

A new record of the genus *Cryptocoleopsis* (Hepaticae, Jungermanniaceae) in Yunnan, China

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Abstract – *Cryptocoleopsis* Amak. (Jungermanniaceae, Hepaticae) is a monotypic genus only with *Cryptocoleopsis imbricata* Amak. It has been regarded as endemic to Japan and known only from type locality. *Cryptocoleopsis imbricata* is reported here as a new record for the Chinese bryoflora.

China has a rich liverwort flora with 147 genera of Hepaticae and Anthocerotae (Piippo, 1990). Piippo (1990) included five genera, *Jungermannia* L., *Nardia* S. Gray, *Scaphophyllum* Inoue, *Mylia* S. Gray, *Notoscyphus* Mitt. in Jungermanniaceae. Later, Yi et Gao (1998) and Yi, Liu & Gao (1998) reported two other genera, *Horikawaiella* Hatt. & Amaka. and *Hattoria* Schust., as new to China.

Cryptocoleopsis imbricata Amak. was first presented as a *nom. nud.* in Hattori (1957) and was described by Amakawa (1959). Subsequently, no further species have been added to the genus, which has thus remained monotypic. The taxon was only known from the type specimen from Hokkaido, Japan.

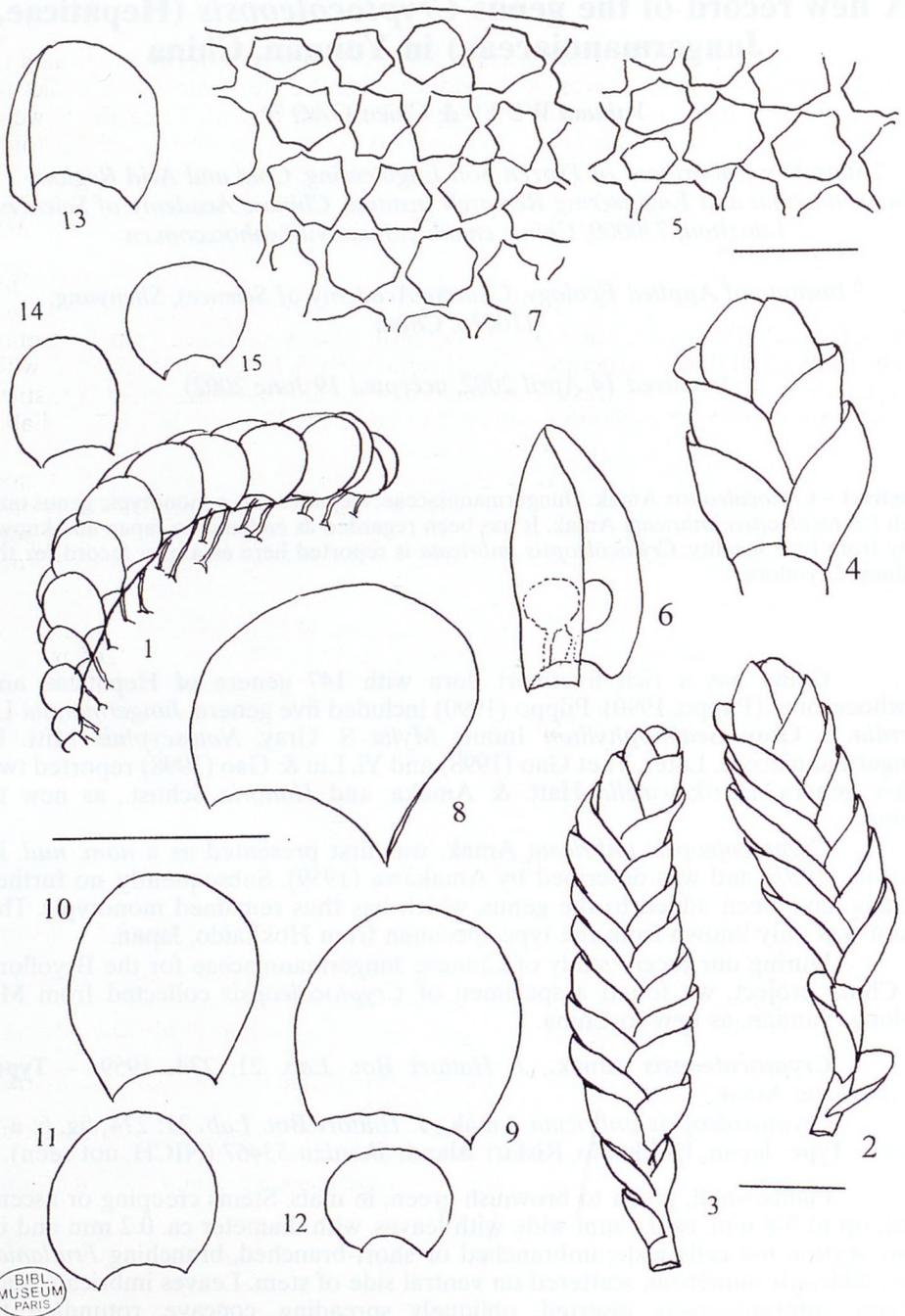
During our recent study of Chinese Jungermanniaceae for the Bryoflora of China project, we found a specimen of *Cryptocoleopsis* collected from Mt. Yulong, Yunnan, as new to China.

