SYSTEMATIC SURVEY OF SOME ANGIOSPERMS OF FAMILY
ASTERACEAE FROM KOTA DISTRICT OF RAJASTHAN, INDIA-II

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ABSTRACT
The present systematic survey deals with vegetation of habitats of Kota district of Rajasthan state. Exploration tour was conducted to determine plants of family Asteraceae from various habitats that resulted into occurrences of 08 plant species. Taxonomic position of these plant species is described in various available Floras of different regions of the Rajasthan state.

KEY WORDS: Asteraceae, Angiosperms, Kota.

INTRODUCTION
Previous studies on systematic enumeration of South East Rajasthan especially of Kota district have been contributed by Majumdar (1971, 1976 and 1980) in form of Synoptic flora of Kota division. Sharma and Tiagi (1979), Sharma (2002a, 2002b), Sharma and Siringi (1986) have also made significant contributions. Flora of Rajasthan by N.K. Sharma (Floristic studies on Hadoti region. 2002) provides a vast account of angiosperms. This communication describes systematic survey of some plants of family Asteraceae from the study area.

Study Area
Kota district is situated in South of Rajasthan at latitude 30° 39.125’ N and longitude 78° 31.156’ E. and is located along the eastern bank of the Chambal river, covering an area of approximately 521324 hectare (12,436 km²) and that is 3.63 per cent of the Rajasthan State. Out of which, area of forests is 125379 hectare, non-agriculture land is 60021 hectare and cultivable barren land is 23011 hectare. The Chambal River is natural boundary of Kota district that separates Kota from neighboring Sawai Madhopur, Tonk and Bundi districts by forming the natural district boundary.

Climate
Precipitation from June and September is nearly 80% of the mean annual rainfall (1516 mm) and remaining 20% falls in winter season. Overall climate is moderate. Frost is common during winter season. Mean of minimum monthly temperature ranges from 4.7°C (Jan) to 24.2°C (Jul) and mean of maximum monthly temperature ranged from 21.2°C (Jan) to 33.10°C (Jul) in the year 2011.

METHODOLOGY
The studied plants of family Asteraceae from study area is based on the results obtained from both extensive and intensive studies of the vegetation. ‘Quadrat Method’ was used for collection of these herbaceous plants. Identification of plant species during field survey was done by compiling different floras available i.e. Flora of Rajasthan by N.K. Sharma that deals with Hadoti region (District Kota, Baran and Jhalawar), Flora of Delhi by J.K. Maheshwari, and Flora of Indian Desert by M.M. Bhandari and authenticated at Herbarium, Department of Botany, University of Rajasthan, Jaipur. The photographs of all the eight plant species were taken during field trip.

RESULTS AND DISCUSSION
Systematic survey of studied plant species is described under (FIG: 1 A-H):
1. Launaea procumbens (Roxb.) Ramayya & Rajgopal

Erect, biennial, several flowering stems arise from base, leafy Herb stem 60-80 cm, branched, Leaves sessile, whorled, pinnatifid, minutely toothed, acute apex, dentate margin, Inflorescence-head, Flowers bright yellow, ligulate ray florets and tubular disc florets both present, fruits acenes.

Vernacular Name- Jangi Gobi, Gobi
Specimen Examined- SUBHASH/TH/121(GCK)

2. Blumea mollis (D. Don) Merr.

Vernacular Name - Kakronda, Mirudi Chhada (Sanskrit) Specimen Examined - SUBHASH/TH/122(GCK)


Prostrate, annual, many branched diffused herb, stem glabrous, branched, spinulated, Leaves alternate, pinnatifid into thin linear segments, heads bisexual, pale yellow, solitary, angled achenes.

Specimen Examined: - SUBHASH/TH/123(GCK)


Prostrate, annual, diffused herb, stem erect/ prostrate 40-60 cm long, nodes show rooting, branched, Leaves simple opposite, sub sessile, ovate/ elliptical, hairy surface, acute apex, petiole and young branches densely hairy. Solitary apical heads, 5/6 toothed ligulate ray floret, Many tubular disc florets, silky black cypsela.

Vernacular Name- Ghamraj (Hindi), Jayanti veda (Sanskrit) Specimen Examined - SUBHASH/TH/124(GCK)

Local uses- Leaves are used for stone querry's, leaf juice used for first aid dressing on wounds.


Erect/Semi prostrate, annual, white wooly herb. stem 15-30 cm long, branched, Leaves alternate, sessile, oblong linear, wooly surface, 4mm long, corymb heads white, heterogenous, axillary, sessile, florets light yellow, fruits flat cypsela.

Specimen Examined: - SUBHASH/TH/125(GCK)


Erect, annual, herb, stem 40-150 cm long, much branched. Leaves alternate, lanceolate, corymb heads, terminal and axillary, pale white, heterogenous, ray florets 5, many tubular disc florets, flat achenes.

Vernacular Name- Wild carrot weed (English), Gajar Ghaas and Jhilmil (Hindi) Specimen Examined- SUBHASH/TH/125(GCK)


Erect, annual, herb, stem 20-80 cm long, branched. Leaves alternate, petiolate, spatulate,.., 3-5 lobed, acute apex, narrow, corymbose head, purple coloured, homogenous, 3-5 bracts in involucre, fruits acenes.

Vernacular Name- Sandri, Vishvadeva (Sanskrit) Specimen Examined - SUBHASH/TH/127(GCK)


Erect, annual, herb, woolly, stem 50-60 cm high, branched at base. Leaves sessile, linear, abovate, acute base, solitary terminal heads, yellow, heterogenous, ligulate ray florets, 6-8 mm, hairy acenes.

Specimen Examined: - SUBHASH/TH/127(GCK)
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