

(1638) Proposal to conserve the name *Potamogeton schweinfurthii* A. Benn. (*Potamogetonaceae*) with a conserved type

Zdenek Kaplan¹ & Jean-Jacques Symoens²

¹ Institute of Botany, Academy of Sciences, CZ-252 43 Prùhonice, Czech Republic. kaplan@ibot.cas.cz (author for correspondence)

² Laboratorium voor Algemene Plantkunde en Natuurbeheer, Vrije Universiteit Brussel, Pleinlaan 2, B-1050 Brussels, Belgium. j.symoens@belgacom.net

- (1638) *Potamogeton schweinfurthii* A. Benn. in Dyer, Fl. Trop. Afr. 8: 220. 1901 (“*Schweinfurthii*”) [*Potamogeton.*], *nom. cons. prop.*
 Typus: “Plantæ Abyssinicae, Im Zana [sic!] See [= Lake T’ana, Ethiopia] (in offenem Wasser, nah am Ufer) bei Angasha, 9 Novbr. [18]63”, *Schimper 1359* (K), *typ. cons. prop.*

Potamogeton schweinfurthii A. Benn. is the name generally applied to a rather common and widely distributed species in Africa and on several surrounding islands. Soon after it was first proposed by Bennett (l.c.), the name was adopted in the world-wide revision of the genus by Graebner (in Engler, Pflanzenr. 31 (IV.11): 79. 1907). Since then, it has been adopted in all relevant literature (e.g., Dandy, J. Linn. Soc., Bot. 50: 526. 1937; Berhaut, Fl. Sénégal 81. 1954; Andrews Flow. Pl. Sudan 3: 234. 1956; Ozenda, Fl. Sahara Sept. Centr. 126. 1958; Obermayer in Codd et al., Fl. South. Afr. 1: 66. 1966; Berhaut, Fl. Sénégal ed. 2: 180. 1967; Hepper, Fl. West Trop. Afr., ed. 2, 3: 16. 1968; Denny et Lye, Kew Bull. 28: 117–120. 1973; Lisowski et al., Fl. Afr. Centr., Potamogetonaceae 6. 1978; Symoens, Fl. Cameroun 26: 60. 1984; Jafri in Jafri et El-Gadi, Fl. Libya 5. 1984; Wiegleb, Feddes Repert. 99: 259. 1988; Lye in Thulin, Fl. Somalia 4: 14. 1995; Wiegleb, Willdenowia 25: 55. 1995; Lye in Edwards et al., Fl. Ethiopia Eritrea 6: 23. 1997; Wiegleb et Kaplan, Folia Geobot. 33: 273. 1998). This species is closely related to the Eurasian *P. lucens* L. with which it shares many important morphological and anatomical characters. *Potamogeton schweinfurthii* has submerged leaves sessile to shortly petiolate (mostly 0–3 cm), with acute to mucronate apex, and floating leaves sometimes developed but mostly not present in adult fertile plants. The stem anatomy pattern of this species shows the endodermis of U-type, interlacunar bundles present and subepidermal bundles absent or scattered ones present (see Wiegleb in Flora 184: 198–200. 1990 and Wiegleb et Kaplan in Folia Geobot. 33: 248. 1998 for a detailed explanation of anatomical structures and terminology).

Potamogeton schweinfurthii is in Africa sometimes

confused with *P. nodosus* Poir. Even though this latter species is in some of its phenotypes very similar to *P. schweinfurthii*, it is actually not closely related but occupies within the genus a rather isolated position together with the East-Asian *P. distinctus* A. Benn. In contrast to *P. schweinfurthii*, *P. nodosus* has, among other features, the submerged leaves long-petiolate, with narrowly obtuse to subacute apex, floating leaves always developed in adult fertile plants, and the stem with endodermis of O-type and both types of cortical bundles almost always absent.

When Bennett published the name *P. schweinfurthii*, he cited the collections (syntypes) as “Nile Land, Abyssinia: Begemeder; in Lake Tana, *Schimper 1359!* British East Africa: at the mouth of the Bahr el Arab, *Schweinfurth 1223!* in the Bahr el Ghazal, near the Nuer Villages, *Schweinfurth 1165!*”. We found at least one of these collections in BM, CGE, E, K, LD, NH, P and PRE. However, only the *Schimper 1359* in BM and K, *Schweinfurth 1223* in K, and *Schweinfurth 1165* in K are the duplicates seen by Bennett and upon which he based his description of *P. schweinfurthii*.

