

## Present taxonomic status of *Salix calophylla* Andersson (Salicaceae): a species of rare occurrence

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### Abstract

*Salix calophylla* Andersson (Salicaceae) was first described by N. J. Andersson in 1851. This species is very incompletely known due to scarcity of herbarium specimens. The present taxonomic status of this species is discussed with a detailed description and an illustration.

**Key words:** *Salix calophylla*, Description, Present status

### INTRODUCTION

The species *Salix calophylla* Andersson (Salicaceae Mirbel) was first described by Andersson in 1851 based on the specimen of Wallich [Wall. Cat. (List) No. 9102] from Myanmar (Banks of Attran). After thorough study in different Indian herbaria it has been found that there are only two other collections deposited in ASSAM (Deka 17991 and Deka 20436) apart from the type specimens of Wallich [Wall. Cat. (List) No. 9102; Accn. No. 443630] at CAL. Thus this species is with very poor representation in herbaria and moreover these collections having only fruiting and leafy twigs. These specimens were collected from Sadiya forest, N.E. Frontier, India (Deka 17991) and Sylhet, Bangladesh (Deka 20436) during the year 1939 and 1941 respectively. Till now there is no report of male and female flowers except these three collections. Based on the available materials the species is described below along with the illustration:

*Salix calophylla* Andersson in Kongl. Svenska Vetenskapsakad. Handl. 1850: 502. 1851, Hook. f. in Hook. f., Fl. Brit. India 5: 628. 1888. [Fig. I]

**Type:** Wallich Cat. Pl. Ind. Orient. (banks of Attran) (Myanmar) no. 9102-CAL (Accn. no. 443630)!

Tree; branchlets brown to blackish, glabrous; vegetative buds (immature) ovoid, ca. 2 mm, reddish, glabrous. Leaves alternate, simple; lamina oblong-lanceolate, ovate-oblong or ovate-lanceolate, generally 10.5 – 16 cm long and 4 – 6.5 cm wide at the middle, crenulate, acuminate, obtuse to oblique at base, coriaceous, green, glabrous on both surfaces; midrib prominent on both surfaces, raised beneath, yellowish above, brown beneath, glabrous; secondary veins pinnate, 24 – 33 pairs on each side, distinct, alternate to subopposite, abruptly curved towards margin forming a series of loops in the intramarginal regions by the union of secondaries with supra adjacent secondaries as brachidodromous; petioles slender, 1.2 – 1.5 cm long, brownish (after drying), glabrous; stipules often absent. Male and female catkins not seen. Infructescence cylindrical, 9.5 – 11 cm long and 1 – 1.3 cm in diameter, lax; capsules ovoid, 3 – 4 mm long, 2-loculed; each half navicular after dehiscence; dehiscence longitudinal, septicial; walls brown without and light brown within, glabrous, brittle; stipitate; stipes 3 – 4 mm long; seeds oblong, 1.8 – 2 mm long, blackish, with tufts of persistent hairs at base; hairs 3 – 5 mm long, flexible, spreading and exceeding usually more than double of the seed length, white-silky, glabrous otherwise.

**Flowering:** Not known; **Fruiting:** January – February

**Habitat:** Growing along the river banks [Wallich Cat. (List) no. 9102] and also within forest (Deka 17991).

**Vernacular names:** *Bhe*, *Veh* (Assam).

**Distribution:** India (Arunachal Pradesh); Myanmar; Bangladesh

**Specimens examined:** INDIA, N.E. Frontier, Sadiya forest, 01.02.1939, Deka 17991 (ASSAM). BANGLADESH, Sylhet, Chhatak, 07.02.1941, Deka 20436 (ASSAM)

**Previous works:**

Hooker (1888) had mentioned this species very briefly and according to him “It is probably a form of *S. tetrasperma*.” After the work of Sir J.D. Hooker in 1888 in *Flora of British India*, there is no mention found in subsequent floras even of its distributional regions like Myanmar (Kress *et al.* 2003), Bangladesh (Huq 1982) and North-Eastern India (Kanjilal *et al.* 1940; Balakrishnan 1983; Haridasan & Rao 1987, Chowdhery *et al.* 2008). Moreover, in floras of Nepal, Bhutan and China the species is not reported. Thus, due to paucity of collected materials as well as lack of information from the regional floras this species is very incompletely known.

**Present observation:**

The present study of *S. calophylla* Andersson is based on the type material and other two collections of Deka as mentioned earlier. It has been noted that the infructescence and fruit characters of the specimens is although quite allied to *S. tetrasperma* Roxburgh but differ in some major characters as under:

<i>S. calophylla</i>	<i>S. tetrasperma</i>
Lamina ovate-lanceolate or oblong, 10.5-16 & 4-6.5 cm wide at the middle	Elliptic, lanceolate, ovate to elliptic-cm long lanceolate; 4-15 cm long & 1.5-4.8 cm wide at the middle
Seeds larger, ca. 2 mm long	Seeds smaller, 1-1.2 mm long

Due to unavailability of flowers it could not be compared by these features.

