INTERNATIONAL JOURNAL OF APPLIED BIOLOGY AND PHARMACEUTICAL TECHNOLOGY

Volume: 2: Issue-4: Oct - Dec -2011 IJABPT *ISSN 0976-4550*

SOME UNREPORTED ETHNOBOTANICAL USES FROM KARANJI GHAT AREAS OF PATHARDI TAHASIL IN AHMEDNAGAR DISTRICT (M.S.) INDIA

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ABSTRACT: This region has been inhabited constantly by a group of nomadic tribals viz.Dhangar, Laman and Vanjaris for curing certain ethnobotanical ailments since ancient times.The present paper enumerates traditional ethnobotanical uses of 19 species belonging to 18 genera and 16 families by the natives of the study area i.e.Karanji Ghat of Pathardi tahasil in Ahmednagar district (M.S.) India. Out of these, seed in 2 plants, leaf in 4 plants, leaf and stem in 3 plants, root in 3 plants, stem in 2 plants, fruit in 6 plants and flower in 1 plant are used for ethnobotanical purposes by the local inhabitants

Keywords: Nomadic tribals, Karanj Ghat, ethnobotanical.

INTRODUCTION

Since the beginning of civilization, human being has been remained constantly dependent on the endemic plants for certain primary needs and specific ailments cure and care. in course of time, his interactions with the wild plants as well as animals increased which has made him a superpower of earth planet.Documentation of human relationship and interactions with the plants in a scientific way has become a prime need of time these days which is called as ethnobotany (Cotton, 1996).

In recent years, ethno-pharmaceutical studies are recognized as the most fruitful methods for identifying new sources of drugs. It is interesting to note the most recent popular plant based drugs of ethnobotanical interests.

Study area:

Being a part of Garbhagiri hills, the study area is located in between 19°10'26"N-19° 31'29" N latitude and 74°71'52"E-75°10'54"E longitude at an altitude of 700-750 mtr. As a beautiful hilly landscape famous for its diversified vegetation, it is situated along South-Western side of Pathardi tahasil at a distance of 22 km. It comes under the jurisdiction the forest department of Ahmednagar district (M.S.) India. The forest is of mixed deciduous type including some evergreen patches. The area is occupied by 52-55 % of mixed type of forests having an average rainfall of 348 cm/year and temperature range of 20°C to 36°C (Almeida, 2007).

Although much has been documented on the ethno-medicinal and ethno-floristic aspects of plants in the district, there is not even a single concrete report on traditional ethnobotanical uses of plants in Karanji Ghat areas of Pathardi taluka. Keeping this in view, the present work was conducted to record some unreported traditional ethnobotanical information hidden in this pocket.

Inhabitants:

The proposed study site has been remained inhabited constantly by the indigenous nomadic tribals viz. Dhangar, Laman and Vanjaris which have been carrying out traditional ethnobotanical practices since ancient times. Their major occupation is agriculture along with animal husbandry and poultry as a secondary job.The forest resources in their surrounding areas play a very significant role in their routine life as they are enriched with traditional ethnobotanical knowledge which has been transmitted in them from their forefathers through the words of mouth in an informal way.

Review of literature:

Recent interests in ethnobotanical explorations have been enhanced on international and national level with the work of John Harshberger 1896, Janaki Ammal 1956 and Anjara 1996 After then various workers have contributed to the field of ethnobotany viz. Datar and Vartak (1975), Dhole *et.al*.(2009),Dwarakan and Ansari (1992),Dwivedi *et.al.*(2009a,b), Ekka and Dixit (2007), EL-Kamali (2009), Ganesan(2008). A perusal of the literature reveals that there are still gaps in ethnobotanical knowledge in this area. The present paper therefore is an attempt to fill up the gap in order to know the plants of ethnobotanical significance in the routine life of local populace.

Methodology:

An ethno-medico-botanical survey was carried out during July-2006 to December- 2007 to collect traditional information from the inhabitants regarding ethnobotanical significance of the endemic flora in Karanj Ghat areas, through group discussions, questionnaires and informal interviews (Schulte 1962, Jain 1989, Alexiades 1996 and Martin 1995).The information gathered was confirmed from traditional herbal practitioners and other knowledgeable informants.

Simultaneously the plant species of ethnobotanical interests were collected in either flowering or fruiting stage and identified with the help of standard floras viz. Cooke 1967, Almeida 1996 and Pradhan and Singh 1999. Such plants were dried and mounted on herbarium sheets and preserved as voucher specimens in the department of botany, P.V.P.college, Pravaranagar for future

RESULTS:

The taxa of ethnobotanical significance have been enumerated alphabetically (Table 1) in the sequence of Botanical name followed by family name (in parenthesis), local or vernacular name, flowering/fruiting season, plant part used and unreported ethnobotanical uses.

