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Typha elephantina Roxb. in Egypt

by

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The genus *Typha* was earlier known to be represented in Egypt by two species, viz. *T. australis* Schum. et Thonn. which is common throughout irrigation channels, and *T. latifolia* L. which is very rare and restricted only to Wadi Natroun, where it grows mixed with *T. australis* around the soda lakes peculiar to that place.

It was recorded from Wadi Natroun by Général ANDRÉOSSY (1823) who was a member of Napoleon's expedition to Egypt. After him it was entirely forgotten and was not even mentioned by ASCHERSON & SCHWEINFURTH

FIG. 42. — A mixed stand of *Typha elephantina* (left) and *T. australis*.

FIG. 43. — Dense basal tufts of *T. elephantina*. In the forefront are: *Cyperus laevigatus* and *Sonchus maritimus*.

(1889) in their enumeration of Egyptian plants, although that list was meant to give a complete account of what was growing in Egypt. The plant was rediscovered in Wadi Natroun by SICKENBERGER (1901). Later it is frequently mentioned by authors dealing with the Egyptian flora (MUSCHLER, 1912; STOCKER, 1927; SIMPSON, 1930, 1937; TÄCKHOLM & DRAR, 1941; TÄCKHOLM & al., 1956).

There are also two uncertain records from outside Wadi Natroun. FIGARI (1864) records it from the Nile delta in the area between Rosetta, Damietta and Qaliub. There is also a record from Marmarica by ROBECCHI-BRICCHETTI (1890), quoted by SCHWEINFURTH & al. (1893). These records are doubtful, and there is no confirmation of its occurrence in any locality outside Wadi Natroun.

During two successive excursions to Wadi Natroun in late August and in early October 1960, Professor Vivi TÄCKHOLM and the writer had the occasion to study *T. latifolia* more carefully in its natural habitat around the soda lakes. During the first excursion it was in full anthesis, and the striking length of its spadix (up to 90 cm) led us to suspect that we had to deal, not with *T. latifolia* of European concept, but with another species. A rich collection was made, and it was then observed that the leaves were keeled, another feature which did not agree with European material.

On our return a more thorough examination of the material was made and it was found to be *T. elephantina* Roxb., a species which has its main distribution in India and has also been found once in Algeria (see fig. 42-46).

According to GRAEBNER (1900) the only known species with keeled leaves is *T. elephantina*. Moreover, our specimens tally fully with his description.

The presence of *Typha elephantina* in Egypt is most interesting from a geographical point of view because it constitutes a link between India and Algeria and provides a better explanation of its occurrence in the latter country.

Typha elephantina grows mixed with *T. australis* in dense thickets around the lakes. The two species, however, are easily distinguished from each other, even at a distance. *T. elephantina* is taller, more robust and its inflorescences project like sticks above the foliage. The plants are frequently associated with *Berula erecta* (Huds.) Cov., *Samolus valerandi* L., *Cyperus laevigatus* L., *Sonchus maritimus* L., *Lemna gibba* L., and other marsh plants.

GRAEBNER (1900) places *T. elephantina* in the Section *Bracteolata* Kronf. and gives the following references and synonyms:

FIG. 44. — Inside the *T. elephantina* zone, with prominent keeled leaves, growing along with *Cyperus laevigatus* and *Berula erecta*.

