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Herbaceous climber medicinal plants recorded from Kota, Bilaspur, Chhattisgarh in India

Durgesh Dixena and DK Patel

Abstract
Plants are remarkable source of various valuable products like food, fodder, fuel, medicine etc which are utilized by the human beings for a variety of purpose. Plants are also showing variation in their habitat as well as their habit. As per environmental conditions, the plants are showing their presence in different ecological areas with enough variation in their habit and habitats. Some plant species with climbing tendency are known as climber plants. A climber plant includes tendrils and creepers having adventitious roots on nodular part of the stem helpful for their climbing and creeping on any substratum. In current study there are thirty species of climber medicinal plants were noticed in the study area. These were documented and further information was gained with the help of tribal peoples, baigas etc.

Keywords: Climber, Medicinal plants, Tribes

Introduction
Plant diversity of all type of habitat is an important species association of living beings for durable ecosystem and for performing better role in formation of biodiversity in specified areas. Variations in ecological factors leading for alteration of plant community. Plants are affecting themselves from starting to ending of their life by their surroundings and interacting within the same and different plant species. Several plants parts are responsible for their multiplication in their natural habitat. Numerous seeds produced by the plants for the same purpose. Whereas some of the plant species are capable to produce their new individuals by using seeds and by stem cutting also. A large segment among the plants are not producing seeds but are marked by their propagation using their stem cutting. Plants modified parts like bulb, tuber, rhizome, corm etc are also registered fot development of new plants like their parents.

Climbers are weak stemmed plants showing variations from trees and shrubs which are self supported plants. These are different in their mechanical characters as well as adopted to climb on any support like large trees. Suitable modifications for mechanical support viz., hooks, tendrils and roots in modified forms are found in these kinds of plants.

India is a rich center of biodiversity. Climbers and creepers are important components of plant diversity and are also valuable for their medicinal uses. Many of the natural as well as manmade reasons are greatly responsible for loss of the species such as destruction of natural habitat, forest fire, environmental pollution etc. in this context conservation of medicinal plants are very much needed following all possible manners.

A study of useful climbers of fatehpur was done by Agarwal 2013. Ethnobotanical study of useful climbers/twiners of District Kotli, Azad Jammu & Kashmir was done by Ajaib *et al.* 2012. Bandopadhya and Mukherjee 2010 studied on diversity of climbing plants in Koch Bihar District of West Bengal. Ghollasimood *et al.* 2012 focused on abundance and distribution of climbers in coastal hill forest in Perk, Malasiya. Climbers of Taluka Modasa, District Sabarkatha (Gujarat) India noticed by Jangid and Sharma 2011. Kumari *et al.* 2011 focused on diversity and status of ethnomedicinal plants of Almoda District in Uttrakhand, India. Muthumperumal and Parthasarathy 2009 studied on angiospermic climbing plants in tropical forests of southern Eastern Ghats Tamil Nadu, India. Patel *et al.* 2013 recorded climbers in urban set up Ahmedabad and Gandhinagar. Rajkumar and Rajanna 2011 focused on ex-situ conservation of climbing plants at University of Agricultural Sciences, Bangalore, Karnataka. Curative climbers of Maruthamalai hills in the southern Western Ghats of Tamil Nadu, India recorded by Sarvalingam *et al.* 2011. Singh *et al.* 2013 studied on *Gloriosa superba* Linn: An important endangered medicinal plant and their conservation strategies.

Suthari *et al.* 2014 studied on the climbing plants of northern Telangana in India and their ethnomedicinal and economic uses.

Materials and Methods

Field visits were done (in adopted village by the Guru Ghasidas Vishwavidyalaya (A Central University) Bilaspur – Chhattisgarh - India) to achieve the present goal regarding ethnobotanical study on Medicinal and Aromatic Plants. Door to door survey was made and further discussion made with Local traditional healers, Baigas for gaining the information on Medicinal plants.

Results

There were thirty species of Medicinal plants with climber habit were recorded from the study area. The findings of the current study are shown in Table – 1.

Table 1: Medicinal and aromatic plants recorded from kota, bilaspur, chhattisgarh in india

