

A Note on the Identity of Carnivorous Plants of Karungalakudi, Tamil Nadu, India

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Abstract

Karungalakudi is blessed with rich herbaceous flora including two carnivorous plant groups, viz. fly traps and bladder worts. In the present communication, a total of 6 insectivorous plants are reported, and it is confirmed that the reported occurrence of *Drosera brevifolia* Pursh, *Utricularia minor* L., *U. resupinata* Greene ex Bigelow and *U. uniflora* R. Br. in Karungalakudi is due to a misidentification.

Key words: Karungalakudi, Fly-traps, Bladder worts, Misidentification.

Introduction

Karungalakudi is situated 40km away from Madurai district and it lies at 10° 9' 34" to 10° 9' 45" N latitude and 78° 21' 31" to 78° 22' 3" E longitude. Detailed botanical studies were conducted in various places of Karungalakudi between January 2006 – October 2008. All the collected specimens were poisoned, processed and labeled by standard herbarium methods (Jain and Rao, 1993). The correct identity of the herbarium specimens were then confirmed by further critical study with the help of relevant floras, monographs and revisions (Gamble and Fischer, 1997; Janarthanam and Henry, 1992; Matthew, 1983; Taylor, 1989). Their identification was later confirmed by matching specimens with previously authenticated specimens available at Botanical Survey of India (BSI), Southern Circle, Coimbatore. All collections are deposited in Ashoka Trust for Research in Ecology and the Environment (ATREE) Herbarium, Bangalore. An artificial key is given for easy identification and further collection of carnivorous plants from Karungalakudi and the enumeration follows alphabetical order of the family, binomials followed by voucher specimen number and distribution.

Key to the Carnivorous plants of Karungalakudi.

- 1a. Leaves with hair like tentacles; Flowers actinomorphic-----2
- 1b. Leaves absent / Foliar organs not as above; Flowers zygomorphic-----3
- 2a. Plants scapigerous; Stipules present-----*Drosera burmanii*
- 2b. Plants non-scapigerous; Stipules absent-----*Drosera indica*
- 3a. Flowers yellow-----*Utricularia bifida*

- 3b. Flowers other than yellow-----4
- 4a. Racemes hairy-----Utricularia hirta
- 4b. Racemes glabrous-----5
- 5a. Mouth of trap basal-----Utricularia polygaloides
- 5b. Mouth of trap lateral-----Utricularia minutissima

Systematic Enumeration

Droseraceae (Fly-trap Family)

NOTE: *Drosera* L., commonly known as sundew, has about 135 species (Schlauer, 1996), among which only three are found in India (Ghosh, 1997). *D. brevifolia* Pursh. so far has been reported only from the United States (Britton and Brown, 1913; Lloyd, 1942) and the reported occurrence of *Drosera brevifolia* in Karungalakudi (Ramya *et al.*, 2008) is incorrect as it is a case of mistaken identity of *D. indica*.

Drosera burmanii Vahl.

Specimens Examined: *Kottai* 1019, 1052.

Distribution: India, West Africa, Myanmar, China, Taiwan, Malesia and Australia.

Drosera indica L.

Specimens Examined: *Kottai* 1222, 1359.

Distribution: India (Deccan Peninsula, Bihar and West Bengal), Srilanka, Myanmar, Tropical Africa, Madagascar, Japan, Australia, China and Malesia.

Lentibulariaceae (Bladder wort Family)

NOTE: *Utricularia* L., commonly known as bladder wort, has about 214 species (Taylor, 1989) distributed mostly in tropics and subtropics and a few are temperate (Cook, 1996) where in 35 species are present in India (Janarthanam and Henry, 1992). Over the last 8 years, 3 additional species have been described from India, including *U. janarthanamii*, *U. naikii* and *U. babui* (Yadav *et al.*, 2000 and 2005). Recently Ramya *et al.* (2008) reported *U. resupinata* Greene ex Bigelow and *U. uniflora* R. Br. from Karungalakudi but there is no authentic report either from Tamil Nadu (Chandrasekaran, 1987; Matthew, 1983; Ravikumar, 1993) or from India (Janarthanam and Henry, 1992; Taylor, 1989) and the record of its occurrence in Karungalakudi is due to a misidentification. The areas of distribution for *U. resupinata* is Eastern Canada, United States and Central America (Baker, 1926; Britton and Brown, 1913; Eyles and Robertson, 1963; House, 1924; Keller and Brown, 1905; Lloyd, 1942; Tatnall, 1946; Taylor, 1989 and 1991) and for *U. uniflora* is Southern Australia, SE Victoria, New South Wales, Southern Queensland and Tasmania (Gibson, 1999; Taylor, 1989). Similarly in India, *U. minor* L. has been recorded so far

only from the Himachal Pradesh, Jammu and Kashmir at 2500-4300m altitude (Janarthanam and Henry, 1992; Taylor, 1989) hence the record of its occurrence in Karungalakudi (Ramya *et al.*, 2008) is erroneous.

***Utricularia bifida* L.**

Specimens Examined: *Kottai1035, 1050.*

Distribution: India, Srilanka, Japan and South to North Australia.

***Utricularia hirta* Klein ex Link.**

Specimens Examined: *Kottai1200, 1356.*

Distribution: India (Bihar, Madhya Pradesh, Meghalaya, Orissa, Tamil Nadu, Uttar Pradesh and West Bengal) and Malesia

***Utricularia minutissima* Vahl.**

Specimens Examined: *Kottai1210, 1357.*

Distribution: India (Karnataka, Kerala, Orissa, Tamil Nadu, Uttar Pradesh and West Bengal), Japan and Australia.

***Utricularia polygaloides* Edgew.**

Specimens Examined: *Kottai1227, 1349.*

Distribution: India (Andhra Pradesh, Karnataka, Kerala, Madhya Pradesh, Orissa, Tamil Nadu and West Bengal) and Srilanka.

Results and Discussions

Carnivorous plant flora of Karungalakudi consists of two species of Droseraceae and four species of Lentibulariaceae. Due to prolonged anthropogenic pressures, the carnivorous plants of Karungalakudi are locally endangered. In the future, if pressures persist, the carnivorous plants - priceless gift of nature - will be extinct locally from Karungalakudi.

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