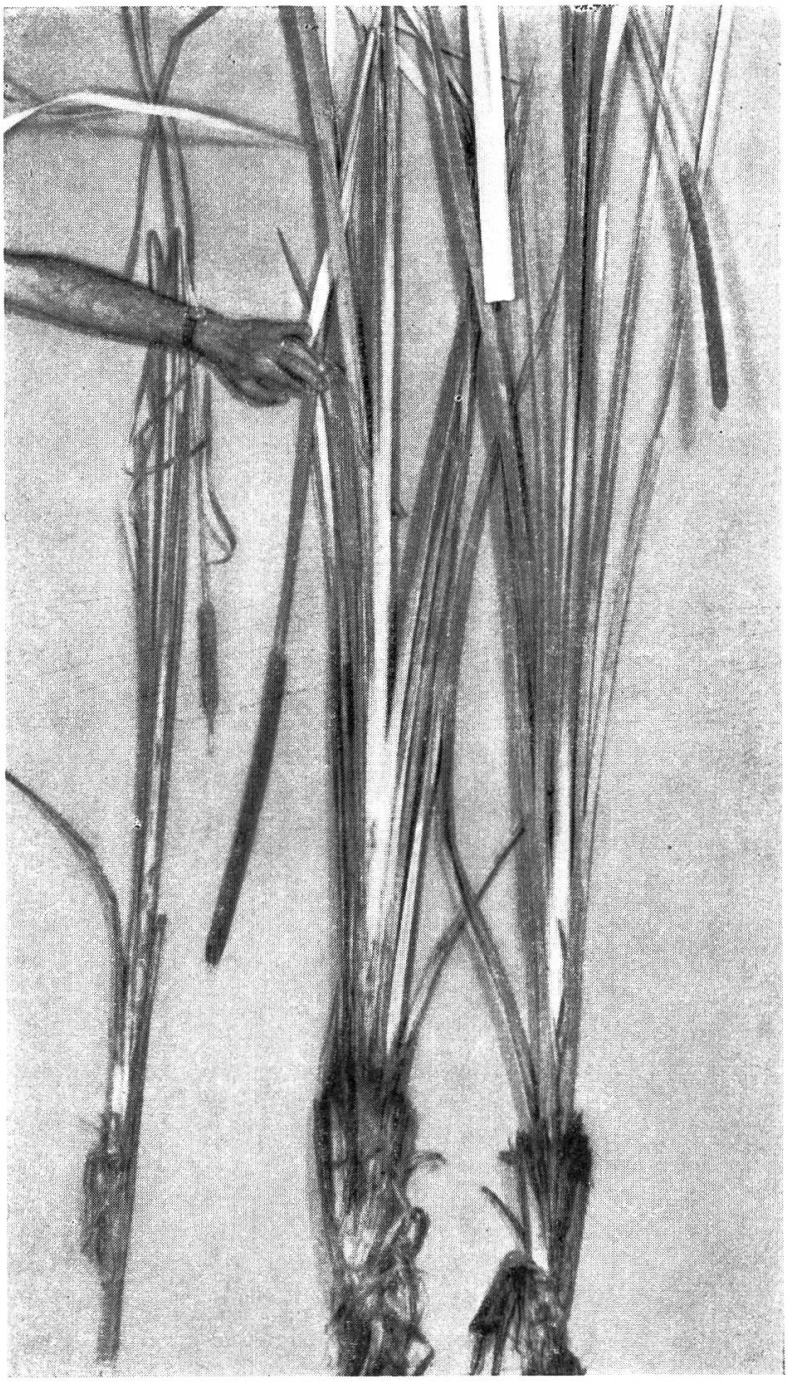

FIG. 45. — *Typha australis* (left) and *T. elephantina* (right). Scale = 40 cm.

T. elephantina Roxb. *Fl. Ind.* **3**:566. 1832; Schnizl. *Typhac.*: 26; Kronfeld, *Verh. Zool. Bot. Ges. Wien* **39**:165. 1889 = *T. latifolia* Edgew. *Journ. Linn. Soc.* **6**:194. 1862, non L. = *T. maresii* Batt. *Bull. Soc. Bot. Fr.* **34**:389. 1887.

Distr. Asia: In India from Calcutta to Western Himalaya, to Peshawar and Kulu. Africa: Algeria in a marsh at Boufarik (Battandier, *l.c.*; Kronfeld, *l.c.*: 166). Battandier & Trabut (1902), however, mention Khodjaberry as the only locality in Algeria.

Hooker (1893) and Graebner (1900) give the following details about the plant:

Stem 2-4 m. *Leaves* 2,5-4 cm broad, trigonous above the sheath, margins often undulate above the middle. *Flowers* bracteolate, pedicels 0,5-1 mm; ♂ spike 20-30 cm, rachis clothed with short, often forked, dirty-white, obtuse hairs; bracts 3 or more; anthers 1-5, 2,5 mm long; pollen 4-globose; ♀ spike much shorter, 15-25 by 0,8-2,5 cm; flowers mixed with clavate pistillodes; bracteoles with fasciate tips, much longer than the hairs, which are shorter than the stigmas.

In the Egyptian material collected, the rhizome is ringed, 35 mm across, rooting at the nodes, roots cylindrical, up to 7 mm across. Leaves densely distichous at base, 2,5-3 m long with blunt tip and a sharp keel which is fading in the uppermost 50 cm of the blade although clearly visible. The blade is in the average 2 cm broad, varying in thickness from almost papery near the apex to 5 mm thick along the keel. Sheaths keeled, with linear brown spots inside, up to 60 cm long, 7 cm broad, in the broadest place. Scape from its base to the beginning of the inflorescence 2,4 m, tapering smoothly in breadth from 15 mm below to 7-9 mm at apex. Male and female spadix confluent, together up to 90 cm long, the female 36-57 cm long, 20-25 mm broad; the male 33 cm long, 20 mm broad. During anthesis the male spadix is by far broader than the female, but afterwards the female rapidly increases in thickness.

