



Useful Plant Diversity for the Development and Economic Upliftment of the Tribal in Chandauli District of Uttar Pradesh : A Case Study

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Chandauli district in eastern Uttar Pradesh lies on the Bank of river Ganges and has been held sacred by the Hindus since time immemorial. It is bounded on the north by Ghazipur, south by Robertsganj district, on west by Mirzapur and Varanasi districts of Uttar Pradesh and east by the boundary of Bihar. The area of study forms the part of Gangetic plain and is inhabited by a number of aboriginal tribes like Chero, Kharwar, Kol and Mushhar who live in close vicinity of the forest areas of Naugarh and Chakia blocks. The forest is tropical dry deciduous type. The vegetation growing in these forests plays a vital role in the life and economy of the tribal. They collect and utilize many shrubs, herbs, roots, tubers, leaves, flowers, fruits and seeds from the surrounding areas for their day to day needs and healthcare. Due to close association with the forests, the kol tribal have learnt to utilize many plants and plant products for their food, fiber, medicine, fish poison, oil, timber and wood work, cordage brooms, basket, fuel, narcotics etc. since time immemorial. During ethno botanical studies among the tribal populations of Uttar Pradesh various tribal populations were surveyed and their indigenous knowledge about plants and plant products were documented. In this connection observations on ethnobotany of Kol tribe inhabiting the forest areas of Naugarh Blocks of Chandauli district of Uttar Pradesh was undertaken and useful plants and plant products were documented.

Wild edible plants

The tribals of the area collect and consume

number of plant species for their food purposes. They collect and consume fruits of *Alangium salvifolium*, *Anthocephalus chinensis*, *Antidesma ghaesembilla*, *Bridelia squamosa*, *Buchanania lanzan*, *Carisa opaca*, *Coccinia grandis*, *Cordia dichotoma*, *Diospyros exsculpta*, *Ficus recemosa*, *Flacourtia indica*, *Grewia hirsuta*, *Limonia acidissima*, *Madhuca longifolia*, *Physalia minima*, *Syzygium heneanum*, *Terminalia bellirica*, *Xeromphis uliginosa*, *Ziziphus nummularia*, *Z. oenoplia* etc. eaten. The flowers of *Cassia fistula*, *Madhuca longifolia*, *Telosma pallid*, *Cordia dichotoma* are cooked as vegetables. The leaves of *Boerhavia diffusa* and *Digera arvensis* is also cooked as vegetables. Tubers of *Dioscorea bulbifera*, *D. pentaphylla*, *D. hispida* and *Pueraria tuberosa* etc. are eaten by them after processing.

Fibre plants

The species like *Bauhina racemosa*, *Butea monosperma*, *Marsdenia tenacissima*, *Bauhina vahlii*, *Sterculia urens* are used for making fiber.

Oil yielding plants

The species like *Madhuca longifolia*, *Ventillago denticulate*, *Shorea robusta* are exploited for extracting edible oil.

Plants used for timber and wood work

Plants like *Terminalia alata*, *Madhuca longifolia*, *Acacia catechu*, *Adina cordifolia*, *Gmelia arborea*, *Holarrena pubescens*, *Shorea robusta*, *Pterocarpus*



marsupium, *Miliusa tomentosa*, *Mitragyna parvifolia*, *Soymida febrifuga*, *Syzygium cuminii*, *Launea coromandelica*, *Bridelia squamosa*, *Careya arborea*, *Garuga pinnata*, *Tectona crandis*, *Lagersrtoemia parviflora*, *Ougenia oogeinensis* etc. are used for making timber and wood work.

Plant species used for medicines

Achyranthes aspera (Amaranthaceae) Ln. Chircheri Loc. Naugarh : Seed powder along with black pepper one tea spoonful with honey twice a day for one month given for the treatment of asthma. Root powder along with black pepper one tea spoonful thrice a day for fifteen days is given for the treatment of rheumatism and gout.

Aristolochia indica (Aristolochiaceae) Ln. Israul Loc. Naugarh : Leafjuice along with black pepper one teaspoonful twice a day is given for the treatment of malarial fever.

Boerhavia diffusa (Nyctaginaceae) Ln. Bishkhapara Loc. Naugarh : Root extract along with black pepper 200 ml twice a day for four to seven days is given for the treatment of spermatorrhoea.

