

## A New Species of *Tupistra* (*Asparagaceae*) from Laos

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*Tupistra laotica* N. Tanaka, a new species from Laos, is diagnosed, described and illustrated. It is unique in having a remarkably long slender peduncle and small broadly campanulate flowers with deltoid tepals and a patelliform or cupulate stigma. Diagnostic differences from two other congeners, *T. stoliczkana* Kurz and *T. muricata* (Gagnep.) N. Tanaka, are noted.

**Key words:** *Asparagaceae*, *Convallarieae*, Laos, new species, *Tupistra laotica*, *Tupistra muricata*, *Tupistra stoliczkana*.

The genus *Tupistra* Ker Gawl. (s. str.) comprises approximately 13 species distributed mainly in South and Southeast Asia, including Nepal, Bhutan, India, Myanmar, Thailand, Malaysia, Indonesia, Laos, Vietnam and China (Tanaka 2003a). It is generally regarded as allied to such genera as *Aspidistra* Ker Gawl., *Rohdea* Roth, *Reineckea* Kunth, *Speirantha* Baker and *Convallaria* L., and classified under the tribe *Convallarieae* Endl. (Engler 1887, Dalla Torre and Harms 1900, Lotsy 1911, Krause 1930, Conran and Tamura 1998).

From Laos only one species, *Tupistra muricata* (Gagnep.) N. Tanaka, has been known (Gagnepain 1934, Tanaka 2003b). In the course of revising the taxonomy of the genus, a very remarkable new species was found in the collections from Laos. In this paper, this species is described, illustrated, and compared with two other congeners, *T. stoliczkana* Kurz described from Myanmar (Kurz 1876) and *T. muricata*.

***Tupistra laotica*** N. Tanaka, sp. nov.

[Figs. 1–3]

Haec species nova a speciebus ceteris *Tupistrae* (s. str.) pedunculo perlongo (ca. 59 cm longo) et gracili facile distinguitur. Subsimitis *T. stoliczkanae* Kurz floribus parvis cum pistillo curto est, sed ab ea stigmatum patelliformi vel cupulato margine undulato (vs. stigma umbraculiforme margine cum dentibus decurvatis), tubo perianthii crateriformi cum lobis deltoidis (vs. tubum teretem cum lobis oblongoovatis), et foliis angustioribus diversa est.

**TYPE:** LAOS. Vientiane, Réservoir Nam Ngum, Embouchure Nam Khê, 102°42' E, 18°28' N, 19 Oct. 1974. J. E. Vidal 5960 (US 2800917–holotype).

Entirely glabrous tall herb. Rhizome stout, ca. 1.5 cm in diam. Cataphylls 7, basal, enclosing basal part of leaves, deltoid, narrowly deltoid or subulate, acute, straw-colored (in sicco), 4–24.5 cm long. Leaves 2, basal; blades

