

Recollection and extension of distribution of *Salix radinostachya* C.K. Schneider (Salicaceae) in the Eastern Himalaya, India

Sukla Chanda and G. G. Maiti¹

Botanical Survey of India, Indian Botanic Garden, Howrah-711 103, West Bengal, India. *E-mail:* sukla_chanda@yahoo.co.in

¹*Communicating author.* Department of Botany, University of Kalyani, Kalyani –741 235, Nadia, West Bengal, India.

E-mail: gaurmaiti@yahoo.co.in

Abstract

Salix radinostachya C. K. Schneider was known from Sikkim (type locality) of India and after a lap of 158 years it has been recollected for the first time from Arunachal Pradesh. The species is further described and illustrated and mentioned the extension of its eastward distribution.

Key words: *Salix radiostachya*, extended distribution, Arunachal Pradesh.

During the field trip, conducted by Botanical Survey of India in the Eastern Himalaya, (Arunachal Pradesh, India) in April, 2006, an interesting as well as rare specimen of *Salix radinostachya* was collected from West Kameng district on way to Saper and Senge. The specimen is a female one. The photograph of type specimen (which is also a female one) from Kew and the collected material (Chanda 40315) suggests the similarity between the two. Moreover, the identity was confirmed after dissecting the female flower (as only the female is available) and matched this with the protologue.

This species was first described by C. K. Schneider (1916), based on the female specimen collected by Hooker and named as *S. elegans* (on the collected specimen only) from Sikkim, reg. temp., alt. 9000 ped. (2743.23 m). It was not described and published by Hooker. Previously no specimen is available at CAL and in other herbaria of India. However, after a lapse of 158 years, the specimen (Chanda 40315) was recollected from Eastern Himalaya (Arunachal Pradesh) and was deposited in CAL.

Previously this species is known only from Sikkim in India (Schinder, 1916). Apart from Sikkim it is also reported from China (Fang *et al.*, 1999). Thus, after recollection of this species from Arunachal Pradesh it had extension of distribution to the east. The species is briefly described below and the illustration is also provided:

Salix radinostachya C.K. Schneider in Sarg., Pl. Wilson. 3: 116. 1916; C.F. Fang, S.D. Zhao & A.K. Skvortsov in C.Y. Wu & P.H. Raven (eds.), Fl. China 4: 194. 1999.

Type: *Salix radinostachya* Sikkim: “reg. temp. alt. 9000 ped., (2743.23 m)” *F.* (misprint, basically it is “J”) *D. Hooker* (type @&; subnomine *S. elegans* Wall. ã, ex Herb. Ind. Or. in Herb. Grary) – K, Photo! [fig. 1]

Shrub, 8 – 10 m high, erect; *bark* dark brown, glabrous, smooth; *branches* divaricate, purple-brown and quite glabrous and glaucous; young branchlets sparsely silky hairy; *vegetative buds* ovoid-oblong, to 7 mm long, obtuse, purple-brown, glabrous. *Leaves* alternate, simple; blades broadly lanceolate or oblanceolate, young leaves narrowly elliptic, 6 – 10.5 x 2 – 2.5 cm, acute to subacuminate, entire or very indistinctly and remotely glandular serrate, cuneate or rounded, leathery, green, glabrous and glaucous above except the midrib, pale, glabrescent and glaucous beneath;



Fig. 1: *Salix radinostachya*: 1. Female twig; 1A. Female flower; 1B. Floral bract; 1C. Gland [1 - 1C on Chanda 40315].

midrib distinct, raised beneath, sparsely pubescent on both the surfaces; petioles slender, 0.6 – 1 cm long. *Catkins* solitary, axillary, appearing simultaneously with leaves, narrow and very slender, provided with 3 – 6 basal leaves. *Male catkins* not seen. *Female catkins* very slender, usually 5 – 12 x 0.4 – 0.5 cm, subdense, green, long pedunculate; rachis sparsely silky hairy. *Female flowers* sessile. *Bract* 1, ovate-oblong to oblong-obovate, 1 – 1.2 mm long and 0.6 – 0.8 mm wide at or above the middle, extending up to 1/3rd of the ovary, truncate and crenulate at apex, entire, narrowed gradually towards base, reddish-brown, glabrous except a few hairs at base. *Gland* 1, posterior, opposite to the bract, attached at the base of the stipe, upper portion free, broadly oblong, 0.8 – 1 mm long, obtuse, folded sometimes at apex, greenish-brown, fleshy and juicy. *Carpels* 2, lateral, syncarpous, hypogynous; ovary ovoid, 1 – 1.5 mm long, shortly stipitate; stipe about 0.5 mm long, glabrous; style very distinct and elongated, 0.8 – 1 mm long, 2-cleft; stigmas 2, long, about 0.5 mm long, biparted, recurved. Infructescence very long, to 20 cm; capsules to 5 mm long; seeds not known.

Flowers & Fruits: May – June

Distribution: INDIA: Sikkim, Arunachal Pradesh; Nepal; BHUTAN; CHINA (W. Sichuan, E. Xizang).

Ecology: Found in the hill slopes and forest; in between 2600 – 3200 m, associated with *Salix wallichiana*.

Exiccatus: Arunachal Pradesh, West Kameng District, on way to Saper to Senge, 2650 m dated April 19, 2006, *Chanda 40315* (female).

Acknowledgements

The authors are grateful to Dr. M. Sanjappa, Director, Botanical Survey of India for granting the financial support to conduct the tour and are to the authorities of Arunachal Field Station, BSI, Itanagar for their great support during the field work and also for giving kind permission and assistance in consultation of herbarium and library under their control.

LITERATURE CITED

- Fang, C.F.; Zhao, S.D. & Skvortsov, A.K. 1999. *Flora China* vol. **4**: 139 – 277. Science Press, Beijing, China and Missouri Botanical Garden Press, St. Louis, U.S.A.
- Hooker, J.D. 1888. *Flora of British India* vol. **5**: 626 – 639 ; L. Reeve & Co. Ltd., Kent.
- Schneider, C.K. 1916. *Plantae Wilsonianae* vol. **3**: 14 – 179, 455 – 456. The University Press, Cambridge.