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ONE NEW SPECIES AND ONE NEW RECORD FROM INDIA IN THE GENUS *UTRICULARIA*

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ABSTRACT

The paper deals with *Utricularia tayloriana* Joseph et Mani, a new species and *U. stanfieldii* P. Taylor, a new record from India.

Utricularia tayloriana Joseph et Mani sp. nov.

U. pubescenti Sm. affinis tamen facile distinguitur *follis* spathulatis quam peltatis, lamellisque duabus infra basin labellis superioris.

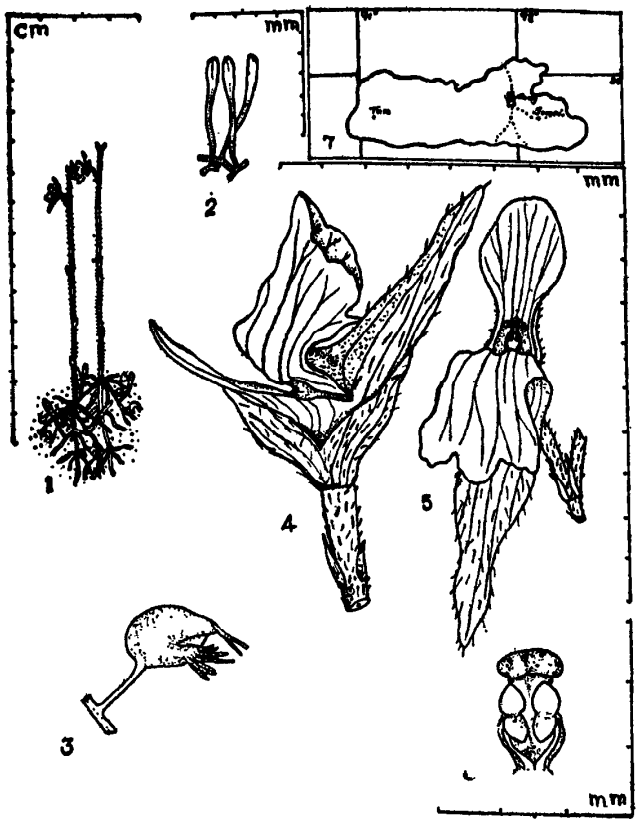
Holotypus Joseph 73568 A (CAL) et *Isotypi Joseph* 73568 B-E (ASSAM), *Joseph* 73568 F-G (MH), *Joseph* 73568 H-I (Rapinat Herbarium, Tiruchirapalli), 26. 8. 1980, ex Shillong Pynursia Road (alt. *ca* 700 m), Khasi and Jaintia Hills, Meghalaya, India. *Paratypi H. Deka* 77232 A-D (ASSAM), 31.8.1980, via proxima ab Jowai (alt. *ca* 1500 m), Khasi and Jaintia Hills, Meghalaya, India.

Utricularia tayloriana Joseph et Mani, sp. nov. is allied to *U. pubescens* Sm. but can be easily distinguished by the leaves being spathulate instead of peltate, and in the presence of two lamellae at the base of the upper lip within.

Holotype Joseph 73568 A (CAL) and *Isotypes Joseph* 73568 B-E (ASSAM), *Joseph* 73568 F-G (MH), *Joseph* 73568 H-I (Rapinat Herbarium, Tiruchirapalli, 26.8. 1980, collected from 20th km on the Shillong Pynursla road (alt. *ca* 700 m), Khasi and Jaintia Hills, Meghalaya, India. *Paratypes H. Deka* 77232 A-D (ASSAM), 31.8.1980, from near Jowai (alt. *ca* 1500 m), Khasi and Jaintia Hills, Meghalaya, India.

Terrestrial, erect, simple herbs, in moist level ground covered with slimy green algal substratum. *Rhizoids* fasciculate, profusely ramifying, filiform, forming an inextricable mesh with the algal substratum, bearing long-stalked traps and spathulate leaves scattered all over. *Traps* numerous, ovoid, long-stalked; mouth terminal, oblique, upper lip projecting with only two hairs; lower lip receding with a row of radiating comb-like hairs. *Leaves* 5.0-6.0 × 0.4-0.5 mm, profuse at anthesis, piercing through the substratum, long petioled, narrowly spathulate, green, simple (rarely 2-3 palmately segmented), glabrous, obtuse at apex, uninerved, with or without traps. *Scape* 3.0-9.5 cm tall, simple, capillary, erect, hairy, dull purple; scales 1-5 (or absent), 1 or 2 flowers at the tip; hairs multicellular. *Scale* 1.0-1.5 mm long, basifixed, ovate-lanceolate, acute, closely appressed to the scape. *Flowers* 1 or 2, *ca* 8.0 mm long to the tip of spur and *ca* 4.0 mm broad across the lower lip, violet with orange yellow blotch on the palate surrounded by a radiating white hallow, bracteate, bracteolate, shortly pedicellate, erect, long spurred. *Bracts ca* 0.5 mm, basifixed, oblong, obtuse, erect, closely appressed to the pedicel. *Bracteoles ca* 1.0 mm, similar to bract but