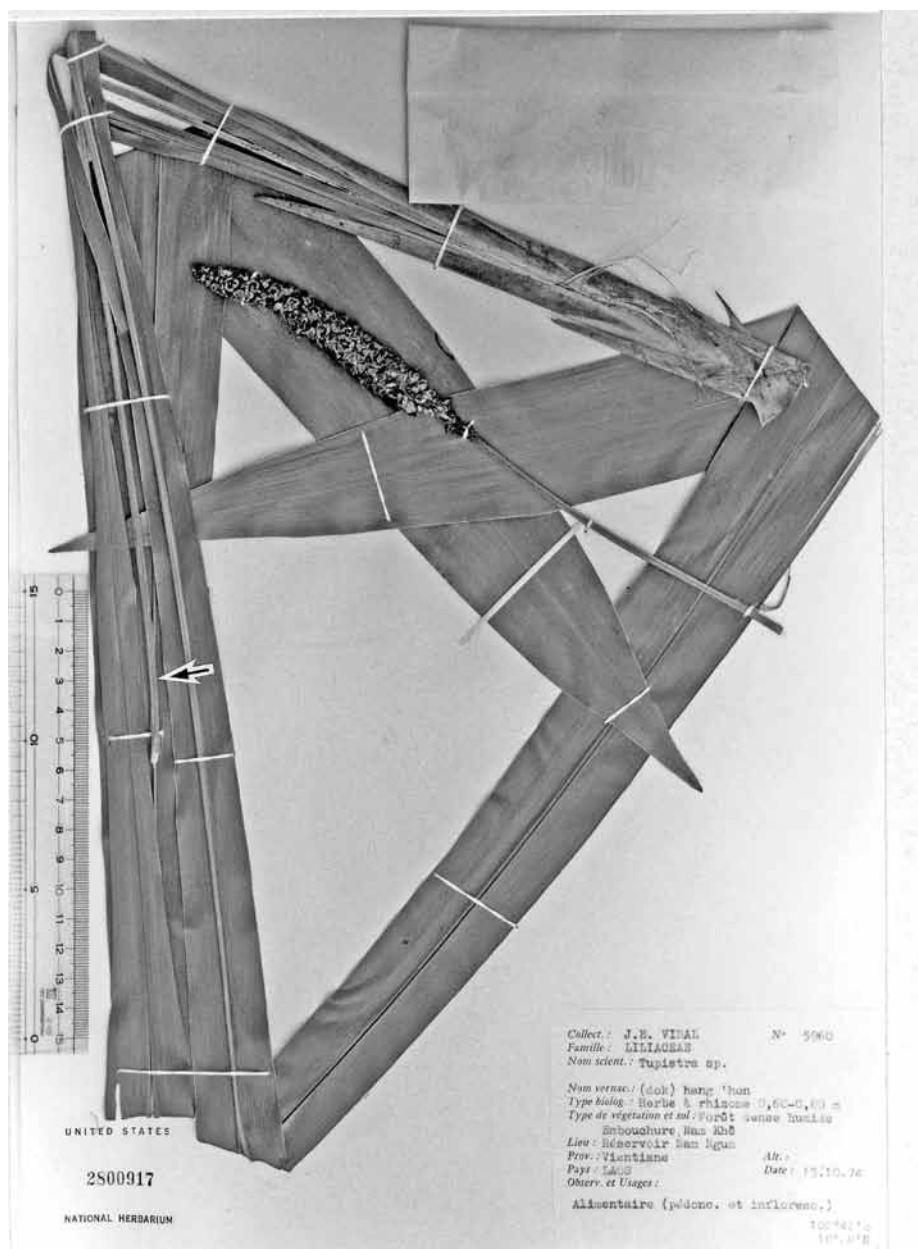


Fig. 1. Holotype of *Tupistra laotica* N. Tanaka from Laos (J. E. Vidal 5960, US 2800917). Arrow points to part of peduncle.

narrowly oblanceolate, acute or subacuminate at apex, long narrowly cuneate at base, entire, ca. 108–125 cm long including petiole, 4.5–5.5 cm broad, midvein prominently ridged dorsally, lateral longitudinal veins fine and numerous, elevated on both surfaces (in sicco). Flowering

stem strict; peduncle terete, slender, stiff, green, ca. 59 cm long, without sterile bracts; spike densely many-flowered, 11 cm long, ca. 1.5 cm in diam, gradually narrowed upwards. Bracts 2 per flower, inserted in 2 whorls to rachis close to floral base; outer one borne under

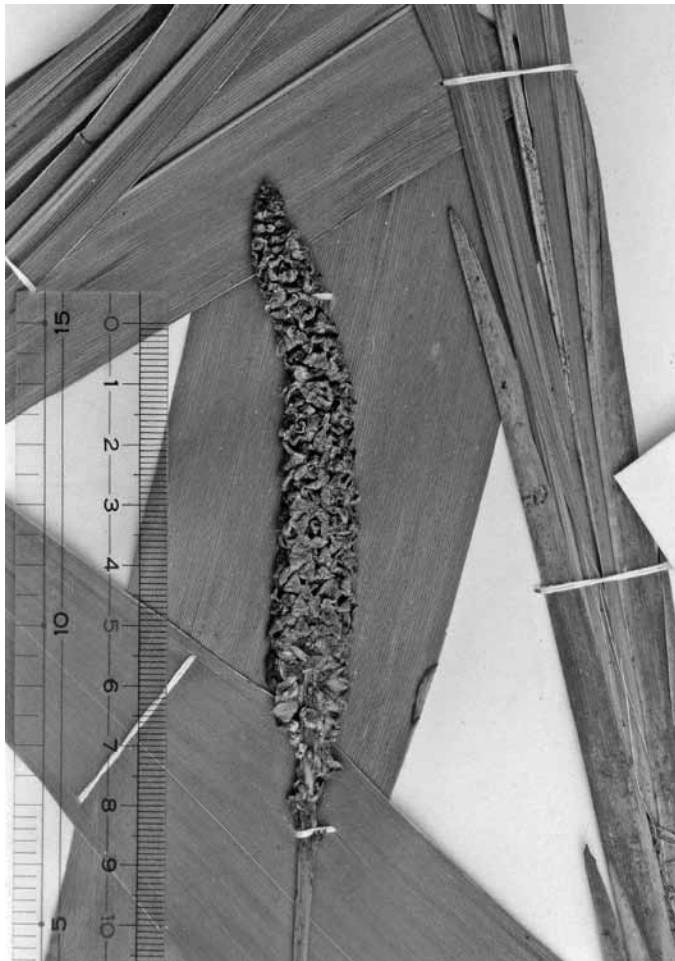


Fig. 2. Spike and some vegetative part (leaves and cataphylls) of *Tupistra laotica* (holotype, US).

flower, cucullate, inflexed above, oblong, truncate or obtuse at apex, to 4 mm long; inner one (bracteole) smaller, borne at same level with flower, suborbicular, elliptic, or oblong-oblancheolate, usually 2–3 mm long, midvein ridged dorsally. Flowers sessile, perpendicular to rachis; perianth broadly campanulate, 6-cleft, 6.5–10 mm across, fleshy; lobes deltoid or ovate-deltoid, obtuse at apex, recurved, slightly imbricate basally, 3–4 mm long, 2.5–4(–4.5) mm broad; tube crateriform, short, 3–4.5 mm long. Stamens 6; anthers sessile, located in distal part of perianth tube, included, elliptic, 1.5–2 mm long. Pistil 1, ca. 3.5–4.5 mm long; stigma

patelliform-cupulate, slightly concave in center, undulate or irregularly 2–4-lobed, somewhat marginate, 2.5–3.5 mm across, positioned higher than anthers; style terete or slightly broadened above, 2.5–3.5 mm long; ovary superior, short, 0.3–0.5 mm long.

