Taxonomic position of *Leptocladium* and new synonymy in Chinese Amblystegiaceae (Bryopsida)

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*Leptocladium sinense* Broth., the single species of its genus and known only from type material from Yunnan, South China, is redescribed and illustrated with line drawings. It is transferred from the Thuidiaceae (original placement) to the Amblystegiaceae and considered closely related to *Platydictya* Berk. *Amblystegiella yunnanensis* Broth. is synonymized with *Amblystegium serpens* (Hedw.) B. S. G. and *Amblystegium sinensistubile* C. Müll. with *Platydictya subtilis* (Hedw.) Crum.

Key words: Amblystegiaceae, *Leptocladium*, mosses, nomenclature, *Platydictya*, taxonomy

*Leptocladium sinense* Broth. was described by Brotherus (1929). Subsequently, no further species have been added to the genus, which has thus remained unispecific. The taxon is only known from the type specimen from Yunnan in South China (cf. Redfearn et al. 1996). Since Brotherus, the type has apparently not been examined by anyone.

The original placement of *Leptocladium sinense* was the Thuidiaceae, which in Brotherus’s time was understood in a much wider sense than today. Brotherus (1929) compared *L. sinense* with the genera *Leptopterigynandrum* C. Müll. and *Heterocladium* Schimp.: “Genus novum cum Heterocladio et Leptopterigynandro comparandum, sed inflorescentia autoica, ramis julaceis necnon foliorum forma et structura longe diversum.” *Leptopterigynandrum* and *Heterocladium* are currently placed in the Leskeaceae and Thuidiaceae respectively (Buck & Crum 1990). I think the taxonomic relationships of *Leptocladium sinense* are completely different: the taxon belongs to the Amblystegiaceae and is closely related to *Platydictya* Berk.

*Leptocladium sinense* Broth. (Fig. 1)


Plants creeping, small, slightly glossy. Stems and branches terete, somewhat julaceous, straight to variably arcuate; many branches caducous. Stems in cross-section elliptic, with relatively small, thick-walled epidermal cells surrounding a layer of similar cortical cells, medullary cells much larger, thin-walled, central strand none. Stem leaves to ca. 0.5 mm long, appressed when dry and scarcely altered upon wetting, somewhat concave, shortly and narrowly decurrent, (broadly...
ovate, narrowed at ca. 3/4 the leaf length to an acuminate, often reflexed acumen. Branch leaves similar but smaller, acumina shorter on the average. Leaf margins plane, entire at base, weakly serrulate elsewhere; costa nearly absent or short and bifurcate to single and reaching near midleaf. Leaf cells slightly prorate; laminal cells elongate, vermicular, upper and median oblong-linear, ca. 25–40 × 5 μm, basal more rectangular, shorter and slightly wider; marginal cells somewhat shorter than the adjacent laminal cells; alar cells shortly rectangular to quadrate in distinct yet diffusely demarcated groups. Pseudoparaphyllia foliose, often lobed.
Autoicous; gametocia situated on the stems. Perigonia gemmiform, inner perigonal leaves ca. 0.5 mm long, ecostate, ± elliptic, apex obtuse to acute. Post-fertilization inner perichaetial leaves to ca. 1.8 mm long, narrowly ovate-lanceolate, plicate, above abruptly narrowed to an acuminate apex; costa faint, single or double, variable in length and sometimes reaching mid-leaf; margins weakly serrulate; some leaves with small basal marginal lobes. Vaginula ca. 0.6 mm long, bearing paraphyses and archegonia. Seta smooth, ca. 1 cm long, dextrorse when dry, brownish red below, orangish above. Capsules poorly preserved, ca. 0.5 mm long, arcuate, horizontal to cernuous. Operculum conical. Calyptra, peristome and spores not observed.

*Platydictya* has not been monographed, but a detailed regional revision was provided by Kanda (1975). The generic relationships of *Leptocladium sinense* are indicated by the combination of very small plants, autoicous sexual condition, absence of a stem central strand, mostly lobed foliose pseudoparaphyllia, leaves with a relatively weak costa or none at all, slightly prorate laminal cells, and a group of short-rectangular to quadrate alar cells. This combination of gametophyte features characterises *Platydictya* (cf. Kanda 1975). Unfortunately, the sporophytes of *L. sinense* are in too poor a condition for taxonomic judgments.

Although clearly closely related to *Platydictya*, *Leptocladium* merits generic segregation because of the following gametophyte characters: stems and branches julaceous; branches often caducous; leaves shortly decurrent; and laminal cells longer than in any species of *Platydictya*. It is not clear from the present material how common the peculiar basal marginal lobes of some of the perichaetal leaves (Fig. 1d) are, but I have not seen such structures in any other related species. They appear to be “over-developed” marginal teeth.

**New synonymy in Chinese Amblystegiaceae**

The following synonymy was proposed as herbarium annotations by Dr. Ryszard Ochyra. I publish it with his permission, and because I agree with the taxonomic judgments.

**Amblystegium serpens** (Hedw.) B. S. G.


**Platydictya subtilis** (Hedw.) Crum


**REFERENCES**


