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E: ISSN NO.: 2455-0817 *Remarking An Analisation*

Selected Climbing Plants with Special Reference to Their Medicinal Importance from Damoh District and Its Adjoining Areas

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Abstract

From biodiversity point of view the vegetation survey is very much important for the research of database from this region which ultimately can be utilized for medicinal experts, plants explorers, researches etc. for their further studies. Flowering and Fruiting is one of the important phenomena in the life of plants because it is responsible for change in the pattern of plants growth and development along with the effects of the environmental factors over it. Present study is based on the selected angiosperm climbing plants from Damoh District and its adjoined areas that reflects the medicinal importance of 50 species, 22 families and 41 genera.The highest number of 13 species recorded in the family Fabaceae. Out of recorded species few of them are considered as potential weeds, viz. Lantana camara and Mimosa pudica. One rare climber Bauhinia vahlii has been recorded from this area. Out of 50 species, 25 species are Twiners, 13 species are Tendril climbers, 04 species are Scramblers, 04 species are Lianas, 02 species are Hook climbers, 01 species is Ramblers and 01 species is Root climbers. There are 43 species in Magnoliopsida and 07 species in Liliopsida. From incentive literature surveys it was observed that most of the work was done from the vegetation point of view expects some noted work on climbers from many parts of India. Work on angiospermic climbing plants from Damoh district has not yet been published still now. The main objectives of the present study are database of traditional uses of some angiosperm climbers along with records of their medicinal importance.

Keywords: Diversity, Traditional, Climber Plants.

Introduction

Present study reveals that Damoh district and its adjoined areas, with special reference to their medicinal importance of Selected Climbing Plants. The specimens or data were collected from different parts of the Damoh district & adjoined areas in different season (Pre-Monsoon, Monsoon and Post-Monsoon) for the preparation of comprehensive data base of angiospermic climbers.

Review of Literature

From distribution point of view climbers are very common in tropical and subtropical countries in the world but better distributed in tropics than temperate regions (Richard, 1996). But the frequencies of climbing plants increasing due to climate change (Malhi and Wright, 2004). Many climber plants are found to be useful for treatment of various diseases. Curative climbers of Maruthamalai hills in the southern Western Ghats of Tamil Nadu, India have been reported by Sarvalingam et al. (2011). Indigenous uses of medicinal plants in North Garo Hills; Meghalaya, NE India was noticed recently by Sharma et al. (2014). Climbers and creepers are important components of plant diversity and are also valuable for their medicinal uses, nutrient recycling, etc. (Schnitzer and Bongers, 2002). Important medicinal Climbers of Dhauligiri Bhubaneswar, Odisha India(Sanjeet kumar et al. 2019). Herbaceous Climber Medicinal Plants recorded from Kota, Bilaspur, Chhattisgarh in India. (Dixena and Patel, 2020). Biotechnological strategies for the conservation of Medicinal and Ornamental Climbers (Ali et al.; 2016).

On the basis of the modifications of plant organs, climbers are of different types as twiner, tendril climbers, hook climbers, lianas, root climbers, including ramblers and scramblers (Agarwal, 2013).

Generally climbers are considered as weak plants and they are usually well adopted to grow in forest in the shade of tall trees as they able to utilize the available light while the expenditure of material informing angiospermic climbers in general along with their medicinal approaches in particular.

Objective of the Study

Objective of the Study is being done to collect, conservation and research information about Medicinal climbers found in this area for future research.

Material and Method : Study Area and field survey

Damoh district has rich flora & fauna, which is a part of Bundelkhand Region of Madhya Pradesh. There are dense forests including Saal & Teak plants. It is situated between 23.84˚ north latitude and 79.45˚ east longitude. Its forest area is 4135sq KM.; especially Jabera, Singaurgarh, Tendukheda,

Rani Durgawati National Sanctuary and Nauradehi National Sanctuary (Taradehi – jhalon region). Climate and Geographical convolutions are applying this territory as biodiversity hub to produce and conserve the desired for many researches of flora and fauna. Climate is warm and temperate.

For documentation of the available medicinal Flora, ethno botanical surveys were conducted in 2017-2019. The specimens or data were collected from different parts of the Damoh district and its adjoined areas in different season (Pre-Monsoon, Monsoon and Post-Monsoon) for the preparation of comprehensive data base of angiospermic climbers. The collected specimens were accordingly identified with help of literature. Field survey and Herbarium methods were followed according to Jain and Rao (1977). Finally these specimens were confirmed & for updating species names, the website of the plant list (http://www.plantlist.org) was consulted. The list of accepted plants names were arranged alphabetically, along with their family, local name, type of climbers, mode of pollination, Uses of plant parts and Diseases in tabulated form table no. (1).