Cryptocoleopsis Amak., *J. Hattori Bot. Lab.* 21: 274. 1959. – **Type:** *C. imbricata* Amak.

Cryptocoleopsis imbricata Amak., *J. Hattori Bot. Lab.* 21: 274, fig. 6: a-t. 1959. – **Type:** Japan, Hokkaido, Rishiri Island, Shimizu 53467 (NICH, not seen).

Plants small, green to brownish-green, in mats. Stems creeping or ascendent, up to 5-8 mm, ca 0.8 mm wide with leaves, with diameter ca. 0.2 mm and in cross section 6-8 cells wide; unbranched or short-branched, branching *Frullania*-type. Rhizoids numerous, scattered on ventral side of stem. Leaves imbricate, succubous, subtransversely inserted, obliquely spreading, concave, rotundate to obtusate, 0.4-0.5mm long, 0.5-0.6 mm wide, margin entire. Cells along leaf mar-

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Figs 1-15. *Cryptocoleopsis imbricata* Amak: 1. sterile plant; 2. female plant; 3. male plant; 4. male bracts; 5. leaf cells of middle lamina; 6. perigonial bracts with antheridia; 7. apical leaf cells; 8. perichaetial bracts; 9-15. leaves. (Drawn from *Mu ZANG 1698* (KUN)). (Scale bars: 1-3 - 1 mm; 4, 6, 8-15 - 0.5 mm; 5, 7-30 μ m).

gin 20-30 × 10-15 μm, in middle lamina 20-30 × 20-23 μm, near base 20-30 × 22 μm, thin-walled; trigones large, sometimes bulging; cuticle nearly smooth. Underleaf absent. Gemmae absent. Plants dioicous. Male inflorescence terminal, bracts in 2-3 pairs, similar to stem leaves. Antheridia round, 1-2 per bract, with stalks of biseriate cells. Female inflorescence terminal. Perianth absent. Perigynium well-developed, short conical, with angles of about 30° to stem tip, fleshy, with rhizoids in the base. Perichaetial bracts 3 or 4 pairs, much larger than stem leaves; bracts on perigynium larger and more broadly ovate. Sporophytes not seen. (Figs 1-15).

Chinese specimens examined: YUNNAN, Lijiang Co., Mt. Yulong, *Mu ZANG 1698* (KUN).

Plants of *Cryptocoleopsis* are similar to *Cryptocolea* Schuster (1953). The characteristic features of *Cryptocoleopsis* are: 1) perigynium inclined, with an angle of about 30° from stem apex; 2) perianth totally reduced; 3) perichaetial bracts lacking bilabiate structure; and 4) seta with 6-7 cells in diameter, with 17 epidermal cells. In contrast, *Cryptocolea* has the following characteristics: 1) perigynium erect; 2) perianth vestigial; 3) perichaetial bracts showing a bilabiate structure; and 4) seta with 8-9 cells in diameter, with 25-27 epidermal cells.

For many years *Cryptocoleopsis* has been regarded as an endemic taxon in Japan and known only from the type locality, growing on shaded, moist, andesite rocks or in crevices, at 1400-2100 m elev. (Amakawa, 1959). The report from China is a second locality for the genus. This discovery extends its range from Japan to China and the genus should be considered now as an East Asia one.

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