Habitat: Humid dense forest.

Distribution: Laos (Vientiane).

*Tupistra laotica* (Figs. 1–3) is unique in having an unusually long slender peduncle, by which it can be distinguished from all the other species of the genus.

At the present moment, it is difficult to trace the relationships of this new species to other

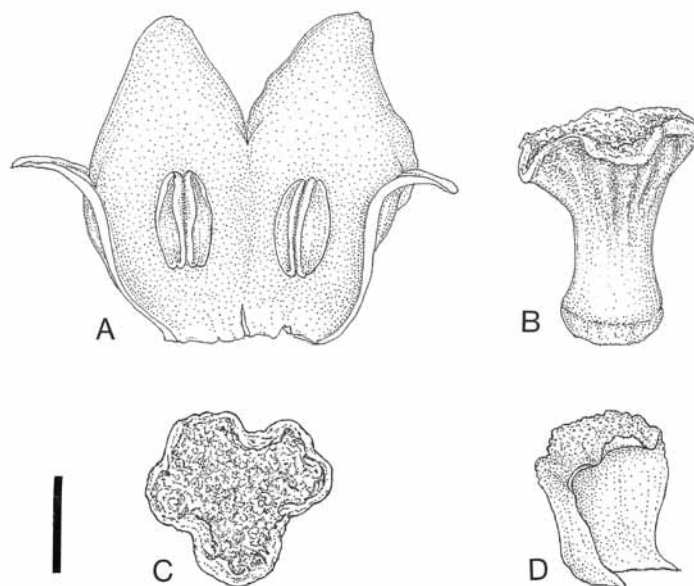


Fig. 3. Flower and bract of *Tupistra laotica*. A. Part of perianth with two lobes and two stamens in side view. B. Pistil in side view. C. Stigma in front view. D. Outer bract. Scale bar = 2 mm. Drawn from holotype (US) by Noriyuki Tanaka.

congeners. *Tupistra laotica* somewhat resembles *T. stoliczkana* (Kurz 1876) from Myanmar in having small flowers, anthers located in the distal part of the perianth tube, and a short pistil. However, as stated in the diagnosis above, the differences of the two species are not small. For instance, *T. laotica* has a patelliform stigma with an undulate limb, and deltoid perianth lobes, whereas *T. stoliczkana* has an umbraculate stigma with decurved deltoid teeth in the limb, and oblong-ovate perianth lobes (Stoliczka s.n., CAL). *Tupistra laotica* is also fairly distinct from *T. muricata* (Gagnepain 1934, Tanaka 2003b) from Laos in many respects. It differs from the latter (Thorel 3314, P) by the much longer peduncle, shorter and denser spike, smaller flowers with a shorter pistil and anthers located at the distal part of the perianth tube (in *T. muricata* the anthers are located in the basal part of the perianth lobe), and more slender leaves (in the holotype of *T. muricata*, the leaf measures about 7.7 cm broad).

The flowering time of the type specimen of

*Tupistra laotica* had already passed supposedly several months before the collection date (19 October), judging from the state of the floral remnants which are very fragile and fairly decayed.

Specimens of two other species examined for comparison and cited in this paper:

*Tupistra stoliczkana*: Myanmar. Upper Tenasserim, Moulmein District, F. Stoliczka s.n. (CAL 480740, type).

*T. muricata*: Laos. Pak-lay, 1866–1868, Thorel 3314 (P, type of *Gonioscypha muricata*).

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#### 田中教之：ラオス産 *Tupistra* (クサスギカズラ科) の 1新種

ハラン属 *Aspidistra* やオモト属 *Rohdea* に近縁な *Tupistra* は主として南アジアや東南アジアに分布している。ラオスからはこれまで1種 *T. muricata* (Gagnep.) N. Tanaka のみが知られていた。 *Tupistra* の分類を再検討している過程で、ラオスで採集された1標本が新種であることが判明したので、これを *T. laotica* N. Tanaka と命名し、記載した。本種は非常に長くかつ細い花梗を持つことで他のどの種とも容易に区別できる。花は小型で三角状の花弁を持ち、雌ずいは短く、柱頭は浅い皿状ないし盆状をしていて辺縁は波

状を呈する。花はミャンマーから記載された *T. stoliczkana* Kurz のそれにやや類似するが、花梗の長さ、花弁や柱頭の形、葉の幅等において差異があり、両種間の隔たりは小さくない。 *T. muricata* とも花梗の長さ、雌ずいの長さ、雄ずいが花被につく位置等で大分異なっている。 *T. laotica* と他種との類縁関係は現時点で不明な点が多く、その解明は今後の研究に委ねたい。

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