International Journal of Scientific Research in Engineering and Management (IJSREM)
Volume: 07 Issue: 06 | June - 2023 SJIF Rating: 8.176 ISSN: 2582-3930

Taxonomic Study of Medicinal Plants in Àmbikapur (District - Surguja) Chhattisgarh (INDIA) With Special Reference to Traditional Medicine

Miss Renu Singh

Department of botany ,K.R Technical College, Ambikapur Surguja(chhattisgarh) . India

ABSTRACT

This present pepar communicates potentially important medicinal plants with reference to their Taxonomy threat in flowering ,fruiting period's, present status in field , traditional uses and ecological diversity.diffrents parts of plant species uses as a traditional medicine.The species are collected and study Surguja district region in Chhattisgarh state.Thestate of Chhattisgarh has about 44.21%of its geographical area covered with forests. It lies between 23º 37' 25'' To 24º 6' 17'' north latitude and 81º 34'40'' To 84º 4'40'' east longitude.Surguja district received the least average rainfall of 590.7 mm.About 58% of the area in the district lies under forests. The district Surguja has a very rich flora exhibiting diversity especially of medicinal plants.

Key words:- Taxonomy, medicinal plants, traditional medicine , Surguja district

INTRODUCTION

Surguja district in Chhattisgarh is very rich in natural vegetation and biological wealth. It lies between 23º 37' 25'' To 24o 6' 17'' north latitude and 81º 34'40'' To 84º 4'40'' east longitude. . Surguja district received the least average rainfall of 590.7 mm. In winters temperature dips to below 5 °C (41 °F) and in summers it rises above 46 °C (115 °F).The highest mountain ranges of theMainpat is located at a distance of 40 km from Ambikapur. It is called Shimla of Chhattisgarh. Mainpat is located on the Vindh mountain range, whose height is 3781 feet above sea level. About 58% of the area in the district lies under forests.

The district has a sizeable tribal population using enormous range of plants for their basic needs,sustenance and livelihood. The district has very rich plant diversity, including medicinal plants. Many of them are on the verge of extinction due to over exploitation and destruc- tion of their habitat. There has been no comprehensive study on the enumeration, distribution and the assessment of threat to the existing medicinal plants.

The vegetation particular the area forest , plants have not been explored fully except a few reports and research pepar from the journal (Swati Srivastava 2013)There is no report on the rich forest flora of the district. Therefore an attempt has been made to study the taxonomic of forest flora especially of medicinal plants.

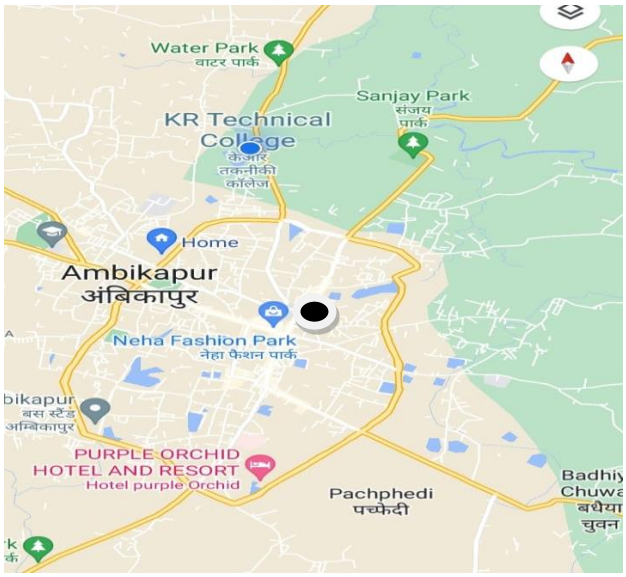

Fig.:- Map of study site in ambikapur (surguja)

MATERIALS AND METHODS

Extensive field survey was undertaken during 2022 to 2023.Collected specimens are identified with the help of floras and literature cited in references at the end. Herbarium specimens are prepared for authentication of collected material and housed in the Herbarium of the Department. Following plant species, I could conserve in my botanical garden during last two years in the program by saplings and seeds collected from the forests.In the following systematic enumeration plant species are arranged alphabetically with their botanical names, followed by family in parentheses. Vernacular names are appended at the ends of botanical names in inverted commas, then it is followed by taxonomy, Occurrence, threats, precise locations, flowering and fruiting period, status and traditional uses.

