

Maclurochloa loebacensis (Poaceae), a new species of climbing bamboo from Vietnam

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A clambering bamboo from southern Vietnam is described as a new species, *Maclurochloa loebacensis* N.H. Nguyen & V.T. Tran (Poaceae, Bambusoideae) and illustrated in line drawings. It is similar to *M. montana* and *M. tonkinensis*, but differs by having deeply concave culm sheaths and flat stigmas.

The genus *Maclurochloa* (Wong 1993) was separated from *Dinochloa* to accommodate just one species, *M. montana* from Malaysia (Wong 1993, 1995). *Maclurochloa* differs from *Bambusa* in having only one or two perfect flowers in the spikelet, 3–5 transitional glumes below the flowers, with the upper as long as lemmas. From *Dinochloa* and *Melocalamus*, which also are climbing bamboos (Wong 1993), *Maclurochloa* differs by its non-fleshy fruit. One species from Vietnam, *M. tonkinensis*, was described by Nguyen and Tran (2013), and that species differs from *M. montana* by having the culm leaves with auriculate sheaths and erect blades.

During an expedition to P40 Pass, Loc Bac Commune, Bao Lam District, Lam Dong Province, in southern Vietnam in August 2005, the authors found several sparsely growing populations of climbing bamboos in mountain forest, between 850–950 m a.s.l. Specimens containing branches, culm leaves and flowering branches were collected and later studied. We confirmed the presence of clambering culms, the dominant central primary branches often growing

very long and recapitulating the development of the original culm. The rachilla internodes were short, the flowers (florets) perfect, two (rarely one or three), with a vestigial terminal flower present, as should be in *Maclurochloa*. However, detailed studies of the specimens revealed that they differed among other characters by their deeply concave culm leaf sheaths and 2–3 transitional glumes (Table 1 and Fig. 1). Therefore, we here describe a new species based on those specimens.

Maclurochloa loebacensis H.N. Nguyen & V.T. Tran, *sp. nova* (Fig. 1)

TYPE: Vietnam. Lam Dong Province, Bao Lam District, Loc Bac Commune, alt. 935 m a.s.l., 11°44′05.9″N, 107°42′16.5″E, 22 Aug. 2005 H.N. Nguyen & V.T. Tran VAFS 0444 (holotype VAFS, Herbarium of the Vietnamese Academy of Forest Science, Hanoi; isotype DLU, Herbarium of Dalat University).

ETYMOLOGY: The specific epithet refers to the type locality, Loc Bac District, Lam Dong Province, Vietnam.