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Utricularia tayloriana Joseph et Mani sp. nov.
Figs. 1-6 : 1. Habit. 2. Leaves. 3. Trap (not to scale). 4. Flower (lateral view). 5. Flower (front view). 6. Androecium & Gynoecium. 7. Map showing the place of collection. Joseph 73568A (CAL).

longer, erect and on either side of the bract on the same level with a slight gap. *Pedicel ca* 2.0 mm, hispid hairy, erect, capillary. *Calyx ca* 3.0×3.5 mm, deeply bilobed; lobes subequal, ovate, concave, entire, obtuse or blunt at tip, closely appressed to the corolla, densely hairy externally, faintly 8-nerved, slightly accrescent. *Corolla ca* 4.0 mm across, conspicuous, bright violet, deeply bilobed, deciduous, long spurred. *Upper lip ca* 5.0×2.0 mm, up to one and a half times as long as the upper calyx-lobe, obovate, erect and slightly reflexed from the base, rounded or slightly retuse at tip, abruptly cuneate with a short concave broad base, minutely papillose along the margin at the base, reticulately 4-nerved, hyaline. There are two short ovate lamellae above the concave base being separated by a semicircular ridge. *Lower lip ca* 4.0 mm across, semiorbicular, reticulately nerved, usually 4-5 lobed (rarely 2 or 3); lobes shallow and unequal, strongly reflexed and not hugging the spur, much shorter than it, palate raised and with two short humps. *Spur ca* 8.0 mm long, projecting much beyond the lower lip, horizontal, infundibular, abruptly narrowed to obtuse tip, with a subterminal constriction, sparsely hairy; hairs long and short, multicellular. Androecium and Gynoecium within the basal cavity of the upper lip of the corolla. *Stamens* 2, held in front of the ovary; filament incurved, *ca* 1.0 mm long, uninerved, dialated at base. *Pistil ca* 2.0 mm long with a short neck; stigma discoid, subpeltate, subsessile. *Fruits* could not be collected.

Fls.: Aug.-Sept.

The specific epithet has been given in honour of P. Taylor for his invaluable contribution on the genus *Utricularia* L. of S. Africa.

This new find has been located, in the moist even substratum, covered with slimy green algae, in association with small caespitose grasses, *Utricularia bifida* L., *U. racemosa* Wall., *Burmania coelestis* D. Don, *Drosera peltata* Sm., *Murdania gigantia* (Vahl) Bruckn., *Eriocaulon* spp., etc. It is neither abundant nor common in the area of collection. Nevertheless further intensive search could locate it near Jowai area—about 30 km east of the type locality.

It also resembles *Utricularia capensis* Spreng. (reported from S. Africa) in the general morphology, but can be easily distinguished being hairy instead of glabrous and in the presence of lamellae at the base of the upper lip.

Utricularia stanfieldii P. Taylor in Taxon 12 : 294. 1963 & Kew Bull. 18 (1) : 88-91. t. 28 & 29. 1964.

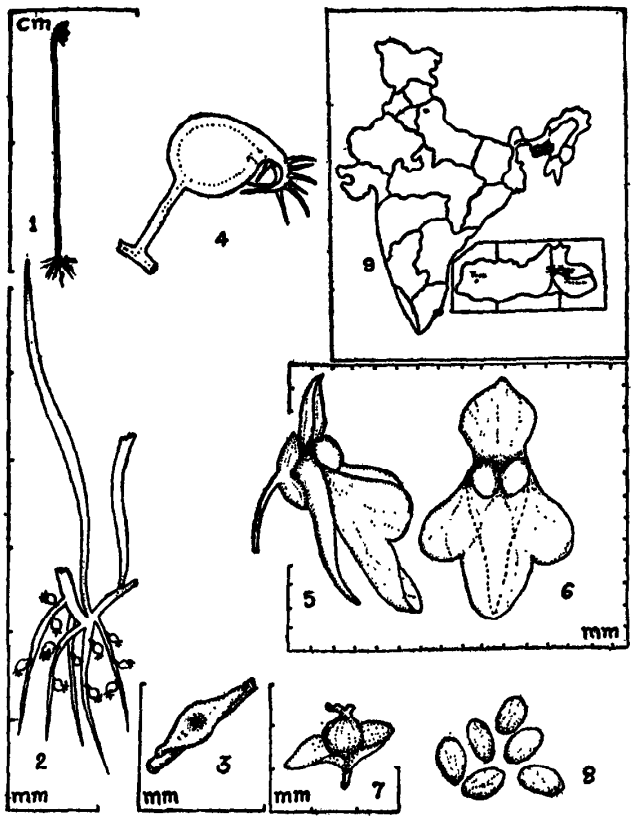
This species was described on the collection of Stanfield 121 (K) from southern