SYSTEMATIC ENUMERATION

1. ***Azadirachta indica(meliaceae)" Neem"***

- **Taxonomy -** A woody lianas. Broad-leaved evergreens, flower – greenish white , fruit – smooth yellow green drupe
- **Occurrence –** Found in forests along bushes, evergreen tree, cultivate area.
- **Precise locations –** Ambikapur (surguja)
- **Flowers & Fruits-** More or less throughout the year
- **Status:** Conserved in botanical garden ,(Sanjay park)

• **Traditional Uses -**The entire tree including its leaves, flowers, seeds, fruits, roots and bark have been utilized in traditional medicine for various treatments such as inflammation, infections, fever, skin diseases and dental disorders.

2.Terminalia chebula(Combretaceae) "HARRA "

- **Taxonomy**- leaves and shoots hairless, or only hairy when very young
- **Occurrence –** Found in forests along bushes, tree, and cultivate area.
- **Precise locations –** Ambikapur (surguja)
- **Flowers & Fruits -** The dull white to yellow flowers are monoecious, , fruits are smooth ellipsoid to ovoid drupes, yellow to orange-brown in colour, with a single angled stone.
- **Status:** Conserved in botanical garden ,(Sanjay park)
- **Traditional Uses -***Terminalia chebula* is a main ingredient in the Ayurvedic formulation *Triphala* which is used for kidney and liver dysfunctions.The dried fruit is also used in Ayurveda as a purported antitussive, cardio tonic, homeostatic, diuretic, and laxative. It is also used as a soothing agent for dry cough.

3.Terminalia bellirica(Combretaceae) "BAHEDA OR BAHERA "

- **Taxonomy-** It is a deciduous tree and its average height is 30 meters. Its leaves are oval and 10-12 cm long. Its seeds are sweet in taste. The biggest feature of Baheda is that it can be grown in all types of soil.
- **Occurrence -** Found in forests along bushes, tree, and cultivate area.
- **Precise locations –** Ambikapur (surguja)
- **Flowers & Fruits –** Flowers are simple and solitary and are usually white or yellow in colour with a strong honey-like odour, Fruits are usually in the form of drupes, grey-coloured and ovoid-shaped**.**
- **Status:** Conserved in botanical garden ,(Sanjay park)
- **Traditional Uses -***Terminalia bellirica*use in Enhances digestion, boost immunity ,promotes cardiac functioning ,treat wounds and ulcers , fever , anorexia nervosa , oral health .

4. Tectonagrandis (Lamiaceae) "Sagwan"

- **Taxonomy –** *Tectonagrandis* is a tropical hardwood tree species in the family Lamiaceae. It isa large, deciduous tree that occurs in mixed hardwood forests.
- **Occurrence**- *Found in forests along bushes, tree, and cultivate area.*
- **Precise location**– *Ambikapur (surguja)*
- **Flowers & Fruits** –Fragrant white flowers are borne on 25–40 cm (10–16 in) long by 30 cm (12 in) wide panicles from June to August. The corolla tube is 2.5–3 mm long with 2 mm wide obtuse lobes. Tectonagrandis sets fruit from September to December; fruits are globose and 1.2–1.8 cm in diameter.

- **Status** – Conserved in botanical garden ,(Sanjay park)

- **Traditional Uses** – The essence of teak (inner black part) is inflammation (relieving swelling) and pain relief, poisoning and burning.The juice of the leaves increases the blood. The oil of teak seeds is Kesya (hair enhancer) and Kandudhna (itching erase).

5. Rauvolfia tetraphyla L. (Apocynaceae) "Sarpgandha"

- **Taxonomy –** *A Tall shrub with four leaves at each node. Flower small ,creamy . fruits dark red at maturity*
- **Occurrence**- *planted in botanical garden & forest area .*
- **Precise location**– *Ambikapur (surguja)*
- **Flowers & Fruits** – *Throughout the year .*

- **Status** – well flourished in bed since five year in forest and botanical garden .