S. No.	Medicinal Plants Family	No. of Medicinal Plants	Botanical Names	Common Name	Local/ Chhattisgarhi Name	Habit	Propagation Method/s
1	Apiaceae	1	*Centella asiatica* (L.) Urban.	Mandukparni	Mandukparni	Herb/ Creeper	Stem cutting
2	Apocynaceae	2	*Pergularia daemia* (Forsk) Chiov.	Trellis vine	Dudhibel	Herb/ Climber	Seed
		3	*Cryptolepis dubia* (Burm.f.) M. R. Almeida	Kala bel	Chherikan	Shrub/ Climber	Seed/ Stem cutting
3	Araceae	4	*Epipremnum aureum* (L.) Engl.	Goldon pothos	Money plant	Herb/ Climber	Stem cutting
4	Asclepiadaceae	5	*Gymnema sylvestre* (Retz) R. Br.	Gudmar	Gudmar	Herb/ Climber	Stem cutting
		6	*Hemidesmus indicus* (Linn.) R. Br.	Anantmool	Anantmool, Anant bel	Herb/ Climber	Stem cutting
5	Basellaceae	7	*Basella alba* Linn.	Malabar Spinach	Poi	Herb/ Climber	Seed/ Stem cutting
6	Convolvulaceae	8	*Ipomoea barbatisepala* A. Gray	Canyon morning-glory	Kanda bhaji	Herb/ Creeper	Stem cutting
		9	*Operculina turpethum* (L.) Silva Manso	Nisoth	Nisoth	Herb/ Climber	Seed
		10	*Argyreia nervosa* (Burm.f.) Bojer	Vidhara, Wooly creeper	Vidhara	Herb/ Climber	Seed/ Stem cutting
		11	*Ipomoea quamoclit* L.	Star glory	Rai ghai	Herb/ Climber	Seed
7	Cucurbitaceae	12	*Coccinia grandis* (L.) Voigt.	Kunduru	Kundru	Herb/ Climber	Seed
		13	*Diplocyclos palmatus* (L.) C. Jeffrey.	Lollypop climber	Shivlingi	Herb/ Climber	Seed
		14	*Momordica chrantia* Descourt.	Bitter guard	Karela	Herb/ Climber	Seed
8	Dioscoreaceae	15	*Dioscorea alata* Linn.	Air potato	Dang kanda	Herb/ Climber	Tuber
		16	*Dioscorea dumetorum* (Kunth) Pax	Bitter Yam, Three leaved Yam	Tinpania kanda, Karu kanda	Herb/ Climber	Tuber
		17	*Dioscorea pentaphylla* L.	Five leaf Yam	Dang kanda	Herb/Climber	Tuber
9	Fabaceae	18	*Abrus precatorius* Linn.	Ratti, Crab's eye	Gomchi, Gunj	Herb/Climber	Seed
		19	*Clitoria ternatea* Linn.	Aprajita	Sotai phool	Herb/Climber	Seed
		20	*Mucuna pruiens* (L.) DC.	Kewach, Kronch	Kewach	Herb/ Climber	Seed
10	Liliaceae	21	*Asparagus racemosus* Willd.	Satavar	Sataver	Herb/Climber	Seed/ Tuber
		22	*Gloriosa superva* Linn.	Kalihari	Jhagdalu kanda	Herb/Climber	Tuber
11	Menispermaceae	23	*Tinospora cordifolia* (Willd.) Miers.	Giloye, Guruchi	Giloye	Herb/Climber	Stem cutting
12	Oleaceae	24	*Jasminum auriculatum*	Juhi	Juhi	Herb/Climber	Stem cutting
		25	*Jasminum gradiflorum* Linn.	Chameli	Chameli	Herb/Climber	Stem cutting,
13	Passifloraceae	26	*Passiflora edulis* Sims.	Passion flower	Kaurav pandav	Herb/Climber	Stem cutting
14	Piperaceae	27	*Piper longam* Linn.	Long peeper	Pipli	Herb/Creeper	Stem cutting
		28	*Piper betel* Linn.	Pan	Pan	Herb/Climber	Stem cutting
15	Rubiaceae	29	*Paederia foetida* Linn.	Gandh prasarni	Gandh prasarni	Herb/climber	Stem cutting
16	Vitaceae	30	*Cissus quadrangularis* Linn.	Hathzode	Hathzode	Herb/Climber	Stem cutting

Table 2: Family wise distribution of medicinal plants

S. No.	Family	Belonging Number of Medicinal Plants
1.	Apiaceae	1
2.	Apocynaceae	2
3.	Araceae	1
4.	Asclepiadaceae	2
5.	Basellaceae	1
6.	Convolvulaceae	4
7.	Cucurbitaceae	3
8.	Dioscoreaceae	3
9.	Fabaceae	3
10.	Liliaceae	2
11.	Menispermaceae	1
12.	Oleaceae	2
13.	Passifloraceae	1
14.	Piperaceae	2
15.	Rubiaceae	1
16.	Vitaceae	1
Total		30