Table: 1-Information of the plant species with unreported ethnobotanical

S.No	Botanical Name	Local Name	Fls./Frts season	Plant Part	Unreported ethnobotanical uses
1.	*Abelmoschus moschatus* Medik. (Malvaceae)	Kastur-bhendi		Seed	*One to two tolas (10-20 gm) of seeds with 1-2 tsp of sugar and 2-3 fresh sabja leaves (*Ocimum basilicum*) are boiled together in a cup of goat's milk for 2-3 minutes and the infusion is given twice a day for 2-3 days to treat ulcers in mouth.
2.	*Abrus precatorius* Linn. (Fabaceae)	Lal-gunj		Leaf	*fresh leaves are crushed in Til (*Sesamum orientale*) oil and the extract is mashed on the throat topically twice a day for 3-4 days to relieve laryngitis.
3.	*Acacia leucophloea* (Roxb.) Willd. (Mimosaceae)	Hiwar	Sept.-Dec.	Leaf & stem	*Fresh plant twigs are tied at the marriage place of Hindu community as an indication that the boy or girl is getting married for the first time.
4.	*Achyranthes aspera* Linn. (Amaranthaceae)	Aghada	Sept.-Oct.	Root	* Fresh roots extracted in warm water mixed with 1-2 tsp of honey and lemon (*Citrus limon*) juice is given to obese people regularly for 18-21 days to reduce body weight.
5.	*Aegle marmelos* (L.) Corr. (Rutaceae)	Bael	April-Sept.	Leaf	*Fine paste from a handful of fresh leaves in sheep's milk is massaged topically on the forehead to relieve headache

6.	*Agave americana* Linn. (Liliaceae)	Ghaypat	Oct.-Dec.	Entire plant	*The plants are grown around the fields for fencing as well as preventing soil erosion.
7.	*Argyreia nervosa* (Burm.f.)Boj. (Convolvulaceae)	Samudra-shok	Aug.- Jan.	Leaf	*A cupful poultice from green and healthy leaves is given orally once a day in early morning with a pinch of sugar to with empty stomach for 5-6 days against acidity
8.	*Bauhinia acuminata* Linn. (Caesalpinaceae)	Safed-Kanchan	Jan-June	Seed	*The seeds are roasted on fire, de-husked and eaten for gaining strength.
9.	*Caesalpinia decapetala* (Roth.)Alst. (Caesalpinaceae)	Chillar	Feb.-May	Fruit	*The fine paste from certain amount of young pods in specific quantity of goat's milk is applied externally on the swollen and painful legs and around the naval region of the pregnant women for sure and early relief.
10.	*Caesulia axillaris* Roxb. (Asteraceae)	Kala-maka	Sept.-Nov.	Leaf & stem	*An extract from certain quantity of younger leaves and tender shoots made in coconut oil and applied externally on the bald region of head to stimulate healthy and fresh hair growth.
11.	*Canvalia cathartica* Linn. (Fabaceae)	Abai-vel	Oct.-Dec.	Seed	*Seeds from partly matured pods are eaten raw and also cooked as vegetable by the local inhabitants.
12.	*Caralluma adscendens* var *fimbricata* (Wall.) Gravely & Mayumath (Asclepiadaceae)	*Shindal-makadi*	June-Sept.	Leaf & stem	*Extract from 4-5 fresh and young 2-3 inches long stem pieces with leaves in a cup of coconut milk is mixed with a pinch of black (*Piper nigrum*) pepper powder, 1-2 tsp of sunth (*Zingiber officinale*) powder and little quantity of rock salt and the mixture is then given orally twice a day for 3-4 days to the patient to treat laryngitis.
13.	*Catharanthus pussilus* (Murr.) G.Don. (Apocynaceae)	Chandani	July-Sept.	Leaf	*An extract from a handful of fresh leaves in warm water is mixed thoroughly with 1-2 tsp soil from termite mound and a pinch of common salt and applied externally 3-4 times to cure irritation and swelling due to wasp sting.
14.	*Cereus pterogonus* Lem. (Cactaceae)	Tridhar	March-Sept.	Latex	*About 2-3 tsp of latex from plant is mixed with a pinch of Haldi (*Curcuma domestica*) powder in a cup of Til(*Sesamum indicum*) oil and massaged once daily at night for 8-9 days to cure arthritis.
15.	*Cissus repanda* Vahl. (Vitaceae)	Ghetuli	March-June	Leaf & stem	*A handful of fresh leaves and tender shoots are fried slightly in vegetable oil and crushed with 5-6 black (*Piper nigrum*) pepper and 2-3 leaves of Krishna Tulasi (*Ocimum sanctum*) and the paste is administered orally with gur (Jaggery) once a day at night from 5th month up to 7th month of pregnancy to attain healthy growth of foetus.

