

ETHNO-MEDICINAL AQUATIC AND MARSHY PLANTS IN THE WELFARE OF TRIBAL WOMEN IN JAMMU PROVINCE (J&K), INDIA

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Jammu province is endowed with rich biodiversity in terms of medicinal aquatic and marshy plants. The tribal women utilize plant based medicines to treat various diseases like leucorrhoea, gonorrhoea, gleet, menstrual difficulties, parturition difficulties, hairfall etc. This paper deals with 28 aquatic and marshy plant species, among them 20 plant species belong to dicots, 6 to monocots and 2 to pteridophytic families. Herbal medicines are administered in the form of powder, decoction, juice, extract, paste etc.

Keywords : Aquatic and Marshy plants; Ethno-medicines; Jammu province; Tribal women.

Jammu province is bestowed with a rich repository of medicinal plants. Plant therapy in Jammu province is quite prevalent, particularly in villages and far flung areas where hospitals/medical facilities are not available. Jammu, the winter capital of J&K state is situated at a longitude 74° to 76° - 15° E and latitude 30°-30' to 32°-15' N and altitude ranging from 304.8 to 3658.5 mts above mean sea level. Jammu province of J&K state exhibit sub-tropical to alpine climatic conditions and divided into 10 districts - viz Jammu, Udhampur, Kathua, Doda, Rajouri, Poonch, Ramban, Reasi, Samba and Kishtwar, situated at different altitudes. The study area is largely a mountainous track. The major tribes of the region include Gujjars, Bakerwals, Gaddis and Paharis. Due to the lack of health care and medical facility, the life of the women in backward and tribal areas is adversely affected, and are the first target of poverty and unhygienic conditions. The origin and evolution of tribal communities reflect their long association with indigenous flora for their day to day basic needs and cultural activities.

Women folk of tribals and other ethnic communities being the inhabitants of remote areas, found it feasible to rely upon herbal/plant based medicines for the treatment of number of diseases rather than going to hospitals or health care centres. There are a number of lentic and lotic water bodies at different locations in Jammu province, harbouring luxuriant growth of aquatic and marshy plants. These plants are potentially rich in medicinal resources, besides catering to the other needs of the inhabitants for food, fodder, fuel, shelter etc. Notable contribution regarding the ethno-medicinal uses of terrestrial plants of J&K has been made by different

ethnobotanist from time to time¹⁻⁷, but the present study is the first attempt to explore the potentialities of aquatic and marshy plants in treating different ailments of tribal women. The present attempt is therefore, a thorough survey for information regarding welfare of tribal women to enrich the traditional systems and to document the age old herbal practices in the study area.

During the course of present studies in 2007-2008, field surveys were conducted covering different localities among the tribals by contacting village heads, elder women, men, heads of tribes, shepherds, etc. They were interviewed to record different plants used by tribal women to treat different ailments. Generally the tribals were very shy and reluctant to leak their precious knowledge to outsiders. After great persuasion, a good rapport was established with them and this enabled recording of the desired information. An effort was also made to visit the same locality during different seasons. Once the information on a particular plant was recorded, it was repeatedly verified to record its local name and uses.

1. *Nymphaea nouchali* Burm f. 'Lal Kamal' (Nymphaeaceae). One teaspoon seed powder, one teaspoon ghee and honey, all mixed together, taken once a day for one week to avoid risk of abortion.
2. *Nelumbium nuciferum* Gaertn. 'Kamal', Indian Lotus (Nelumbonaceae). Flowers dipped in water over night and one cup is taken in early morning for 5 days to cure bleeding from womb during gestation.
3. *Nelumbium pentaplata* Walt. 'Kamal', 'Lotus' (Nelumbonaceae) one cup of seed decoction with fennel is taken thrice in a week for one month to