Table(1): List of climbing species along with their Botanical name, family, local name(s), types of climbers, use of plant parts and diseases.

S. No.	Name of the plant	Family	Common name	Type of climbers	Use of plant parts	Diseases
	Magnoliopsida					
1	*Abrus precatorius* L.	Fabaceae	Lal gunja	Twiner	Leaves, Seeds	Eczema, Steatites, Alopecia, Migraine, Lymphomas, Dysmenorrheal and Conjunctivitis
2	*Acacia sinuata* (Lour.) Merr.	Fabaceae	Ban ritha	Hook-climber	Pods	Hemorrhoids, skin disease, burning sensation eczema
3	*Ampelocissus latifolia* (Roxb.) Planch.	Vitaceae	Katti bel	Tendril climber	Bark, Stem, Seeds, Fruits	Fungal infection, Wound, Stomach pain and bone fracture
4	*Argyreia nervosa* (Burm.) Bojer	Convolvulaceae	vidhara	Twiner	Leaves	Mental problems
5	*Basella alba* L.	Basellaceae	Poi	Twiner	Leaves	Ulcer healing, anti inflammatory, gastro-protection and Wound
6	*Bauhinia vahlii* Wight & Arn.	Fabaceae	Maljan	Lianas	Leaves, Seeds,	Urinary tract infection, Diarrhea and Food poisoning.
7	*Benincasa hispida* (Thunb.) Cogn	Cucurbitaceae	Konhada/Petha	Tendril climber	Leaves, Seeds,	Urinary dysfunction, Anti-periodic, Lung disease , Anti-cancer
8	*Boerhavia diffusa* L.	Nyctaginaceae	Punarnava	Rambler	Fruits, Leaves, Stem	Kidney disorders, Asthma, Alcoholism, Skin disease, Insomnia and Eye disease
9	*Beutea superba* Roxb.	Fabaceae	Palash lata	Lianas	Whole plant	Erectile dysfunction, Diarrhea, painful difficult urination and fever
10	*Cajanus goensis* Dalzell.	Fabaceae	Ban Bichatee	Twiner	Leaves	Ulcers, Inflammation and Breast Pain
11	*Cajanus scarabaeoides* L.	Fabaceae	Ban-kurthi	Twiner	Seeds, leaves	Anemia, Smallpox, Inflammatory Gonorrhea, Cholera, Sores, Dysentery and Swelling
12	*Capparis zeylanica L.*	Capparaceae	Ban kera	Scrambler	Leaves	Snake-bite, Boils, Piles, Cholera, Pneumonic, Counter irritant and Febrifuge

