

## CONTRIBUTION TO THE AQUATIC AND MARSHY FLORA OF JAMMU (J & K)--A LIST OF NEW RECORDS

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Survey conducted on the aquatic and marshy plants of Jammu province revealed that 32 species and 3 varieties have been recorded for the first time from Jammu. 12 plants have been added to the flora of J & K state while three plants *Nuphar lutea*, *Nymphaea micrantha* and *Potamogeton salicifolius* were added to the flora of India.

**Keywords :** New records; Aquatic plants; Jammu.

Botanical explorations conducted from January 1988 to August 1989 for the hydrophytes of Jammu province revealed the occurrence of several new species. In the past, Anand (1977) reported the occurrence of 53 angiosperms from the stream Gadigarh Jammu, and Sharma & Kachroo (1981, & 1983) studied the flora of Jammu district. Their main emphasis was on the terrestrial flora only. Later on Langer (1987). Anand and Langer (1988 & 1991) reported the occurrence of charophytes from the aquatic habitats of Jammu province. Thus practically, no consolidated work is available on the hydrophytes of Jammu province. With this aim, a survey on the hydrophytes of Jammu province was conducted and over all 65 different water bodies i.e. lakes, ponds, pools, ditches, paddy fields, streams, river and man made water bodies have been

surveyed. In total 116 plants were collected (Sharma, 1990). Out of which, 32 species and 3 varieties have been recorded for the first time from Jammu province whereas 14 species are new to the flora of J & K State. While *Nuphar lutea*, *Nymphaea micrantha* and *Potamogeton salicifolius* are new to the aquatic flora of India. Table 1 revealed the occurrence and voucher specimen numbers of the plants deposited in the herbarium section of the department of Biosciences, University of Jammu, Jammu (J & K). Identifications of the plants was done using standard literature (Hagstrom, 1916; Arber, 1920; Biswas and Calder, 1936; Bor, 1960; Subramanyam, 1962; Cook, 1974; Oommanchan, 1977; Hookers, 1978; Gupta, 1979; Sharma and Kachroo, 1981, 1983).

Table 1. List of new records, place and voucher number.

Name of the species	Place→Jammu Province	J & K State	India
1	2	3	4
<b>Alismataceae</b>			
<i>Alisma gramineum</i> Lejune (SS/NRJ/060)	+	+	—
<i>A. subcordatum</i> (SS/NRJ/061)	+	+	—
<i>Caldesia oligococca</i> (F.V.M.) Buthen (SS/NRJ/064)	+	+	—
<i>C. parnassifolio</i> (Barl. ex. L.) Pail (SS/NRJ/063)	+	+	—
<i>Segittaria segittifolia</i> var. <i>minor</i> (SS/NRJ/065)	+	—	—
<i>S. segittifolia</i> var. <i>major</i> (SS/NRJ/066)	+	—	—
<b>Araceae</b>			
<i>Colocacia antiquorum</i> Schott.	+	—	—
<b>Asclepiadaceae</b>			
<i>Oxystelma secamone</i> (L.) K. Schum (SS/NRJ/106)	+	—	—
<b>Ceratophyllaceae</b>			
<i>Ceratophyllum submersum</i> Linn. (SS/NRJ/045)	+	+	—
<b>Cyperaceae</b>			
<i>Eleocharis plantaginea</i> R. Br. (SS/NRJ/085)	+	—	—
<i>Scirpus acutus</i> (SS/NRJ/092)	+	—	—
<i>S. validus</i> Vahl. (SS/NRJ/091)	+	—	—
<b>Equisetaceae</b>			
<i>Equisetum diffusum</i> Don. (SS/NRJ/103)	+	—	—
<b>Lemnaceae</b>			
<i>Lemna gibba</i> Linn. (SS/NRJ/056)	+	—	—
<i>L. minor</i> Linn. (SS/NRJ/054)	+	—	—
<i>Spirodela oligorrhiza</i> (SS/NRJ/059)	+	+	—
<i>Wolffia arhiza</i> (L.) Wimm. (SS/NRJ/037)	+	—	—
<b>Lentibulariaceae</b>			
<i>Utricularia flexuosa</i> Vahl. (SS/NRJ/037)	+	—	—

Contd.

	1	2	3	+
<b>Menyanthaceae</b>				
<i>Nymphoides indicum</i> (L.) O. Kuntze (SS/NRJ/026)		+	+	-
<b>Najadaceae</b>				
<i>Najas indica</i> (Wild Cham.) (SS/NRJ/068)		+	-	-
<i>N. minor</i> var <i>gramineum</i> (SS/NRJ/070)		+	-	-
<i>N. minor</i> Allioni (SS/NRJ/070)		+	-	-
<b>Nelumbonaceae</b>				
<i>Nelumbo pentapetals</i> Walt Fernald (SS/NRJ/017)		+	+	-
<b>Nymphaeaceae</b>				
<i>Nymphaea stellata</i> Wild (SS/NRJ/018)		+	-	-
<i>N. micrantha</i> Linn. (SS/NRJ/020)		+	+	+
<i>Nuphar lutea</i> Linn. (SS/NRJ/021)		+	+	+
<b>Potamogetonaceae</b>				
<i>Potamogeton lucens</i> L. (SS/NRJ/070)		+	-	-
<i>P. natans</i> Linn. (SS/NRJ/072)		+	-	-
<i>P. salicifolius</i> L. (SS/NRJ/076)		+	+	+
<b>Salviniaceae</b>				
<i>Salvinia cucullata</i> Roxb (SS/NRJ/105)		+	-	-
<i>S. natans</i> Hoffins (SS/NRJ/104)		+	-	-
<b>Scrophulariaceae</b>				
<i>Limnophila heterophylla</i> Benth (SS/NRJ/034)		+	+	-
<i>L. roxburgii</i> G. Don. (SS/NRJ/035)		+	+	-
<i>L. sessiliflora</i> G. Don. (SS/NRJ/030)		+	+	-
<b>Zannichillaceae</b>				
<i>Zannichilla palustris</i> ssp. <i>pedicellata</i> Wahenburg & Rosen (SS/NRJ/076)		+	+	-

+ = New records; - = Already reported.

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