There are two sheets of *Schimper 1359* in BM and a single sheet in K, each bearing several plant fragments, with many submerged leaves and a few floating leaves. The submerged leaves are sessile or with a petiole of up to 2.8 cm, a lamina up to 21 cm long and 6–13 mm wide. The stem has a stele of trio of oblong type, endodermis of U-type, interlacunar bundles present as scattered in 1 circle, subepidermal bundles absent and a pseudohypodermis of 1 continuous layer. These plants are what is now called *P. schweinfurthii*.

Two sheets of *Schweinfurth 1223* are preserved in K. These sheets bear a tightly pressed mass of plant shoots with many submerged leaves and a few floating leaves. The submerged leaves have petioles 4–10 cm long and laminae ca. 8–11.5 cm long and 5–11.4 mm wide. The stem has a stele of trio type, endodermis of O-type, lacks both interlacunar and subepidermal bundles, and pseudohypodermis is present in 1 incomplete layer. This collection clearly belongs to *P. nodosus*.

The single sheet of *Schweinfurth 1165* preserved in

K bears a plant with two submerged, one transitional and four floating leaves. The submerged leaves have petioles 4.0–4.3 cm long, and laminas 8.3–8.9 cm long and 4.5–11 mm wide. The floating leaves have petioles 3–4 cm long, and laminas 3.9–4.7 cm long and 10–19 mm wide. The stem has a stele of trio type, endodermis of O-type, cortex without bundles and no subepidermal bundles or pseudohypodermis. This plant is taxonomically identical with *P. nodosus*.

When working on a revision of the genus *Potamogeton* in tropical Africa, Dandy (in J. Linn. Soc., Bot. 50: 527. 1937) designated the specimens on one of the sheets *Schweinfurth 1223* preserved in K as a lectotype of the name *P. schweinfurthii* A. Benn. However, Dandy did not use for identification of *Potamogeton* taxa the stem anatomy characters, some of which are highly stable and reliable, in contrast to rather plastic features of external morphology. Unfortunately, as described above, the lectotype *Schweinfurth 1223* actually belongs to *P. nodosus* and not to the species nowadays widely known under the name *P. schweinfurthii*.

On the basis of Dandy's typification, our recent examination of the lectotype and the strict application of the nomenclatural rules of the *ICBN*, the name *P. schweinfurthii* would become a synonym of *P. nodosus* and a different name would have to be used for the African species under concern. There are several names at the rank of species available for this taxon, the three oldest of them being of equal priority: *P. repens* Hagstr. (in Kongl. Svenska Vetenskapsakad. Handl. 55(5): 170. 1916), *P. promontoricus* Hagstr. (in Kongl. Svenska Vetenskapsakad. Handl. 55(5): 182. 1916) and *P. capensis* Scheele ex Hagstr. (in Kongl. Svenska Vetenskapsakad. Handl. 55(5): 203. 1916). However, each of these names was only used by its author in the original publication and not adopted by any other researcher. Using any of these names would be a typical example of resurrection of a long-forgotten name for purely nomenclatural reasons. In contrast, the name *P. schweinfurthii* has been in consistent use for more than a hundred years.

The application of the name *P. schweinfurthii* in a new sense would be an undesirable change. This widely used name would be replaced by one of its synonyms and itself would become a synonym of another name, which could cause confusion of literature records. As the lectotypification by Dandy was formally correct, it cannot be superseded without a conservational proposal. To avoid the disadvantageous change and ensure nomenclatural stability, we propose to conserve the name *P. schweinfurthii* A. Benn. with one element of the original material of Bennett, the specimen *Schimper 1359* preserved in K, as its conserved type.

ACKNOWLEDGEMENTS

We would like to thank the curators of the above mentioned herbaria for allowing us to study their plant material. Z. K. was supported by grants no. 206/02/0773 from the Grant Agency of the Czech Republic and no. AV0Z6005908 from the Academy of Sciences of the Czech Republic.