- regularize menses.
4. *Nasturtium officinale* RBr. 'Chho', 'Water Cress', (Cruciferae). One cup of juice extract from leaves is mixed with cumin seeds and taken once a day for 3 days to treat vaginal pruritus.
 5. *Portulaca quadrifida* Linn. 'Kulfa' (Portulacaceae). One tea spoon full of seed powder with sugar is taken twice a day till relief, for curing gonorrhoea.
 6. *Eclipta prostrata* Linn. 'kesar Raja' (Asteraceae). Two teaspoons of plant decoction is taken twice a day for 7-8 days to check leucorrhoea and uterine bleeding.
 7. *Campanula sulamani* Nasir. (Campanulaceae). One cup of decoction of leaves with ginger is taken at time of delivery to facilitate child birth and to lessen parturition difficulties.
 8. *Phyla nodiflora* Linn. 'Jal pipli' (Verbenaceae). One teaspoon of juice of leaves and tender stalks is given once a day to women in indigestion after delivery. Tender leaves dipped in little water till the leaves swell, half cup of this water is given twice a day till relief in case of gonorrhoea.
 9. *Bacopa monnieri* Linn. 'Jal Brahmi' (Scrophulariaceae). Leaf extract (2-3 teaspoons) given twice a day for 10-15 days for treating sterility.
 10. *Mentha longifolia* Linn. 'Jungli Pudna' (Lamiaceae). One cup of decoction of leaves and stems is given once a day for a week to regularize menses and pain in womb.
 11. *Alterneanthera sesilis* Linn. 'Gudrisag', 'Joyweed' (Amaranthaceae). Leaves are given as vegetable to the women against deficiency of breast milk and half cup of decoction of whole plant once in a day for one week is given against abdominal pain in pregnant women.
 12. *Chenopodium ambrosoides* Linn. 'Jingli Bathua' 'American wormseed' (Chenopodiaceae). One cup of leaf decoction is given at time of delivery to relieve pains. Two spoons of leaves with sugar are given once a day for 10-12 days to hasten milk flow from nursing mothers.
 13. *Polygonum hydropiper* Linn. 'Jal mirchi', 'Smartweed' (Polygonaceae). One teaspoon leaf and stem bark powder is given once a day with water for seven days for preventing conception.
 14. *Polygonum bistorta* Linn. 'Narri' (Polygonaceae). One teaspoon of root extract is given once a day for 3 days against profuse menses. Half cup of root decoction with black pepper is given once a day for 7-8 days in leucorrhoea.
 15. *Polygonum aviculare* Linn. 'Kerru' (Polygonaceae). Two teaspoon of leaf paste is given with warm water once a day for 3-4 days in excessive menses.
 16. *Polygonum viviparum* Linn. 'Maslun' (Polygonaceae). Half cup of decoction of flowers are given once a day for 7-8 days to check leucorrhoea and gleet.
 17. *Vallisneria spirallis* Linn. 'Swala', 'Eelgrass' (Hydrocharitaceae). Two teaspoons of whole plant decoction is given once a day for 5-10 days to treat leucorrhoea.
 18. *Cyperus distans* L. (Cyperaceae). Two teaspoon of stems powder with honey or sugar is given twice a day for 4-5 days to check excessive bleeding in periods.
 19. *Scirpus grossus* Linn. 'Kesrur', 'Water Chestnut' (Cyperaceae). One teaspoon of leaf powder with cumin seed powder and sugar is given twice a day till relief in case of gonorrhoea.
 20. *Setaria glauca* L. 'Bandra', 'Pigeon grass' (Poaceae). Half cup of root decoction is given once a day for 2-3 days to against painful menstruation.
 21. *Adiantum capillus veneris* L. 'Hansraj', 'Maiden hair fern' (Adiantaceae). Half cup of leaf decoction with ginger is given to stimulate menstrual discharge.
 22. *Equisetum debile* Roxb. 'Narri', 'Horse tail' (Equisetaceae). One cup of decoction of whole plant is given twice a day for 10-15 days against gonorrhoea.
 23. *Centella asiatica* L. 'Brahmi Booti' (Apiaceae). One teaspoon of paste of whole plant with powdered black pepper is given once a day till relief in case of leucorrhoea.
 24. *Typha angustifolia* Roxb. 'Elephant grass' (Typhaceae). one teaspoon of extract of rhizome with water is given once a day for 1-15 days against gonorrhoea.
 25. *Jussiaea repens* (Onagraceae). One teaspoon of juice of flowers is given twice a day for 4-5 days against leucorrhoea and spitting of blood.
 26. *Colocasia esculenta* L. Schoot. 'Arbi' (Araceae). Tuber juice rubbed on head for good growth of hair.
 27. *Ammania baccifera* L. (Lythraceae). Half cup of decoction of whole plant is given twice a day with sugar for 10-12 days against gonorrhoea.
 28. *Asteracantha longifolia* Nees. (Acanthaceae). One teaspoon of seed powder with water is given twice a day for 10-20 days for curing gonorrhoea.

The present communication provides ethno-medicinal usages of 28 aquatic and marshy plants belonging to 23 families for the treatment of different

diseases of tribal women of Jammu province. Of the total 28 plant species maximum number of plants are used to check gonorrhoea and menstrual disorders (7 species each), followed by leucorrhoea (6 species), poor secretion of milk (2 species), parturition difficulties (2 species) and gleet, conceptive preventions, hairfall, uterine bleeding, sterility, indigestion, abdominal pain in pregnant women, abortion and vaginal purities (1 species each). Further more it has been observed that leaves are the most frequently used plant parts against different diseases followed by whole plant, seed, flower, stem, root, tuber and rhizome. A few plants were found to be effective against more than one disease, while most were restricted to use over a specific affliction. The present study is based on verbal interaction and personal interviews with authentic local informants like hakeems, heads of tribes, elder women, shepherds, vaides etc. Identical uses of plants for various ailments from sub-tropical to alpine regions by tribal women in distantly located places of the study area is not mere a co-incidence, but a positive indication of some useful properties in these plants.

Gujjar and Bakerwal tribal women keep on moving from place to place, with their livestock in search of fodder and forage. The choice of the plant used, depend upon the availability of the particular plant species in vicinity of different regions. Use of aquatic and marshy plants for the curing various ailments by tribal women is attributed to their accessibility and less toxicity (safety). These women, being the residents of remote areas preferably use herbs for curing different diseases, instead of going to hospitals.

The data compiled was compared with pertinent published literature⁸⁻¹². Most of the uses reported here are contemporary and do not seem to have been reported earlier. A critical analysis of the study also revealed that aquatic vegetation is highly diverse and possessed enormous medicinal resource potential. The present investigation throws light on the popularity of our indigenous system of medicine among the tribals and other ethnic communities and the rich medicinal repository of aquatic vegetation that demand urgent need regarding conservation. Therefore these plant species have to be preserved with utmost care and pharmacological aspects

of these plants must be explored.

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