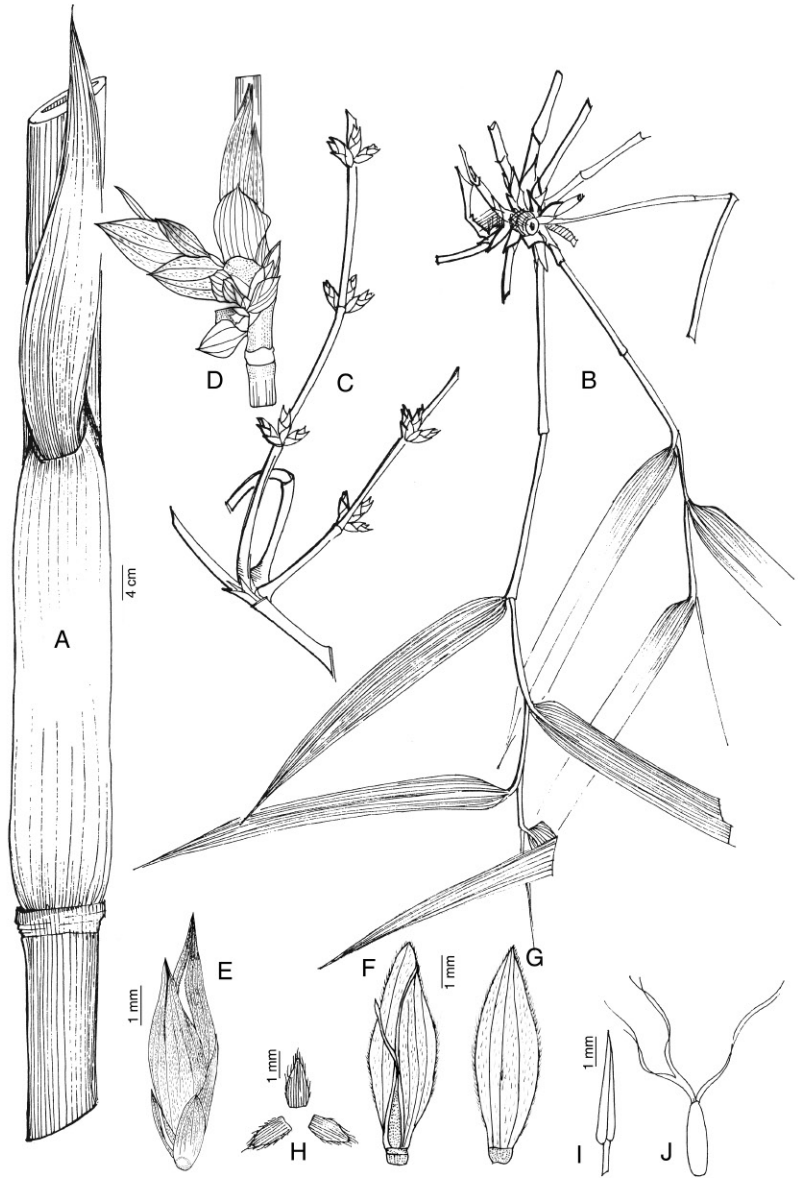


Fig. 1. *Maclurochloa locbacensis* (from the holotype). — **A:** Culm leaf. — **B:** Branch complement. — **C:** Flowering branches. — **D:** Section of flowering branch. — **E:** Pseudospikelet. — **F:** Ventral view of palea. — **G:** Dorsal view of palea. — **H:** Lodicules. — **I:** Stamen. — **J:** Gynoecium.

Table 1. Morphological comparison of *Maclurochloa locbacensis* with its congeners.

Characters	<i>M. montana</i>	<i>M. tonkinensis</i>	<i>M. locbacensis</i>
Culm leaf sheaths	apex horizontal, covered with shiny pale brown short appressed hairs, auricles forming a low rim	apex horizontal, covered with dense white hairs, auricle long	apex deeply concave to ca. 3 cm, covered with appressed black hairs, auricles absent
Culm leaf blades	spreading to reflexed	erect	spreading to reflexed
Glumes	3–5	3	2–3
Perfect flowers	1–2	(1–)2	(1–)2(–3)
Lemma	7–10 mm long, smooth	11–12 mm long, pubescent	5–6 mm long, pubescent
Palea	abaxial surface smooth	abaxial surface ciliate	abaxial surface ciliate
Stigmas	terminal on ovary	terminal on style	terminal on style

Rhizomes pachymorph. Culms scrambling, 15–20 m long, trailing over ground; internodes 55–60 cm long, 4–4.5 cm in diameter, with felted shiny white to silvery hairs below each node; walls 0.5–0.6 cm thick. Branch complement consisting of a dominant central primary branch with several slender secondary branches, dominant central primary branches often very long and recapitulating development of original culm. Culm leaf sheaths stiff and fragile, 18.5–29 cm long, 17–19 cm wide, abaxially covered with appressed black hairs, base of outer margin usually with a small conspicuous sub-circular projection below point of attachment; sheath apex 2–3 cm wide, deeply concave to ca. 3 cm, one summit 6–7 cm long, other one 1.5–2 cm long; blades long and oblique, one margin straight, one margin rounded, abaxially with sparse, brown hairs, 22–24 cm long, 2.5–3 cm wide, green, reflexed; auricles absent; ligules ca. 0.3 cm long. Foliage leaf blades oblong-wedge-shaped, abaxially covered with dense silver hairs, 15–16 cm long, 1–1.1 cm wide; base obtuse or acute; primary veins 9–10; ligules short, ca. 2.5 mm long, white hairs, ca. 1.1 cm long. Pseudopetioles 0.5 mm wide, 0.5 mm long. Pseudospikelets typically 0.5–0.7 cm, consisting of small bracts, 1–2, 1–2 bracts subtending prophyllate buds, 2–3 transitional glumes (shorter than lowest lemma); 2 perfect flowers (occasionally 1 or 3) and a terminal vestigial flower; uppermost glume 2–2.2 × 2–2.5 mm, ciliate on abaxial surface, veins 5–7; rachilla internodes between flowers ca. 3 mm long; lemma 5–6 × 2–3 mm, apex acuminate, abaxial surface ciliate, veins 9–11; palea 2-keeled, 5–6 × 2–3 mm, apex

acuminate, abaxial surface ciliate, densely hairy on keels; lodicules 3, oblique-ovoid, apex acute, 2–2.2 × 1–1.2 mm, margins with long hairs ca. 0.3 mm; stamens 6, filaments free, ca. 3 × 1 mm; style with two flat, hairy stigmas; caryopses oblong-ovoid. In 2005, flowering lasted from July to August, and fruiting occurred on 22 August. New shoots developed from June to August.

DISTRIBUTION AND HABITAT: Found only in the Loc Bac Commune, Bao Lam District, Lam Dong Province, southern Vietnam. The species grows sparsely scattered in degraded valleys and mountain gorges, mixed with broadleaved trees and other bamboos such as *Gigantochloa multifloscula*.

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