Carissa opaca (Apocynaceae) Ln. Karwan Loc. Naugarh : Root paste is given for the treatment of stomach pain.

Cryptolepis buchananii (Asclepiadaceae) Ln. Dudhiya Loc. Naugarh : Extract of stem 200ml once a day empty stomach is given orally for the treatment of paralysis for long time.

Curcuma longa (Zingibraceae) Ln. Kachchi Haldi Loc. Naugarh : Unprocessed rhizome juice 50 ml is given after mensuration once a day for one month for checking conception.

Datura innoxia (Solanaceae) Ln. Datura Loc. Naugarh : Seed paste along with koina oil (*Madhuca longifolia*) is boiled and applied three times a day for seven days for the treatment of arthritis.

Dioscorea bulbifera (Dioscoreaceae) Ln. Genthil Loc. Naugarh : Paste of the corm along with warm

mustard oil is applied for the treatment of rheumatism and gout.

Dioscorea hispida (Dioscoreaceae) Ln. Bank Loc. Naugarh : Paste of the corm along with warm mustard oil is applied for the treatment of rheumatism and gout.

Ficus religiosa (Moraceae) Ln. Pepal Loc. Naugarh : Fruit along with milk is boiled and concentrated called 'Kheer' is given one teaspoon thrice a day for one month to sterile women for bearing child.

Hemidesmus indicus (Asclepiadaceae) Ln. Kapoori Loc. Naugarh : Aqueous extract of the root along with root of *Grewia hirsuta*, black pepper, and sugar candy 200ml thrice a day is given for fifteen days for the treatment of spermatorrhoea.

Indigofera tinctoria (Fabaceae) Ln. Ban Nilva Loc. Naugarh : Leaf paste of the plant is applied three times a day on the warts and exposed to the sunlight for the treatment of the warts.

Mimosa pudica (Mimosaceae) Ln. Lajani Loc. Naugarh : Leaf juice along with two black pepper 50ml twice a day is given to woman for the treatment of fever accompanied with child birth.

Phyllanthus fraternus (Euphorbiaceae) Ln. Bhui amla Loc. Naugarh : Aqueous extract of the plant along with rhizome of *Zingiber officinale* 50ml twice a day for fifteen days is given for the treatment of leprosy.

Pygmeopremna herbacea (Verbenaceae) Ln. Gathia vat Loc. Naugarh : Rootpaste is applied on boils and blisters.

Solanum surattense (Solanaceae) Ln. Bhand kataiya Loc. Naugarh : Decoction of root along with *Tinospora cordifolia*, one teaspoonful thrice a day is given for the treatment of fever.

Syzygium heyneanum (Myrtaceae) Ln. Jamati Loc. Naugarh : The paste of the stem bark along with lime and buttermilk is given two times a day for two days to cure dysentery.



Terminalia arjuna (Combrretaceae) Ln. Kauha / Arjun Loc. Naugarh : Decoction of the bark along with cow's milk one teaspoonful twice a day for one month is given for the treatment of Asthma.

Urginia indica (Liliacea) Ln. Ban piyaj Loc. Naugarh : Corm paste is put into the cotton and inserted in the vagina for abortion.

Vetiveria zizanioides (Poaceae) Ln. Khas Loc. Naugarh : Aqueous extract of the root thrice a day for three days removes constipation.

Xeromphis spinosa (Rubiaceae) Ln. Mainphal Loc. Naugarh : Paste of the fruits along with the salt is applied on boils.

Conclusions

The plant resources of Chandauli district is quite rich in raw materials needed for cottage industries in making fibers, brooms, baskets, musical instruments, timber and house building materials, collection of herbal drugs, extraction of edible and non edible oils

etc. Further information on ethnomedicinal plants may serve useful data to the chemists, pharmacologists and clinician of herbal medicines for isolation of bioactive molecules, validation and formulation of herbal medicines for their safe effective and sustainable utilization in human healthcare and human welfare. This will also bring some light on some new source of drugs of herbal origin. The systemic collection, storage and processing of crude herbal drugs for pharmaceutical industries will provide employment to the tribal and rural population of the district for their economic development and upliftment.

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