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Common medicinal herbs of family Asteraceae in Raipur District of Chhattisgarh, India

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Abstract

The present paper deals with the survey of common medicinal herbs of the family Asteraceae in Raipur District of Chhattisgarh, India. About 44% of the total area of the area is under forest cover, with a rich biodiversity, which has not been fully explored.

The survey revealed that 68 species belonging to 51 genera were wild whereas 04 species under 03 genera were found under cultivation. Majority of these species have medicinal utility in various ailments.

Chhattisgarh is situated in the central part of the country. Raipur district is the capital of Chhattisgarh State. It is formerly a part of Madhya Pradesh before the State of Chhattisgarh formed on 1st Nov. 2000. It is located between 17°46□ North to 24°5□ North latitude and from 80°15□ East to 84°20□ East longitude. The total area of Chhattisgarh is 135,191 square km. It is rich in forest resource. About 44% of the total area is covered by Forest. A great diversity is found among the herbs, shrubs and trees of this region. This part of the country is the habitat for vital medicinal herbs.

Plant collection :

The specimens of all the plants of family Asteraceae were collected from selected sites of Raipur and every specimens were noted down. Habit of plants, habitat, flower colour, flowering and fruiting, ecological surrounding and adaptation, morphological peculiarities, if present were also recorded enlisting of collected specimens were also carried out simultaneously. Relevant literature was consulted for the preparation of the manuscript[1-11].

(ii) Identification of plants of family Asteraceae by taxonomic key :

The systematic treatment start with a dichotomous key to Genera of family Asteraceae based on Bentham and Hooker's system of classification as proposed in *"Genera plantarum"* (1862-83). A dichotomous key to genera has been given. The generic key is based on macroscopical character and it is useful to indentify plant species. The nomenclature of plants has been checked in the light of

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international code of botanical nomenclature (1978). A short uniform description has been given with individual species for conformation of its identity.

(iii) Study of medicinal use of plants of family Asteraceae in Raipur District:

Medicinal use of plants of family Asteraceae were recorded during field visit by interviewing or by on the spot survey. The collected information was later confirmed with the published literature of Jain and Haines (1961) and documentation was done by consulting different Journals of Medicinal chemistry

During survey of fifteen sites of Raipur district total 68 species were found in which 64 species were wild and 4 species were cultivated. Total 51 genera were found in which 48 genera are wild and 3 genera are cultivated.

Table1 Habitat of plants of family Asteraceae recorded in Raipur district of Chhattisgarh, during the year-2013-2015.

Name of family	Wild		Cultivated	
	Genera	Species	Genera	Species
Asteraceae	48	64	3	4

Habitat of plant species :

During survey of of Raipur district total 68 species were found in which 64 species were wild which is 94% of total plant species and 4 species which is 6% of total plant species were cultivated. Total 51 genera were found in which 48 genera were wild which is 94% of total plant species and 3 genera were cultivated which is 6% of total plant species.

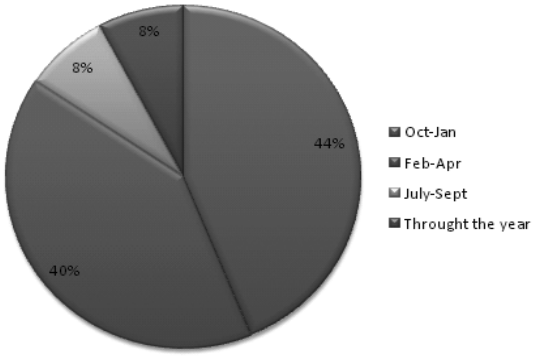

Fig. 1. Flowering and Fruiting percentage in different months of plant species of family Asteraceae recorded in Raipur district of Chhattisgarh, during the year 2013-2015

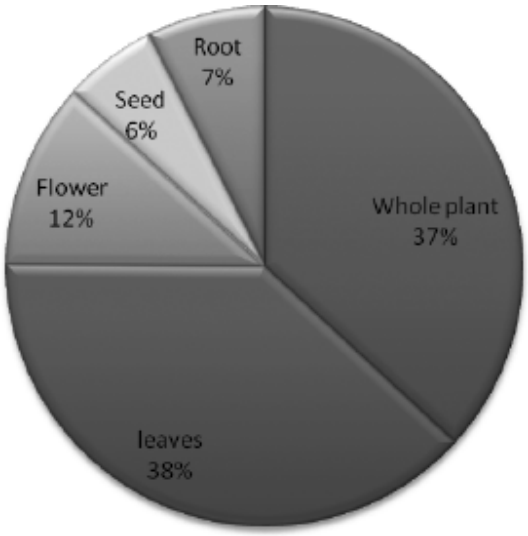

Fig 2: Percentage of Plant parts used as medicine of family Asteraceae recorded in Raipur district of Chhattisgarh,during the year 2013-2015.

