

Some Antifertility Ethnomedicines Used by Tribals of Satpuda Forest Region of East Khandesh Maharashtra, India

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Abstract: Study deals with 10 medicinal plant species used traditionally by Pawara and Barela tribes of Jalgaon district of Maharashtra state in India for the treatment of various ailments. Some medicinal plants with unexplored ethnomedicinal uses of plants have been reported. It covers the area falls in Jalgaon district situated between 20°-17' and 21°-26' north latitude and 74°-47' and 76°-28' east longitude. Topographically it can be distinguished as 1) The rich Tapi valley in the centre, 2) The high mountainous ranges on the north & 3) Barren ridges of Satmala and Ajanta ranges on the south. The study is confined to first two regions only and more specific to Satpuda mountainous ranges from 2006-2009. Present study reveals about total no. of medicinal plant families '82' composed of pteridophytes (3), Dicots (66), and monocots (13). The genera are 234, spread over pteridophytes (3), dicots (209) and monocots (22). Similarly Species are 270 out of which pteridophytes are (3), dicots (244) and monocots (23). The most Prominent & common method of administration of medicinal plants is oral 252(56.00%) followed by external 109(24.22%), internal applications are 49 (10.08%), poultice 31 (6.88%), smoking 3 (0.66%), inhalation 4 (0.88%) and steam bath 2 (0.44%). The present paper highlights 10 antifertility folk ethnotherapies belonging to 09 genera, 10 species and 7 families with reference Vernacular name, Botanical name, Family, their Distribution & Threat status. Mode of administration of Ethnomedicine with critical note.

Keywords: East Khandesh, Satpuda, Antifertility, Mountainous Ranges.

1. Introduction

Most of the countries worldwide has compiled the information on traditional medicines of centuries old. In India ancient drugs have been mentioned in Rigveda which is about 4000-5000 B.C. old. Atharva veda also described about 2000 medicinal plants. Well documented account on properties of medicinal plants are found in Sushruta, Samhita of 1000 BC. Indian Materia-medica accounts about 3500 medicinal plants. Satpuda is rich in biodiversity both in flora and fauna. Tribals (several tribes like Pawara, Barela & Bhills.) are the inhabitants of the area of Satpuda forest. These people are very poor and cannot afford the expenses for modern medical facilities, hence they are depend on local medicinemen who help them to cure their ailments at lowest cost. East Khandesh Satpuda lies on northern part of Jalgaon district. It is rich in vegetation composed of humid and many semi evergreen species apart from dry deciduous ones. The climate is generally dry except in monsoon. Rain fall is 639.7 to 696.0 mm. The forest types of Satpuda ranges classified by Champion and Seth in 1966 are Dry Teak forest, Southern Dry mixed deciduous forest, Anjan forest & Scrub forest. Studies on medicinal plants of the area are lacking except few sporadic references like Karnik, 1966[10], P.B.Bhamare, 1989[5], I.B.Salunkhe, 1995[11], S.S. Yadav & Patil, 2001, [13], R.M.Bagul and S.S. Yadav, 2003 a & b [1], [2]. R.M.Bagul, 2010, 2011a & b. [3], [4]. G.P.Roy, B.K.Shukla & Bhaskar Dutta, described importance of economically important plants in Flora of Madhya Pradesh, 1992.[7]

2. Materials and Methods

Present study is based on the field work and literature survey from June 2006 to July 2009 through systematic planning and meticulously exploring the areas for gathering various

information related to medicinal uses of plants. During outgoing all the information collected were noted in field book. Pertinent attention was paid to habit, habitat, distribution pattern, diseases for which plants used, doses and mode of administration. As far as possible correct information were confirmed by repeated queries at different places. Specimens collected during the field work are processed for herbarium as per the customary methods suggested by Jain & Rao, 1977[9]. Specimens thoroughly studied for correct identification with the help of standard floras viz. Flora of Presidency of Bombay, Cook, 1957 Repr.ed.) [6], Flora of British India, Hooker, 1872-1897 [8], B.S.I. Flora of Maharashtra State, Vol. I, II & III. Edited by Sharma et al, 1996; Singh & Kartikeyan, 2000; Singh & Laksh 2001 [12]

The identification was confirmed by authentically identified species at B.S.I. Pune. Herbarium sheets were neatly labeled and deposited in the herbarium of department of botany, A.S.C. College Chopda.