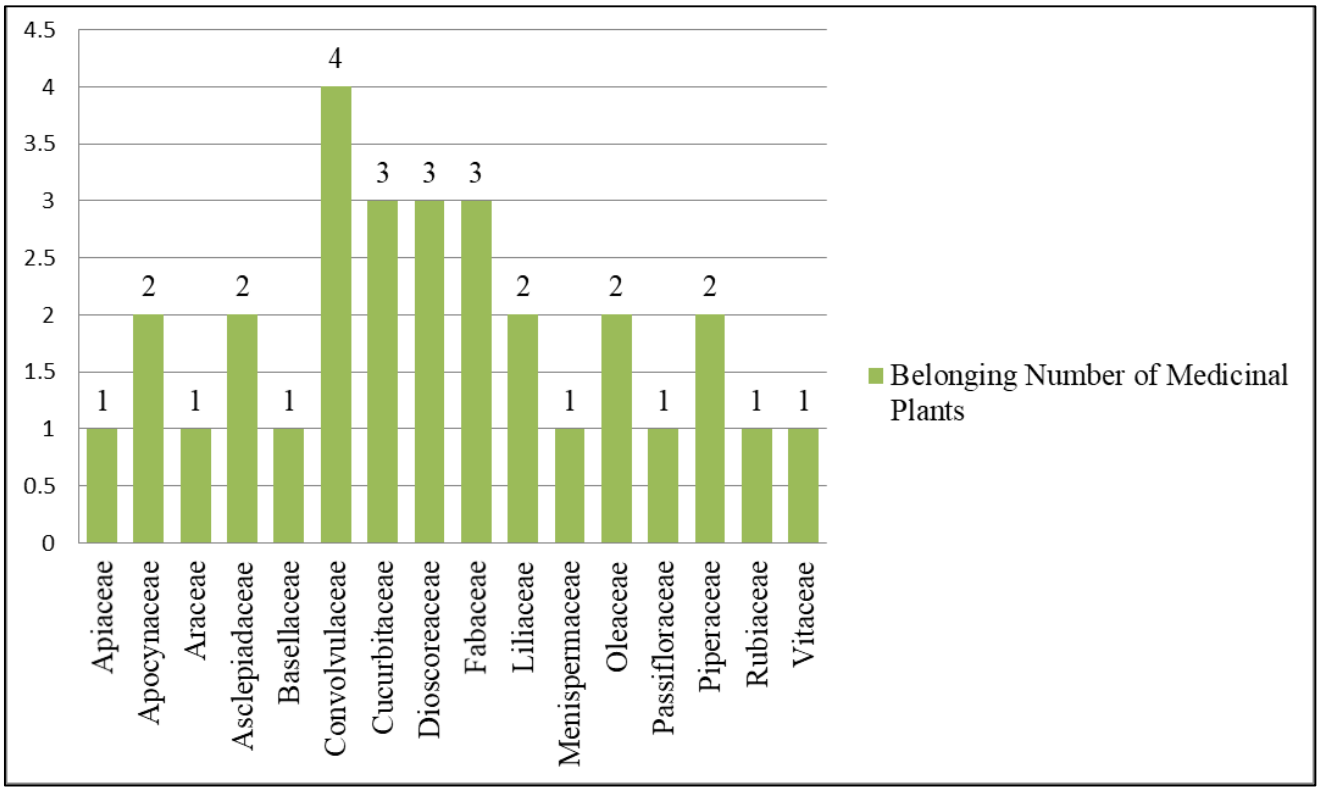

Fig 1: Families of Medicinal Plants

Table 3: Propagation methods of different medicinal plants

S. No.	Propagation Method/s	Number of Medicinal Plants
1.	Seed	9
2.	Seed/Stem cutting	3
3.	Seed/Tuber	1
4.	Stem cutting	13
5.	Tuber	4
Total		30

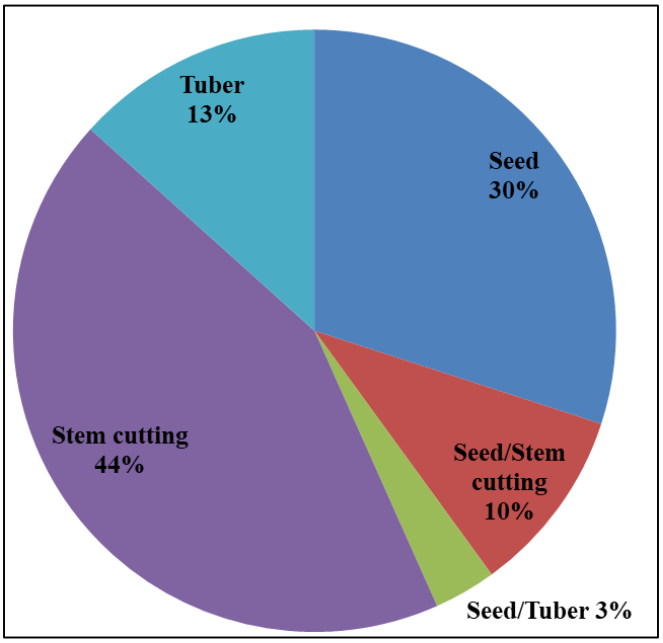

Fig 2: Propagation Method/s of Medicinal Plants

Discussion

Medicinal plants of climber habit were recorded from the study area and are listed in Table 1 with the details on their common name, botanical name, family, habit and the propagation mode of the plants individually.

Family-wise distribution of climber medicinal plants is given in Table 2. A maximum of four plant species of family Convolvulaceae were observed in the present study. Rest of the plant species belonging to 15 different families were intermediately showing the number of the plant species.

Modes of regeneration of the recorded medicinal plants are listed in table -3. A total of thirteen different climber medicinal plants species were registered to multiply by their stem cuttings. Secondly, the seeds were found to be suitable for multiplication which accounted for nine medicinal plant species and rest of the plants studied were propagating by using their Seed/Stem cutting, Seed/Tuber and tuber.

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