Flowering and fruiting period of family Asteraceae :

A remarkable features of the vegetation is the change that sets in with the advancement of the season. Corresponding to three district season of the year, one comes across winter, rainy and summer seasons. Plants completing their life cycle within three to four months are known as annuals.

During field survey in (Oct-Jan) 28 species were recorded in flowering and fruit stage which is 44% of total plant species, in feb-Apr 26 species which is 40%,were in flowering and fruiting stage during rainy season (Jul-Aug) total 5 species which is 8% were in flowering and fruiting stage in summer season while 5 species which is 8% of total plant species which include- *Ageratum conyzoides* L., *Eclipta prostrata* L. *Parthenium hysterocarpous* L. and *Tridax procumbens* L. were in flowering and fruiting stage throughout the year.

Study of medicinal plant of family Asteraceae :

A total 68 Species under 51 genera of family Asteraceae were recorded from Raipur district of Chhattisgarh. It was observed during the study that all are medicinally important.

Whole plant of 24 plant species which is 37% of total plant species, Leaves of 26 plant species which is 38% of total plants, flower of plant which is 12% of total plant species, seed of plant which is 6% of total plant species, Root of plant species which is 7% of total plant species their extract, paste and decoction are used for the treatment of disease like wound, Diarrhoea, Skin disease, Epilepsy, Headache, Stomach ache, Toothache, Cold, Diabetes, Haemorrhage, Ulcer, Urinary infection, Menstrual cycle, Fever, Arthritis, Liver tonic, Piles, Chest pain.

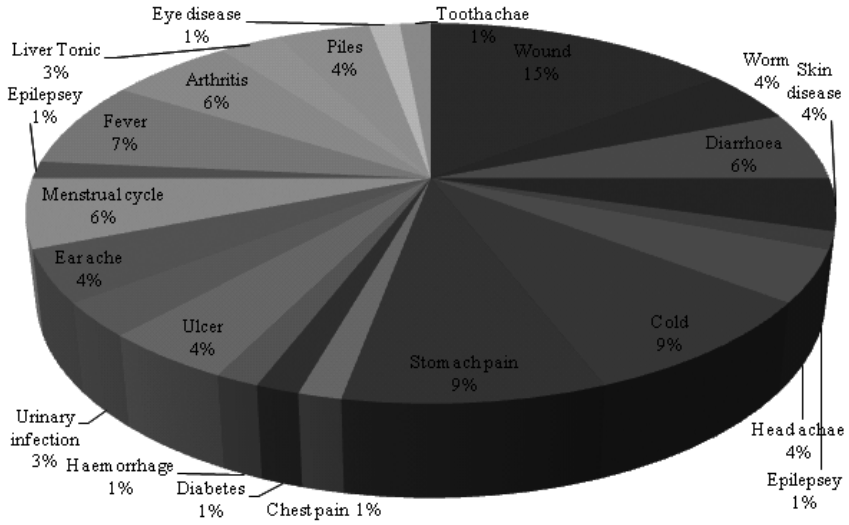

Fig. 3. Percentage of plants species of family Asteraceae used in treatment of disease recorded in Raipur district of Chhattisgarh,during the year 2013-2015.

During survey of Raipur District of Chhattisgarh it is found that 68 species under 51 genera were wild and 4 species under 3 genera were cultivated. This result shows that most of the species of family Asteraceae were wild. Similarly wild Asteraceous species of Indian Botanic garden Howrah in West Bengal is reported by Ansari and Panda[4] in which 16 wild species of Asteraceae were recorded. In present enumeration flowering and fruiting period have been provided and medicinally important plant of family Asteaceae reveals that it is used for cut,wounds, boils, burns and skin disease. Similarly Sahu *et al* (2004) studied total 81 weeds belonging to 59 genera and 31 families growing in the University botanic garden at sagar were found medicinally important.Various parts of all the weeds have been analysed for their medicinal utility.In present study Correct identification local names and plant parts used in various disease. Similarly Patel and Mahajan[10] reported 26 species belonging to 25 genera and 18 families, which are used by tribals in the treatment of various diseases. The local people living in villages particularly in forest area are using a number of wild plants as a household remedy in several diseases.

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