BULL. BOT. SURV. INDIA
Vol. 49, Nos. 1-4 : pp. 215-218, 2007

ADDITIONS TO THE FLORA OF MANIPUR

M. R. KHAN, P. S. YADAVA AND A. KIKIM
Ecology Laboratory, Department of Life Sciences, Manipur University, Imphal – 795 003

Manipur is rich in biodiversity and falls under Indo-Burma biodiversity hotspot which is one of 25 hotspots of biodiversity proposed by Myers & al. (2000). Deb (1961) had worked on the flora of Manipur and reported a list of 2007 taxa of flowering plants consisting both monocots and dicots. Besides this, Shukla and Baishya (1979) reported additional list of 49 genera and 53 species of flowering plants and a list of 13 cryptogams from Manipur. Karthikeyan & al. (1989) enumerated the monocot flora of India. Singh & al. (1997) reported a list of 49 species of flowering plants belonging to 32 families. Shukla (1996) has also published the grasses of all the states of North East India.

The study area is located between 24°72' N latitude and 93°85' E longitudes in the Imphal Valley. Climate is monsoonic with three distinct seasons of summer, rainy and winter. The mean minimum temperature was recorded to be 5°C (December) and the mean maximum temperature was recorded 30.7°C (September). Average annual rainfall is 1358.47 mm.

However, the information on the study of sedges and grasses are far from complete. The present paper deals with 15 plant species collected from different parts of Imphal Valley during their frequent field explorations from 1997 to 1998 and from 2003 to 2004. These plant species have not been reported by earlier workers. In the following enumeration, species are arranged alphabetically.

Locality, altitude, date of collection, field number and local name in Manipuri have been provided. Specimens collected by the authors from different parts of valley have been deposited in the Herbarium of Life Sciences Department, Manipur University, Imphal.

ENUMERATION

CYPERACEAE

Fimbristylis dichotoma (L.) Vahl

Annual herbs. Culm tufted. Leaves as long as the culm, spikelets ellipsoid. Nut pale brown.

Common in plains.

Wangjing, Thoubal District (910 m) 26.8.2003, 3010.

Received on 08.09.2006; Accepted on 17.12.2007.

Fimbristylis rigidula Nees

Rhizomatous herbs. Culm thickened at the base. Leaves as long as culm, glabrous. Spikelets solitary and paired. Nut paler, less glistening.

Common in the plain area.

Khongjom, Thoubal District (922 m). 26.8.2003, 3011.

F. tristachya R. Br.

Root stock many leaved, crowded at the base of the culm, sheaths very short, pale yellowish. Spikelets brown and distinct. Nut black-brown.

Abundantly gorws in moist places.

Khongjom, Thoubal District (922 m) 26.8.2003. 3012.

Kyllinga tenuifolia Steud. (*K. triceps* Rottb.)

Rhizomatous herbs. Culms leafy at the base only. Inflorescence capitate, spikes subcylindric, whitish. Nut ellipsoid, ultimately yellow-brown.

Common in damp areas of foothills.

Thoubal, Thoubal District (900 m) 26.8.2003, 3013.

Scleria pergracilis Kunth

Annual rhizomatous herbs. Culms leafy, leaves filiform. Nut white, shining.

Khongjom, Thoubal District. (922 m) 27. 7.2003, 2926.

POACEAE

Axonopus compressus (Sw.) P. Beauv.

A perennial broad leaf grass. Culms erect, stoloniferous. Spikelets greenish to pale green. Caryopsis yellowish brown. It is an excellent pasture grass and considered as "carpet grass".

Common in valley areas.

Canchipur, (785 m) 24.6.1997, 120.

Cymbopogon flexuosus (Steud.) Watson (*Andropogon flexuosus* Nees ex Steud.)

Local name: "Houna".

An aromatic perennial grass. Leaf blade lanceolate, glaucous, sheath hairy. Tender shoot is fairly palatable. Extracted oil is known as "Malabar-oil".

