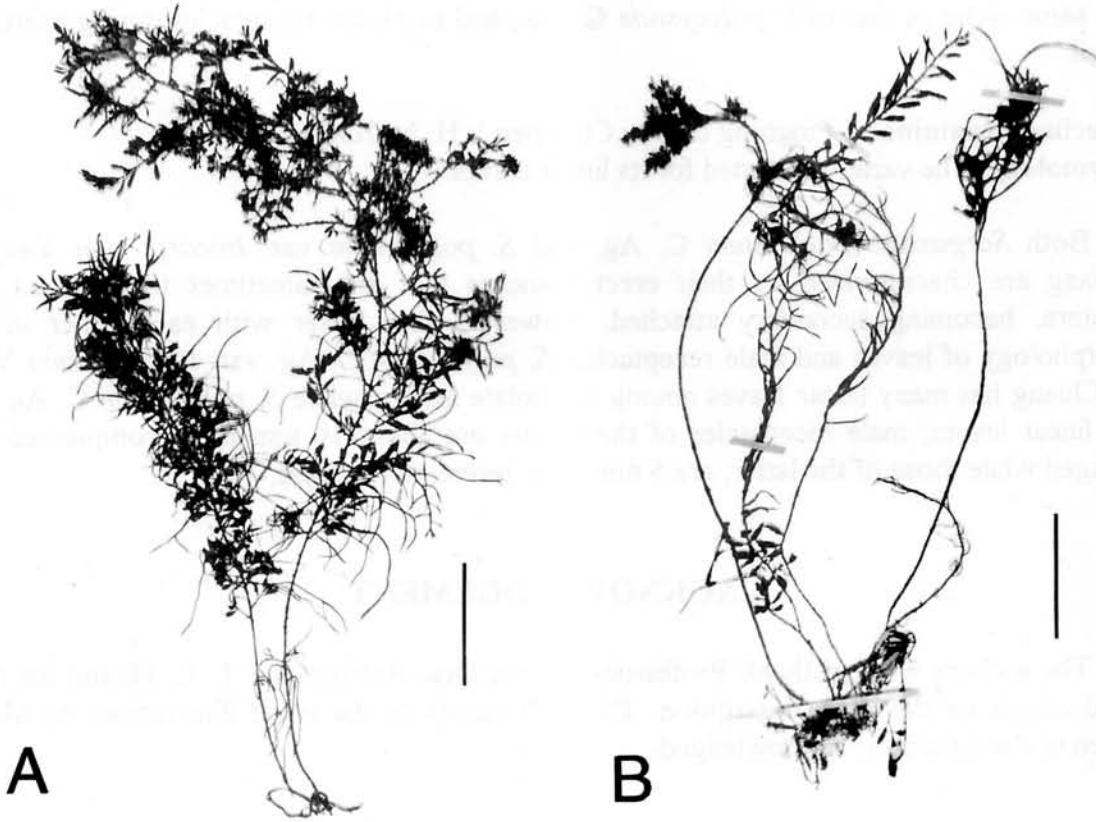


Fig. 2: Habit of *S. polycystum* C. Ag. var. *linearifolium* Yang & Chiang var. nov. A: male plant; B: female plant (scale bar = 5 cm)

Planta dioica; foliis linearibus vel filamentosis linearibus, usque ad 10 cm longis et 0.5 mm latis, apice apiculato vel obtuso, aliquanto furcato, cryptostomatibus irregulariter in pagina et margine, receptaculis femineis teretibus, apice apiculato et petiolo, 3-4 mm longis, 0.5-0.7 mm in diametro; receptaculis masculinis compressis et alis spiniferis, ad 10 mm longis et 1 mm latis.

Holotype: Male, Chiu-pen, Pingtung county, Taiwan, 121°06' E, 22°07' N, Leg. *H. N. Yang* 4032, Apr. 16, 1992. (TAI).

Plant dioecious; leaves papyraceous, broadly lanceolate, linear-lanceolate, linear to filamentous linear. Linear leaves up to 10 cm long, 0.5 mm wide (up to 1.3 mm), apex acute to obtuse, forked sometimes. Cryptostomata scattered on the surface and margin of the leaves. Female receptacle racemose to cymose, terete, apex acute, 3-4 mm long, 0.5-0.7 mm in diameter, with short stalk; male receptacle cymose, compressed and winged, warty with distinct teeth and spines at margin and apices, 10 mm long, 1 mm wide.

Sargassum polycystum C. Ag. distributes quite widely in many parts of southern Taiwan as well as its offshore islands, however, through three years' (from 1992 to 1994) extensive collections and surveys, *S. polycystum* C. Ag. var. *linearifolium* Yang & Chiang was found

only at Chiu-peng. It usually grows on rocks in large tidal pools in the mid-intertidal zone, the same niche as that of *S. polycystum* C. Ag., and produces receptacles during March to April.

Specimen examined (Pingtung county Chiu-pen): H. N. Yang 4032, 4424.

Etymology: The variety is named for its linear leaves.

Both *Sargassum polycystum* C. Ag. and *S. polycystum* var. *linearifolium* Yang & Chiang are characterized by their erect branches that are sometimes transformed into haptera, becoming secondary attached. However, they differ with each other in the morphology of leaves and male receptacles. *S. polycystum* C. Ag. var. *linearifolium* Yang & Chiang has many linear leaves among lanceolate leaves, while *S. polycystum* C. Ag. has no linear leaves; male receptacles of the former are about 10 mm long, compressed and winged while those of the latter, are 5 mm long, terete, not winged.

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台灣馬尾藻屬的一新變種

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摘 要

在臺灣省屏東縣東岸的九棚發現了匍枝馬尾藻(*Sargassum polycystum* C. Ag.) 的新變種—匍枝馬尾藻線葉變種(*Sargassum polycystum* C. Ag. var. *linearifolium* Yang & Chiang var. nov.)。這個新變種和匍枝馬尾藻的不同在於前者有線形的藻葉及長達 10mm 的雄生殖托，而後者則無線形的藻葉且其雄生殖托僅 5mm 而已。目前僅發現於九棚沿岸，與匍枝馬尾藻生長於相同的生態席位(niche)，同樣都是在潮間帶波浪不大的大潮池中。

關鍵詞：新變種，馬尾藻，褐藻植物門，臺灣。

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