Simple Questionnaire used for data collection is like Occurrence of Plant, Respondents age, sex & education, Community Status (medicine man, nurse, doctor), Forest type where plant was found & its availability in nature (Common, Frequent, Rare, Occasional etc), Plant part used to treat, Mode of administration (oral, external) & dosages given with, & How many times & days the drugs prepared roughly given (glassful, teaspoonful, paste etc.)

3. Results

Following are some important Antifertility ethnomedicinal plants used are given with reference to Vernacular name, Botanical name, Family, their description, Distribution,

Threat status, Mode of administration of ethnomedicine and Critical note.

(1) **Hinganbet**

Balanites aegyptiaca (L.) Del.

Balanitaceae: Armed deciduous, bushy shrubs or small trees. Leaves petiolate, leaflets elliptic-oblong, pubescent. Flowers pale-greenish-yellow, in axillary, fascicled cymes. Drupes yellowish-green when ripe.

Distribution: Through out in scrub forest,

Threat Status: Critically Endangered

Medicinal Uses: 10-20gm Fruit epicarp paste is made in to the water and use externally after menstruation to Prevent conception before sex

Critical Note : Leaves and bark used as fish position (Salunkhe,1995). Steroid hormones prepared from the drug diosgenin extracted from fruits and roots for the use of herbal contraceptives for women.

Exsiccata : RMB 374, Dhavali.

(2) **Ruchkin**

Calotropis gigantea (L.) R.Br.

Asclepiadaceae

Tall shrubs, latex milky abundant, bark ash coloured, shallowly longitudinally fissured. Leaves sessile, thick glaucous-green. Flowers in terminal and lateral umbellate cymes. Follicles paired, cottony pubescent. Seeds flat.

Distribution: Throughout common,

Threat Status: Not Endangered

Medicinal Uses: 10-20 ml of Latex is obtained from the whole plant collected in the morning with cotton & applied externally before and after sex to prevent conception.

Critical Note: Plant used as antidote on Snake and scorpion Sting (G.P.Roy, 1992)

Exsiccata : RMB 322, Sakali

(3) **Safeda**

Calotropis procera (Ait) R.Br.

Asclepiadaceae

Tall shrubs. Leaves, sessile or sub sessile, thick glaucous-green. Flower's in umbellate cymes, white. Follicles paired glaucous green. Seeds flat.

Distribution : Not common in east Satpuda,

Threat Status : Not Endangered

Medicinal Uses : 10-20 ml of Latex obtained from the stem and whole plant applied externally with cotton before cotton before and sex to prevent conception.

Critical Note : Latex and flower buds used in stomachache and body pain (Tewary et al.1982).

Exsiccata : RMB 403, Jamnya Gadrya.

(4) **Khota Lajalu**

Biophytum sensitivum(L).DC.Prodr.

Mimosaceae

Herbs, Annual, Stem unbranched, up to 20 cm tall, Leaves 4-6 cm long, leaflets 5-14 pairs oblong, oblic, punctuate on upper surface. Flowers in terminal umbels, peduncles up to 10cm long, sepals sometime glandular-pubescent, petals oblong obovate yellow. Capsules 0.2-0.3 cm long , ellipsoidal, covered with persistent calyx. Seeds ovoid brown.

Distribution : Common throughout as a weed near wet places,.

Threat Status : Not endangered

Medicinal Uses : Seeds powder up to 10 gms mix with a glassful of warm water and used orally daily morning and evening for 15- 20 days to prevent conception.

Exsiccata : RMB 203, Khadgaon

(5) **Lajalu**

Mimosa pudica L. Sp Pl

Mimosaceae

Herbs, woody diffuse, prickly, leaflets sessile 12-20 pairs coriaceous, sensitive, acute. Flowers pink, in globose head, pods 1.2-2.0cm, flat sutures clothed with yellowish bristles. Seeds 3-5.

Distribution : Not Common

Threat Status : Not threatened

Medicinal Uses : 5-10 gm seeds paste made with cold warer applied externally before sex. Sex to prevent conception.

Exsiccata : RMB 405, Gorgavale.

(6) **Aghada**

Achyranthus aspera L. Sp.Pl

Amaranthaceae

Herbs, woody,30-80 cm high, erect,. Leaves elliptic oblong, 2.5-9.0 X 1.5-6.0 cm , ovate,or obovate,apex acuminate. Inflorescence of elongate terminal spikes. Flowre greenish white. Urtilcales oblong-cylindric, truncate, enclosed in hardened perianth.