13	*Cayratia pedata* (Lam.)	Vitaceae	Kitmari/Birdfoot	Tendril climber	Leaves	Ulcers, Diarrhea, Inflammations
14	*Cayratia trifolia* (L.) Domin	Vitaceae	Amalbel	Tendril climber	Root, Bark, Leaves	Diabetic, Inflammatory, Cancer & Cardiac effects.
15	*Cissus adnata* Roxb.	Vitaceae	Paniyalata	Lianas	Leaves, roots	Bone fracture, Antiseptics, cuts, Wound & Blood purifier,
16	*Cissus quadrangularis* L.	Fabaceae	Hadjod	Tendril climber	All parts	Diabetes, Heart disease, Obesity.
17	*Clitoria ternatea* L.	Fabaceae	Aparajita	Twiner	Leaves	Stress, Infertility, Gonorrhea
18	*Coccinea grandis* (L.) Voigt	Cucurbitaceae	Kundaru	Tendril climber	Whole Plant	Antipyretic, Diabetic, Inflammatory, Malaria, Ulcer & Fever
19	*Combretum album* Pers.	Combretaceae	Madumalti	Hook-climber	Bark, Leaves	Diarrhea, Digestive disorders, Inflammation.
20	*Cucumis savita* L.	Cucurbitaceae	Khira	Tendril climber	Fruits	Blemished skin, Burns, Sores, heat rash
21	*Dalbergia volubilis* Roxb.	Leguminosaceae	Bankhara	Lianas	Leaves, Roots	Sore throat, Gonorrhea, Gastec
22	*Gymnema sylvestre* (Retz.) R. Br. Ex Schult.	Asclepiadaceae	Gurmar	Twiner	Leaves, Stem	Diabetic, Malaria, Metabolic syndromes
23	*Holmskioldia sanguinea* Retz.	Verbenaceae	Kapni	Scrambler	Leaves, Stem, Bark	Blood purify, Headache, Dysentery, Arthritis and Rheumatism,
24	*Ipomoea aquatica* Forssk.	Convolvulaceae	Kalmi saag	Twiner	Leaves, Root	Fever, Diabetic, Liver complaint, Jaundice, Nervous disorders
25	*Ipomoea nil* (L.) Roth.	Convolvulaceae	Kaladana	Twiner	Seeds, Leaves	Tumor, fungal infections.
26	*Ipomoea purpurea* (L.) Roth.	Convolvulaceae	Morning glory	Twiner	Seeds	Mental disorders
27	*Legenaria siceraria* (Molina)	Cucurbitaceae	Lauki	Tendril climber	Fruits	Cardiac failure, Ulcer, Piles, Colitis, Insanity, Hypertension, Jaundice, Diabetic & Skin disease
28	*Lantana camara L.*	Verbenaceae	Baramasi	Scrambler	Whole plant	Malaria, Asthma, Blood pressure, Bilious fever, Chicken Pox,
29	*Merremia tridentata* (L.) Hallier	Convolvulaceae	prasarani	Twiner	Stem, leaves	Astringent, Swelling, Urinary infection.
30	*Mimosa pudica* (L.)	Fabaceae	Lajwanti / Chuimui	Scrambler	Whole plant	Mental health, Fever randomly, Nerve sciatic, Heal and liver
31	*Momordica charantia* (L.)	Cucurbitaceae	Karela	Tendril climber	Fruits, Leaves	Cancer, HIV, Diabetic
32	*Mucuna pruriens* (L.) DC.	Fabaceae	Alkushi/Kenwach	Twiner	Seeds, Leaves	Man infertility, Nervous disorders, Aphrodisiac
33	*Mukia maderaspatana* (L.) M. Roemer	Cucurbitaceae	Agnakhi/bilari	Tendril climber	Leaves, Fruits	Cough, Vertigo, Constipation, Burning sensation and dental pain
34	*Operculina turpenthum* (L.) Silwa Manso	Convolvulaceae	Nisoth	Twiner	Leaves	Fever, Constipation, Ulcers, Chronic gout, Skin disorders
35	*Paederia foetida* L.	Rubiaceae	Gandhali	Twiner	Leaves, Stem	Dysentery, Infertility and Paralysis
36	*Passiflora edulis* Sims	Passiflorace ae	Passion phal	Twiner	Leaves	Sleeping problem, Itching and Cough
37	*Piper betel* L.	Piperaceae	Pan	Root-Climber	Leaves	Anticancer, Anti-allergic, Diabetic and gastro protective
38	*Rivea*	Convolvulac	Ban poi/phang	Twiner	Whole plant	Skin disease, Malaria,

