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Utricularia julianae (Lentibulariaceae), a new species from the savannas of the Oyapock River, French Guiana

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Abstract

Utricularia julianae, a new species from the savannas near the Oyapock River, French Guiana, is here described and illustrated. The new species is most similar to *U. tenuissima*, from which it can be easily distinguished by the leaves and stolons apparently lacking (vs. leaves few and on the stolons, the stolons few or lacking, in *U. tenuissima*), traps ellipsoid, 0.3 mm long, with 4–5 capilliform appendages (vs. ovoid, 0.3–0.8 mm long, with 1 dorsal and 2 ventral slender appendages), corolla upper lip limb deeply bilobed (vs. broadly ovate to round), spur saccate, perpendicular to the lower lip (vs. spur narrowly cylindrical, parallel to the lower lip), among other characters. In addition, the capsules of *U. julianae* and *U. tenuissima* are unique within the genus, by being very narrowly ovoid, dehiscing by a single longitudinal slit, and with a placenta projecting outside the dehisced capsule. On the basis of their numerous morphological similarities and their peculiar capsule shape and dehiscence, the new species is tentatively placed within sect. *Martinia*, which P. Taylor described to accommodate *U. tenuissima*.

Key words: Savane Jardin Caché, Section *Martinia*, critically endangered species, taxonomy

Introduction

The genus *Utricularia* Linnaeus (1753: 18) comprises ca. 220 species worldwide (Müller *et al.* 2006). According to the most recent checklist produced for the Guiana Shield (Taylor 2007), 34 species of *Utricularia* are present in the Guianas (Guyana, Suriname and French Guiana). The classic treatment for identifying species of this genus is the worldwide monograph published by Taylor (1989), who dedicated most of his life towards this endeavor. Additional regional references (i.e., Guayana Highlands, Venezuelan Guayana) for identification of *Utricularia* species were also provided by the same author (Taylor 1967, 1999).

Recent molecular phylogenies (Müller *et al.* 2005; Müller & Borsh, 2005) confirmed that the three genera traditionally recognized in the family Lentibulariaceae, namely *Pinguicula* Linnaeus (1753: 17), *Genlisea* Saint-Hilaire (1833: 428) and *Utricularia*, are monophyletic. Also, Taylor (1989) recognized two subgenera in *Utricularia*: subgenus *Utricularia*, with two calyx lobes, and subgenus *Polypompholyx* (Lehmann 1844: 109) Taylor (1986: 1), with four calyx lobes; however this subdivision is not supported by molecular phylogenies (Müller & Borsh, 2005).

The genus most closely related to *Utricularia* is *Genlisea*, which is characterized by its "Y-shaped, twisted, subterrestrial eel traps used to attract and trap protozoa" (Barthlott *et al.* 1998; Müller *et al.* 2005), whereas *Utricularia* "exhibits the most complex trapping device, among the most complicated leaf modifications known in the plant kingdom. The bladder traps of *Utricularia* are either submerged or subterrestrial and work by means of low pressure" (Müller *et al.* 2005). Additionally, the flowers of *Utricularia* are easily distinguished from those of *Genlisea* by the 2- or 4-lobed calyx (vs. 5-lobed in *Genlisea*) (Müller *et al.* 2006, Taylor 1999).

During a recent expedition to the savannas near the Oyapock River, French Guiana, a small, white-flowered species of *Utricularia* was discovered. Although I performed considerable field work in the coastal savannas of French Guiana over the last four years, this species was never seen before. Additionally, the Savane Jardin Caché,

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It is worth noting that as concerns *U. tenuissima* there is a certain discrepancy between the description and illustration provided by Taylor and the type specimens. In fact, Taylor (1989: 261, fig. 67) described and illustrated *U. tenuissima* as having the spur parallel to the lower corolla limb lip, a feature noted by Tutin when he collected the type material, whereas the type specimens (*Tutin 644*, BM!, K!, L!, NY!) have the spur perpendicular to the lower limb lip.

The capsules of *Utricularia tenuissima* and *U. julianae* are quite similar by being very narrowly ovoid, dehiscing by a single longitudinal slit, and by having a shortly stipitate placenta that is projected outside the dehisced capsule. On the basis of these numerous morphological similarities, and their capsule shape and dehiscence unique within the genus, the new species is provisionally placed in sect. *Martinia* Taylor (1986: 7), which was described to accommodate *U. tenuissima*. Further phylogenetic analyses will eventually test this placement and the monophyly of this section.

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