

Helicogloea globispora sp. nov. from Taiwan

SHENG-HUA WU and ZUEI-CHING CHEN

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Helicogloea globispora Sheng H. Wu & Z.C. Chen is described as a new species from North Taiwan. This new species with a hypochnoid-floccose basidiome and nodose-septate hyphae, belongs to the subgenus *Saccoblastia* Lowy. *Helicogloea globispora* is allied to *H. sphaerospora* (A. Möller) Lowy, which has smaller basidiospores.

Key words: *Helicogloea globispora*, new species, *Saccoblastia*, Taiwan

Sheng-Hua Wu, Department of Botany, National Museum of Natural Science, Taichung, Taiwan, ROC. E-mail: shwu@nmns.edu.tw

Zuei-Ching Chen, Department of Botany, National Taiwan University, Taipei, Taiwan, ROC

Introduction

Helicogloea Pat. is a heterobasidiomyceteous genus, characterized by having resupinate basidiomes and transversely septate basidia. Baker (1936, 1946) accommodated species with both mucous-gelatinous and floccose basidiomes in this genus. Donk (1966) recognized the genus *Saccoblastia* A. Möller as having hypochnoid-floccose basidiomes and nodose-septate hyphae, while *Helicogloea* has mucous-gelatinous basidiomes and simple-septate hyphae. Lowy (1971) treated *Saccoblastia* as a subgenus of *Helicogloea*. The treatment of Lowy is provisionally adopted in this study. Baker (1946) recognized 11 species in *Helicogloea*. Hawksworth et al. (1995) recorded 16 species in *Helicogloea*. In ultrastructural studies, McLaughlin et al. (1988) demonstrated simple septa and spindle pole bodies based on a *Helicogloea* specimen. Wells (1990) established a new species, *H. variabilis* K. Wells, based on studies of this specimen.

Methods

Free-hand thin sections were made with the aid of a razor blade under a dissecting microscope of 50 × magni-

fication. For microscopic observations, the sections were stained with 1 % aqueous Phloxine in 5 % KOH. For observing details of the microscopic features, it was necessary to press the cover slide to tease apart the hyphal structures. The drawings were made with the aid of a drawing tube attached to the microscope. The studied specimen is deposited at the herbarium of the National Museum of Natural Science, Taichung, ROC (TNM).

Description of species

Helicogloea globispora Sheng H. Wu & Z.C. Chen, sp. nov. – Fig 1.

Basidiocarpus effusus, membranaceus, 80–150 μm crassus; superficies hymenialis plana. Hyphae fibulatae, 2–4 μm diam. Cystidia desunt. Probasidia cylindrica vel clavata, 20–55 × 3.5–8.5 μm. Hypobasidia cylindrica, transverse 3-septata, 60–75 × 6–9 μm. Basidiosporae globosae vel subglobosae, laeves, tenuitunicatae, 9–12.5 × 8.5–11.5 μm.

Holotype: Taiwan, Taipei, Yangminshan National Park, Luchiaokenghsi Ecological Reserve, alt. 300 m, on rotten branch of angiosperm, 23.X.1999 Wu 9910-7 (TNM F9974).

Basidiome resupinate, white, hypochnoid-floccose, 80–150 μm thick; margin concolorous, thinning, arachnoid. Hymenial surface smooth. Subiculum with moderately loose texture; hyphae nodose-septate, colourless, horizontal near the substratum, somewhat vertical elsewhere, 2–4 μm diam., thin-walled, basal hyphae slightly thick-walled. Cystidia lacking. Probasidia pleural, or terminal but usually bearing a lateral branch, subclavate or cylindrical, 20–55 \times 3.5–8.5 μm , usually guttulate. Hypobasidia usually pleural, cylindrical, 60–75 \times 6–9 μm , transversely 3-septate; sterigmata subulate, up to 9 \times 2.3 μm . Basidiospores globose-subglobose, colourless, smooth, thin-walled, 9–12.5 \times 8.5–11.5 μm , guttulate, bearing a distinct apiculus.

Etymology: "Globispora", from the globose shape of the basidiospores.

Specimen examined: See type.

Distribution: So far known only from Taiwan.

Helicogloea globispora has hypochnoid-floccose basidiomes and nodose-septate hyphae, features which correspond with the concept of the subgenus *Saccoblastia*. This new species is allied to *H. sphaerospora* (A. Möller) Lowy, owing to the globose basidiospores of both species. However, the latter has smaller ba-

sidiospores of 6–8 μm diam., according to Möller (1895).

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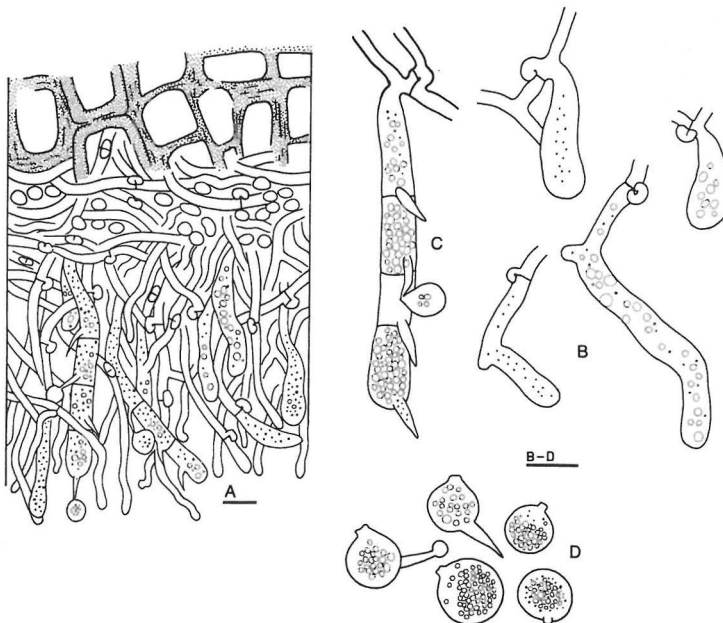


Fig. 1. *Helicogloea globispora* (holotype). A. Basidiome section with substratum (woody cells) at top. B. Probasidia. C. Hypobasidium. D. Basidiospores. Scale bars = 10 μm .