Conclusion: We may safely remove *Typha latifolia* from the egyptian flora and replace it by *T. elephantina*.

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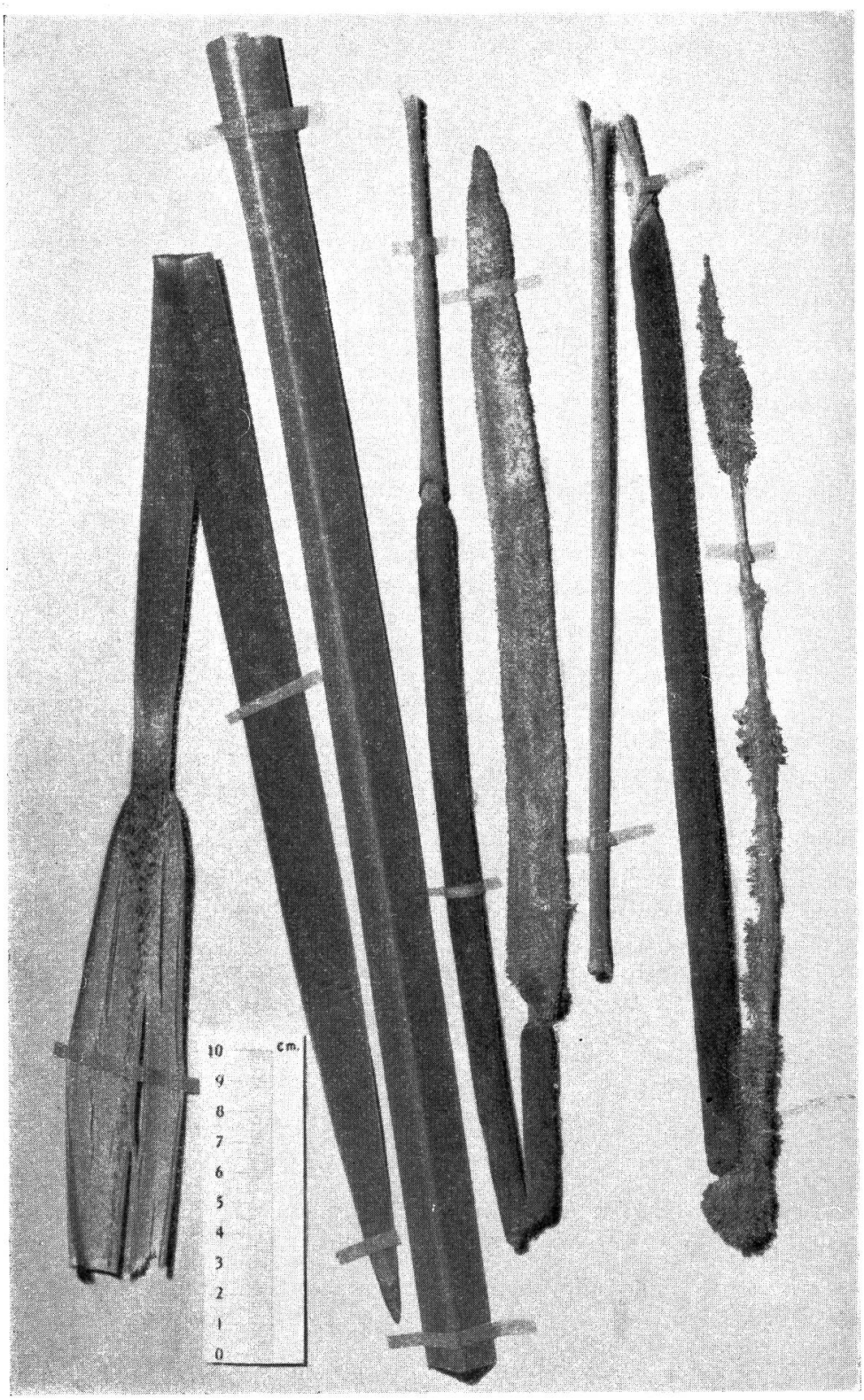

FIG. 46. — A herbarium specimen of *T. elephantina*, collected from Wadi Natroun.

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