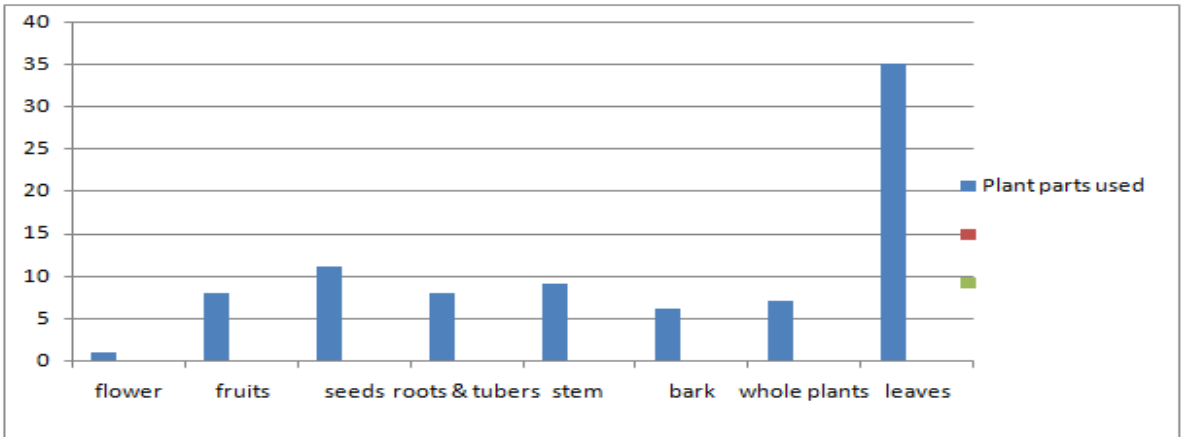
	hypocrateriformis (Desr.) Choisy	eae				Headache Cough
39	*Teramnus labialis (L. f.)*	Fabaceae	Mashavan	Twiner	Leaves, Seeds	Nerve disorders, Paralysis and Tuberculosis
40	*Tinospora cordifolia* (Willd.) Thoms.	Menisperma ceae	Giloy	Twiner	Whole plant	Fevers, Diabetes, Syphilis, Hepatitis and Ulcer disease
41	*Trichosanthes tricuspidata* Lour.	Cucurbitace ae	Lal indrayan	Tendril climber	Fruits, Leaves	Fever, Migraine, Diabetic, Lung disease and Headache
42	*Vigna trilobata (L.)* Verdc.	Fabaceae	Mung	Twiner	Seeds, Leaves	Jaundice, Diarrhea and Eyes pain
43	*V. unguiculata (L.)* Walp.	Fabaceae	Ban-mung	Twiner	Seeds, Roots	Jaundice, Menstrual disorders, Epilepsy, Constipation
	Liliopsida					
44	*Asparagus adscendens* Roxb.	Asparagace ae	Maha satavari	Twiner	Stem	Upset stomach, Ulcer, Cancer, Diarrhea, Bronchitis, Diabetic
45	*A. racemosus* Willd.	Asparagace ae	Satamuli	Twiner	Roots	Ulcer, Tuberculosis, Pain, Anxiety
46	*Dioscorea alata L.*	Dioscoreace ae	Bilari Kand	Twiner	Leaves	Fever, Leprosy, inflammation, Gonorrhea
47	*D. Esculenta* (Lour.)	Dioscoreace ae	Suthani alu	Twiner	Tuber, Stem, Leaves, Roots	Dysentery, Liver damage, Coolants
48	*D. Bulbifera L.*	Dioscoreace ae	Ban alu	Twiner	Tubers, Stem, Leaves	Leprosy, Cough, Cancers, Piles, Asthma and Syphilis
49	*Gloriosa superba L.*	Liliaceae	Kalihari	Tendril climber	Leaves, Flowers, Roots	Snake bite, Cholera, Kidney problems, Leprosy, Cancer, Sexually transmitted disease, Ulcer
50	*Smilax zeylanica L.*	Smilacaceae	Kumarika	Tendril climber	Fruits, Leaves	Syphilis, Skin disease, Blood purifier

Table (2): Types of climbers and their numbers

S. No.	Types of climbers	Total number
1	Twiners	25
2	Tendril climbers	13
3	Lianas	04
4	Hook-climbers	02
5	Ramblers	01
6	Scramblers	04
7	Root-climbers	01
Total		**50**

Table (3): The identified and collected plant samples arranged to their parts used in medicine.

S. No.	name of Plant parts	No. of Plants
1	Flowers	1
2	Fruits	8
3	Seeds	11
4	Roots and Tubers	8
5	Stem	9
6	Bark	6
7	Whole plant	7
8	Leaves	35



Figer (1): Plant part used follows from table (3)

Result and Discussion

Recent study of climbing plants in the flora of Damoh district and its adjoined areas reflects the medicinal approaches of 50 species and 22 families from table no. (1).

There were 50 species of climbers were collected and introduced in the Flora of Madhya Pradesh and are listed in Table: (1) with the details on their botanical name, family, common name, types of climbers, use of plant parts and the medicinal uses of each plant, followed by number and type of climbers followed by given in Table: (2). A maximum of 12 plant species of family Fabaceae were introduced in the Damoh district & its adjoined areas, followed by 7 species of the family Cucurbitaceae and Convolvulaceae. Rest of the plant species belonging to 17 different families are showed in table no. (1).

With the keen review it revealed that out of 50 species, 25 species are Twiners, 13 species are Tendril climbers, 04 species are Scramblers, 04 species are Lianas, 02 species are Hook climbers, 01 species is Ramblers and 01 species is Root climbers (Table-2).

Regarding the flowering and fruiting periods, 3 seasons have been selected i.e. Pre-monsoon (February - May), Monsoon (June- September) and Post-monsoon (October - January).

Observations from table no. (3) clearly reveal that leaves of 35 species, seeds of 11 species, stem of 9 species, fruits and tubers of species and whole plant of 7 species are used for medicinal purpose or activities.

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