Nigeria. So far this is known only from west Africa-Suria, Liberia and Nigeria. The present collection from Jarain in Jaintia hills, Meghalaya establishes its occurrence in India for the first time and extends its distribution.

A description with analytical drawings based on the present collection is provided to facilitate future collectors to locate it elsewhere.

Ephemeral erect terrestrial insectivorous plants in open moist sandy soil overlying rocks and stones along with *Drosera peltata* Sm. and *D. burmanii* Vahl.

Rhizoids 5-6, from the base of the scape with many traps. *Stolons* similar to rhizoids, branched. *Leaves* a few, at the base of the scape and also along the stolon, *ca* 5 mm long, uninerved. *Traps* a few, along the leaf margins more on the rhizoids, long stalked, *ca* 1 mm long (with stalk), ovoid; mouth oblique. *Scape* erect, 2-4 cm tall, simple, capillary, finely papillose towards the base and smooth above. *Scale ca* 1 mm long, 2-5 on the scape, elliptic, both scales and bracts closely adpressed to the axis, attached about the middle, persistent, the portion above the attachment about two and a half times longer than the lower part, acute to acuminate at apex; lower portion obtuse at tip. *Bracts* similar to scales but slightly larger and oblong. *Flowers* long pedicellate, solitary, rarely two, golden yellow, bracteate, ebracteolate, with trilobulate lower lip, pedicels 3-5 mm long, slender, erect. *Calyx* bilobed; lobes subequal, cupular, slightly accrescent and closely enveloping the fruit, prominently 6-nerved; nerves converging and united at the apex. *Corolla* yellow, bilobed with a conspicuous raised bigibbous palate; upper lip orbicular, *ca* 3×3 mm, two and a half times longer than the calyx lobe; lower lip very conspicuous and larger than the upper, deflexed, unequally 3-lobulate, shortly clawed at the base, *ca* 5 mm long and *ca* 6 mm broad across the side lobes; midlobe slightly larger than the side ones. *Spur* arising from a conical base, shortly acuminate, as long as the lower lip or slightly shorter, held closely below and concealed by the lip. *Capsules* globose, *ca* 1 mm in diameter, with an accrescent calyx. *Seeds* ovoid, faintly longitudinally straited.



Utricularia stanfieldii P. Taylor

Figs. 1-8: 1. Habit. 2. Basal portion of the scape, stolen and leaves. 3. Scale. 4. Trap (after Taylor). 5. Flower (lateral view). 6. Flower (front view). 7. Capsule (with spread out calyx lobes). 8. Seeds (not to scale). 9. Map showing distribution of: *U. pubescens* Sm. & *U. tayloriana* P. Taylor. Joseph 50993 (ASSAM).

Fls. & frts: Aug.-Sept.; near Jarain alt. 1450 m, Joseph 50993, Kanjilal Herbarium, Shillong (ASSAM).

This is no doubt the same species of Taylor (l.c.) but differs from it, having long-stalked traps; 1(-2) flower instead of 2-7 (alternating sterile bracts) and the spur as long as or a little shorter than the lower

lip of the corolla instead of being longer. Again it can easily be distinguished from *U. subulata* L. (reported from Africa and the New World, and is allied to *U. stanfieldii* P. Taylor, in having yellow flowers with trilobed lower lip) by the entire margins of the scales instead of papillose margins and by the prominent nerves of the calyx instead of obscure ones.

This is the second African species reported from the Khasi and Jaintia hills, the first being *U. pubescens* Sm. (*A. S. Rao* & *J. Joseph* 1967) also earlier reported from Rajpur, near Dehra Dun, U. P. (*Saxena* 1965).

Incidentally it may be mentioned here that Meghalaya is a natural home for about thirteen species of insectivorous plants belonging to the genera *Drosera* (2 spp.), *Utricularia* (10 spp.) and *Nepenthes* (*Nepenthes khasiana* Hook. f. the only representative of the genus for the whole of India).

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