Abundant at higher altitudes.

Khongjom, Thoubal District (922 m) 25.8.1997, 1315.

C. martinii (Roxb.) Watson (*Andropogon martini* Roxb.)

Local name: "Wana manbi".

Perennial. Leaf-blades flat, rounded at the base. Culms erect, smooth, pedicel spikelets reddish at maturity.

Common on hill slopes.

Khongjom, Thoubal District (922 m) 25.8.1997, 1316.

Cyrtococcum accrescens (Trin.) Stapf (*Panicum accrescens* Trin.)

Perennial. Culms tall, often branching at the lower nodes, leafy to the top; nodes glabrous. Leaf-blades linear-lanceolate or ovate-lanceolate, smooth or hariy. Inflorescence a very lax panicle. Spikelets yellowish or white.

Common in plains and hills.

Khongjom, Thoubal District (922 m) 27.7.2003, 2714.

Dactyloctenium aegyptium (L.) Willd.

Annual. Culms erect, slender to moderately stout, glabrous and smooth. Leafy blades linear, flat, acute and long. Spikletes pale yellowish green. an excellent fodder, said to be strengthening for horses. Whole plant also used as medicine.

Abundant in plains and hills.

Wangjing, Thoubal District (922 m) 25.6.203, 2566.

Digitaria cruciata (Nees ex Steud.) A. Camus (*Panicum cruciatum* Nees ex Steud.)

Annual. Culm erect, spikelets purple or green, rarely hairy.

Khongjom, Thoubal District. (922 m) 25.6.2003, 2633.

D. stricta Roth ex Roem. & Schult.

Tufted erect annuals with lanceolate leaves. Spikelets purple at maturity.

Common along roadsides and in moist localities.

Khongjom, Thoubal District (922 m) 27.7.2003, 2811.

Eulalia fastigiata (Nees ex Steud.) Haines

Local name: "Satu".

A tall perennial grass. Culms erect, leaves rigid white hairy with golden brown hairs on the keel. Inflorescence brownish or reddish black.

Common on the road sides and open slopes of hill.

Khongjom, Thoubla District (922 m) 25.10, 1997, 1724.

Festuca leptopogon Stapf

A tufted perennial grass. Leaves long, flat, dark green, base rounded. Spikelets 2-3-flowered.

Common in Khongjom area.

Khongjom, Thoubal District (922 m) 27.7.2003, 2820.

Lophatherum gracile Brongn.

Perennial with fleshy roots. Culms erect; tall, simple, glabrous and smooth. spikelets dark green.

A forest grass common in the plains and hills.

Khongjom, Thoubal District (922 m) 27.7.2003, 2818.

REFERENCES

DEB, D.B. Monocotyledonous plants of Manipur. *Bull. Bot. Surv. India* 3(2): 115-138. 1961.

KARTHIKEYAN, S., S.K. JAIN, M.P. NAYAR AND M. SANJAPPA. Fl. Ind. Enum. Monocot. Botanical Survey of India, Calcutta. 1989.

MYERS, N., R.A. MITTERMEIER, C.G. MITTERMEIER, G.A.B. DAFONSECA AND J. KENTS. Biodiversity hotspots for conservation priorities. *Nature* 403 : 853 858. 2000.

RAO, A.S. AND D.M. VERMA. Cyperaceae of North East India. Botanical Survey of India, Calcutta. 1982.

SHUKLA, U. The grasses of North-Eastern India. Scientific Publishers, Jodhpur. 1996.

SHUKLA, U. AND A.K. BAISHYA. A contribution to the flora of Manipur. *J. Bombay Nat.Hist. Soc.* 76:224-230. 1979.

SINGH, E.J., P.S. YADAVA AND TH. B. SINGH. A contribution to the flora of Shiroy hills, Ukhrul Manipur. *Bull Bot. Surv. India* 35(1-4); 99-105. 1995.