

## Lectotypification of *Typha elephantina* Roxb. (Typhaceae)

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Received 4 Sep. 2014, final version received 14 Jan. 2015, accepted 29 Jan. 2015

Halder S. & Venu P. 2015: Lectotypification of *Typha elephantina* Roxb. (Typhaceae). — *Ann. Bot. Fennici* 52: 265–267.

The name *Typha elephantina* Roxb. (Typhaceae) is lectotypified based on an icon present in CAL.

Roxburgh (1832) described *Typha elephantina* Roxb. based on a material collected most certainly either from Coromandel or from Bengal. Its common names in Teling (*enuga junum*) and Bengali (*hogla*) were given. There are challenges in tracing Roxburgh's specimens as they are often poor and scrappy and also because he distributed them haphazardly; no herbarium is known to possess a complete set.

The difficulty of preparing a representative herbarium specimen for *Typha*, especially the larger and unwieldy *T. elephantina*, is duly recognized. The authors searched for specimens of *T. elephantina* with Roxburgh's annotations and did not find any in CAL. Various herbaria (A, B, BM, BR, C, TCD, E, FI, G, K, LIV, NY, OXF, P, PH and UPS; Stafleu & Cowan 1983, Robinson 2008) where Roxburgh's specimens were known to possibly exist, were contacted. The Berlin-Dahlem Botanical Museum (B) sent an image of a sheet (B100474979) with an acknowledgment of its origin from CAL, possessing only clumps of female flowers or fruits holding seeds. As the material is of poor quality with only female flowers and no bearing of a general habit or even leaves, was not considered by us for the appli-

cation of the name. Two other images supposedly of Roxburgh material were received from Geneva (G000308516 & G000308517). The first image is of an unnumbered specimen with leaves up to 12 mm broad, semi-cylindric above the sheath and flat dorsally, and with the leaf sheath tapering into the lamina, pointing to *T. dominicensis*. The other image is of an unnumbered Wallich specimen with Roxburgh's identification as *T. angustata* (cf. *T. elephantina*, leaves 25–40 mm broad, sheath auriculate, trigonous above the sheath, angularly keeled dorsally). Thus, none of those specimens appear to serve for typification.

Roxburgh left at the Calcutta Botanic Garden a set of coloured drawings, 2542 in total, among which nearly all the Indian species described in his *Flora Indica* were depicted. A duplicate set is preserved at Kew (Sealy 1956a, 1956b, Sanjappa *et al.* 1991, Robinson 2008). The numbered species descriptions in the *Flora Indica* manuscript at Kew may be connected with similarly numbered drawings with certainty as Roxburgh referred to them in great detail. Unfortunately those details were lost in the *Flora Indica* publication as icons were not part of it. An illustration may be designated a lectotype as no specimen



**Fig. 1.** Lectotype of *Typha elephantina* Roxb. (photo CAL). Published with permission from CAL.

used by him directly or indirectly could be traced.

Roxburgh had the icon of *T. elephantina* (number 870; Fig. 1) drawn during December, 1794, just a year after reaching Calcutta. The number 1134 written after a hyphen (870-1134) on the icon, in all probability written by an unidentified person, is not mentioned anywhere in manuscript or in print. The icon appeared to have been drawn from a fresh specimen as the male spikes were shown with five distinctive deciduous bracts and the anthers in true colour

that cannot be seen in dried specimens. The icon number is inked on the face of the sheet while the name and number is penciled on the verso in Roxburgh's hand (visible faintly against light as the drawing is mounted on another tough sheet). The icon depicts rounded culms bearing ca. 1.2–1.5 m long ensiform leaves with obtuse leaf tips. Leaf sheaths were shown tightly embracing the culm as well the sheaths of the inner leaves. The male ament was depicted with five spathes (bracts) enclosing the largest at the base, two tiny ones on top, and two others of moderate size

positioned in between. The female inflorescence, more or less equalling the male, is enclosed by a single spathe and bears female flowers intermixed with club-shaped bodies (neuter flowers). There are also drawings of male, female and neuter flowers detailing the flower structure and variability separately. Stamens in male flowers with yellow coloured anthers, varying from one to three on a common filament were presented separately and collectively (Fig. 1 "A"). Both female and neuter flowers (Fig. 1 "B" and "C") bear fine filaments (scales).

All the marked floral parts can be connected to Roxburgh's manuscript. Roxburgh was aware of the deciduous nature of the bracts, which he clearly indicated in his description. Though the habit drawing was done without scale, Roxburgh's note stated that it was 2/3 smaller than the natural size, whereas the figures of male, female and neuter flowers are much enlarged. Of the two icons, one at CAL and the other at K, the former is preferred as it has additional sketches of leaf transverse sections both at the base and tip, by which he Roxburgh distinguished *T. elephantina* from *T. angustata*. The icon at CAL, which did not appear in published drawings of *Plants of Coast of Coromandel* (Roxburgh 1795–1820) or in *Icones Roxburghianae* (Roxburgh 1964–1978), is here designated as lectotype.

### ***Typha elephantina* Roxb.**

Fl. Ind. 3: 566. 1832. — LECTOTYPE (designated here): Icon. Roxb. inedit. No. 870 (CAL icon!) (Fig. 1).

ETYMOLOGY: The epithet "*elephantina*" was coined by Roxburgh (1832) as the plants are preferred food for elephants.

### **Acknowledgements**

We thank Dr. P. Singh, the Director, Botanical Survey of India, for facilities and a fellowship under *Flora India* programme to one of the authors (SH). We also thank the Directors of G and B for images of Roxburgh specimens, the IBLO, Kew, V. Sampath Kumar for page images of *Flora Indica* manuscript and Drs. K. N. Gandhi, M. Sanjappa and S. Bandopadhyay for their help.

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