Distribution : Common in open areas, forest edge.

Threat status : Not threatened

Medicinal Uses : Decoction of 100 g of dry roots made with water & given orally early in the morning after menstrual period for antifertility up to 15 days.

Exsiccata : RMB 133, Chunchale.

(7) **Adrak**

Zingiber officinale **Rosc.**

Zingiberaceae

Herbs, Stem leafy, up to 2 meter high perennial. Leaves 10-25X1.5-2.0 cm .lanceolate to linear to lenceolate, sessile, narrowed to the base. Inflorescence 4-5X2 cm, Ovoid.

Distribution : Grown frequently in Yaval field area.

Threat status : Rare

Medicinal Uses : Glassful of (100 ml) of juice obtain from rhizome by crushing in water taken orally for 30 days creates temporary impotency.

Exsiccata : RMB 303, Charthana.

(8) **Kala dhotra/Dhanturo**

Datura innoxia Mill.

Solanaceae

Tall, glabrous annuals. Leaves broadly ovate-triangular, entire or shallowly lobate. Flowers tinged purple or wholly purple, axillary, solitary. Capsules drooping, with stout tubercles. Seeds orbicular, smooth.

Distribution : Not common, found in dense forests of Manudevi, RMB

Threat Status : Not threatned

Medicinal Uses : Seed paste made with cold water applied externally before sex to prevent conception.

Critical Note : Asthma : Ash prepared from roots is smoked daily twice and at the time of asthmatic attack.

Exsiccata : RMB 202, Manudevi.

(9) Gunja

Abrus precatorius L.

Fabaceae

Perennial, deciduous twiners, woody at base. Leaves elliptic-oblong, glabrous above. Flowers pinkish-purple in compact racemes. Seeds, subglobose; oblong, ovoid, shining, black red.

Distribution : On hedges and low shrubs in forest,

Threat Status : Vulnerable

Medicinal Uses : Seed paste made with cold water & applied externally for abortion (G.P.Roy ,1992).

Critical Note :Body Swelling: Leaf paste with Mustard oil is applied externally daily once in sunlight for 30 days.

Leucoderma and eye diseases : Paste of the seeds applied on white spots and filtered juice 1-2 drops put into eyes in case of eye diseases.

Digestion : Leaves are digestive.

Exsiccata : RMB 161, Malapur.

(10) Palas

Butea monosperma (Lam.) Taub.

Fabaceae

Deciduous tree with rough, ash-coloured bark. Leaflets glabrous, obovate, elliptic oblong. Racemes compact. Pods sandy brown rounded on edges.

Distribution : Throughout common in deciduous forest of Satpuda.

Threat Status : Not Endangered

Medicinal Uses : Seed paste made with cold water applied externally before sex after menstruation to prevent conception.

Eye diseases : Leaf juice is useful in eye diseases.

Liver disorder: Bark is used in liver diseases. Gumliver tonic.

Fractures: Paste of the bark is applied on fractured parts.

Piles: Seeds are useful in piles.

Critical Note: Kurup (1977) and Khan et al. (1988) confirmed the seeds' properties as antihelmintic and contraceptive properties.[14].

Exsiccata : RMB 439, Edlabad

4. Discussion and Conclusion

From the study it is found that 10 antifertility folk ethnotherapies belonging to 09 genera, 10 species and 07 families used as antifertility plants. Most of the information reported from the tribals of the area is found to be less known to the literature of Indian medicinal plants. The plants mentioned here are still popular in this area and enjoyed good reputation in traditional medicines used on antifertility. Most of the drugs are utilized in fresh mode and as a cooled decoctions or infusions. It is necessary to make further investigations on these ethnomedicines for conservation of biodiversity to protect extinction of the ethnomedicinal plants. There is also need to brought these plants under cultivation in a systematic manner to meet demands from traditional drug based market. It is also needed to evaluate pharmacologically the efficiency of these plants against antifertility claim.

From the study It can be observe that least of prscriptions are applied orally 03(30%). and externally 07 (70%) Generally single plant part is used but sometimes many plant

parts in combinations with other are used for the treatment of diseases. Rhizome, tubers and flowers are surprisingly used rarely, may be attributed that people have tendency to conserve the medicinal plants.

5. Acknowledgement

Author thanks to UGC for financial support.

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