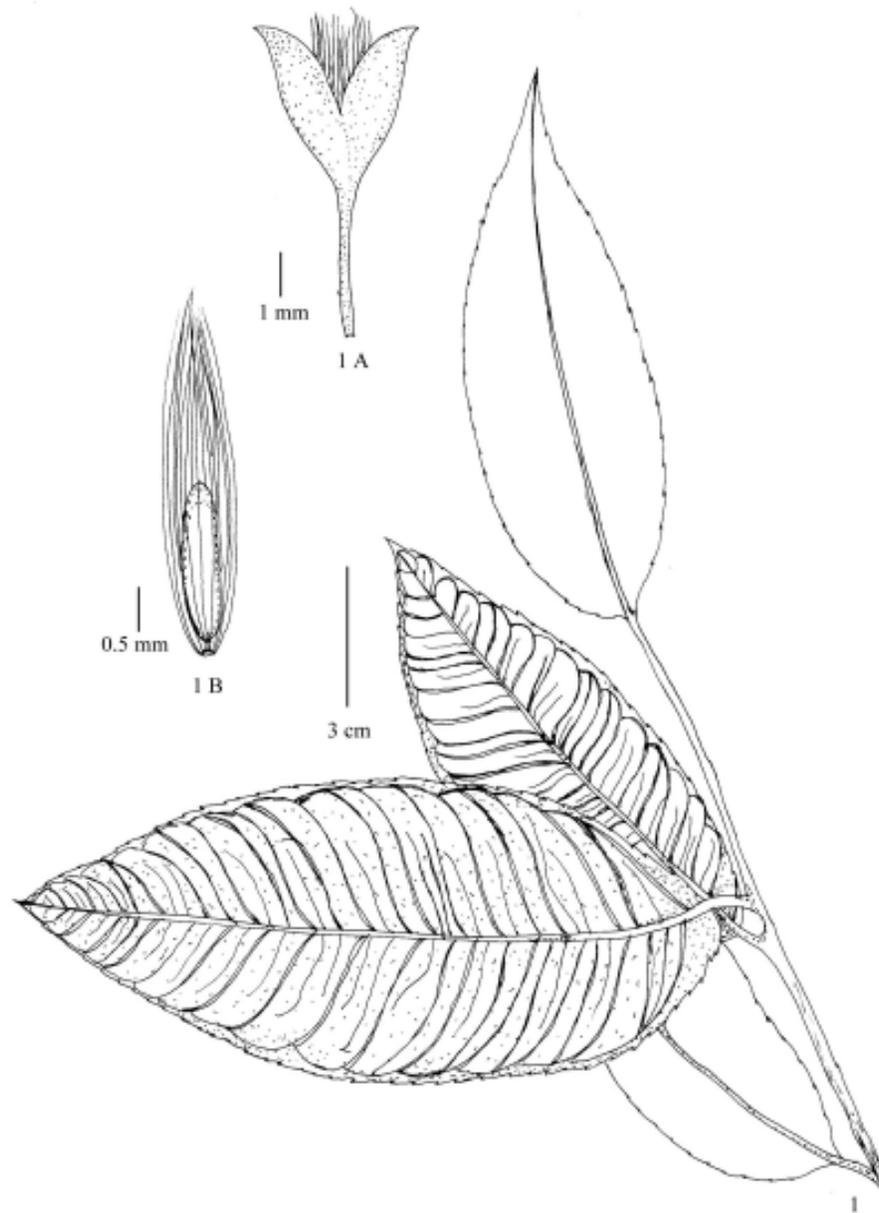
*S. calophylla* is considered as a distinct species due to distinct differences in the size of leaf blades and seeds. It needs collections for further opinion on its further conclusive taxonomic status. However, the specific status is presently retained here and placed under the section *Tetraspermae* having some allied fruiting characters.

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**LITERATURE CITED**

- Andersson, N.J. 1851. Ost-Indiens hittils kända Pilarter (Salices). *Kongl. Svenska Vetenskapsakad. Handl.* vol. 1850: 463 – 502.
- Balakrishnan, N.P. 1983. *Flora of Jowai and Vicinity of Meghalaya*. vol. 2: Salicaceae p. 461; Botanical Survey of India, Howrah.
- Chowdhery, H.J.; Giri, G.S.; Pal, G.D.; Pramanik, A. & Das, S.K. 2008. In Giri, G.S., Pramanik, A. and Chowdhery, H.J. (eds. ) *Materials for The Flora of Arunachal Pradesh*, Flora of India (Series-2). Pp. 434 – 436; Botanical Survey of India, Kolkata.
- Haridasan, K. & Rao, R.R. 1987. *Forest Flora of Meghalaya*. 2: 865 – 866; Bishen Singh Mahendrapal Singh, Dehra Dun
- Hooker, J.D. 1888. *Flora of British India*. 5: 626 – 639; L. Reeve & Co. Ltd., Kent.



**Fig. 1.** *Salix calophylla*. 1. Female twig; 1A. Fruit; 1B. Seed [1 - 1B. Deka 1799].

Huq, A.M. 1982. Salicaceae in M.S. Khan, *Flora of Bangladesh*. Bangladesh National Herbarium, Bangladesh Agricultural Research Council. no. 20: 1 – 2.

Kanjilal, U.N.; Kanjilal, P.C.; De, R.N. & Das, A. 1940. *Flora of Assam* Govt. of Assam. Shillong vol. 4: 329 – 331.

Kress, W.J.; DeFilipps, R.A.; Farr, E. & Kyi, D.Y.Y. 2003. *A Checklist of the Trees, Shrubs, Herbs, and Climbers of Myanmar*. National Museum of Natural History, Washington, DC.