- **Traditional Uses –** Roots are highly medicinal in treating cancer as substitute of rauwolfia serpentine**.**

Results & Discussion

The medicinal plants survey conducted in the Surguja district of Chhattisgarh showed that 5species of plants are being used by the tribes for the treatment of skin disease, kidney- liver infection, fiver , boold purified. The drugs are obtained From flower, fruit, leaf, bark and seeds. The indigenous knowledge Of drug preparation and administration and expenses per episode Was documented. It was found that peoples of tribes control The disease by their own dugs prepared from plant source, this proves the efficiency of traditional system of treatment used by the tribe in Surguja.

Acknowledgement -

This paper and the research behind it would not have Been possible without the exceptional support and guide Of our director Mrs Rinu Jain, principal Dr. Ritesh Verma, my supportive colleagues and my friends.

References

1. Bradley C. Bennett, &. M. (2008). Plant taxonomy for preclinical and clinical medicinal plant researchers . *jounrnal of society for integrative oncology ,vol 6* , 150- 157.
2. Kshirsagar SR.post graduate department of botany (2018). taxonomy and occurrence of some medicinal plants used in traditional medicines. *Archives of pharmacy & pharmacology research* , 1-8.

3. Chanda, S. (2013). Importance of pharmacognostic study of medicinal plant. Journal of pharmacognosy and phytochemistry , 69-73.
4. Swati Shrivastava.International Journal of Herbal Medicine 2013; 1 (3): 127-130

5.Aderibigebe AO, Emudianughe BA. Antihyperglycemic Effect of mangifera indica in rats. Phytother Res;1999:13:504-507.

6. Yeh GY, Eisenberg Dka M, Ptchuk, TJ, Phillips RS.Systematic review of herbs and dietary supplements for Glycemic control in diabetes. Diabetes Care; 2003:26:1277-1294.

7.Ahmad M, Khan MA, Qureshi RA. Ethnobotanical study Of some cultivated plants of chungh region (District Attock). Journal of Hamdard Medicus; 2003:3: 15-19.

18. Aiyeloja AA, Bello OA. Ethnobotanical potentials of Common herbs in Nigeria: A case study of Enugu state.Acad.c J. Education Res. Rev; 2006:1 (1):16-22.

19.Etuk EU, Bello SO, Isezuo SA, Mohammed BJ. EthnoBotanical survey of medicinal plants used for the treatment Of Diabetes mellitus in the North Western region of Nigeria Asian J Exp. Biol.Sci; 2010:1(1):55-59.

20 . Ravi K, Rajasekaran S, Subramanian S.Antihyperlipidemic effect of Eugenia jambolanaseed Kernel on streptozotocin induced diabetes in rats. Food and Chemical Toxicology; 2005:43:1433 – 1439

21.World Health Organization. Diabetes mellitus report of a WHO study group on diabetes mellitus. Geneva:WHO.WHO Technical Report; 1985, pp 1-727.

22.Shinwaikar A, Rajendran K, Dinesh C. Oral ant diabeti Activity of Annona squamosa leaf alcohol extract in NIDDM rats. J. Ethnopharmacol; 2004:42:30-35.

23.Ayyanar M, Sankarasivaraman K, Ignacimuthu S.Traditional herbal medicines used for the treatment of Diabetes among two major tribal groups in South Tamilnadu, India Ethno botanical leaflets; 2008:12: 276-280.

24.Rana TS, Singh KK, Rao RR. Studies on indigenous Herbal remedies for diabetes mellitus in India. Journal of Economic and taxonomic botany; 1999:23: 115 – 120.

25.Jain SK, Jain SP, Singh SC. An ethnomedicobotanical Survey of Ambikapur district M.P.,Contribution to Indian Ethno botany Scientific Publ: 1997:8: 3-91.

26.Haines HH. The Botany of Bihar and Orissa. Vol. I. II Bishen Singh Mahendra, Pal Singh, Cannaught place,Dehradun, India

*27.Gua, B.; Pedersen, A. & Barstow, M. (2022). "Teak". IUCN Red List of Threatened Species. **2022**: e.T62019830A62019832. Retrieved 29 January 2023.*

28. "Tectona grandis L.f. — The Plant List". The Plant List.

***29.**^ "GRIN Taxonomy for Plants - Tectona". United States Department of Agriculture. 5 October 2007. Retrieved 22 September 2013.*

***30.**^ William Feinberg (8 July 2013). "Burmese Teak: Turning a new leaf". East By South East. Retrieved 20 September 2015.*