16.	*Cissus rotundifolia* Vahl. (Vitaceae)	Ghotmuli	March-June	Leaf	*A fine paste from aatpav (aprox.100 gm) leaves and equal amount of sunth (*Zingiber officinale*) powder in a cup of mohri (*Brassica compestris*) oil is applied topically on the body region once daily for 10-12 days to cure irritations and inflammations of muscles.
17.	*Clerodendrum serratum* (L.) Moon. Vent. (Verbenaceae)	Bharangi	July-Dec	Root	*Paste from aatpav (about 100gm) fresh and healthy roots with 1-2 tsp of arjun sadada (*Terminalia arjuna*) stem bark powder in a cup of coconut oil is applied locally 3-4 times in a day for 9-12 days to cure arthritis.
18.	*Commiphora wightii* (Arnold.) Bhandari (Burseraceae)	Guggul	March-May	Resin	*Dried resin is burnt as Dhoop (inscence sticks) during religious ceremonies for worshipping of Gods and Goddesses.
19.	*Cordia gharaf* (Forsk.) Ehrenb. & Asch. (Boraginaceae)	Gondhan	April-Oct.	Leaf	*Handful of fresh, young and healthy leaves crushed with 1-2 tsp of honey,1-2 tsp of cow ghee and equal amount of glycerine in a cup of cow's milk is given thrice a day up to 5-7 days to cure mouth ulcer and tongue irritation

Abbreviations used: * Unreported or unknown ethnobotanical uses from the state and country

Dec.-December; Oct-October; Sept.-September; Aug.-August; Jan-January

Fls-Flowering; Frts.-Fruiting; &-and.

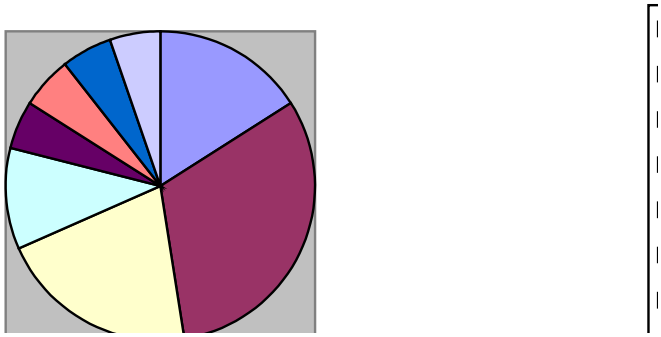
Table:2-Analysis of plants verses plant part used

Sr.No	Part used	Name of plant species	No. of plants
1	Root	*Clerodendrum serratum* (L.)Moon.Vent.,*Achyranthes aspera* L.	2
3	Leaf	*Cordia gharaf* (Forsk.)Ehrenb. & Asch., *Cissus rotundifolia* Vahl., *Catharanthus pussilus* (Murr.)G.Don., *Argyreia nervosa* (Burm.f.) Boj., *Aegle marmelos* (L.) Corr.,*Abrus precatorius* L.	6
4	Fruit	*Caesalpinia decapetala* (Roth.) Alst.	1
6	Leaf & stem	*Cissus repanda* Vahl., *Caralluma adscendens* var *fimbricata* (Wall.) Gravely & Mayumath, *Caesulia axillaris* Roxb., *Acacia leucophloea* (Roxb.)Willd.	4
7	Resin	*Commiphora wightii* (Arnold.) Bhandari,	1
8	Seed	*Canvalia cathartica* L., *Bauhinia acuminata* L., *Abelmoschus moschatus* Medik.	3
9	Latex	*Cereus pterogonus* Lem.	1
11	Entire plant	*Agave americana* Linn.	1

Discussion:

In all total 19 species belonging to 18 genera and 16 families having unreported traditional ethnobotanical has been reported. Out of these, seed in three plants, leaf in six plants, leaf and stem in four plants, root in two plants, latex in one plant, resin in one plant, entire parts in one plant and fruit in one plants are used for certain ethnobotanical purposes by the local inhabitants (Table:2).

Graph:1- Pie graph showing Plant parts used against number of plant species.



More surveys are needed in future to carry out to know the plant resources which have an immense value in the routine life and welfare of tribal community. Such studies prove helpful in preservation and passing of the traditional ethnobotanical knowledge from the tribals to other ethnic communities and also to the next generations. Efforts should be taken in protection, conservation and maintainance of the plants which are on the verge of extinction due to deforestation, global warming, industrialization and urbanization.

Few plants of this locality possess potential of better economic exploitation.Some of them are *Clerodendrum serratum* (L.) Moon.Vent., *Achyranthes aspera* L., *Cordia gharaf* (Forsk.) Ehrenb. & Asch., *Cissus rotundifolia* Vahl., *Catharanthus pussilus* (Murr.) G.Don., *Argyreia nervosa* (Burm.f.) Boj., *Aegle marmelos* (L.) Corr., *Abrus precatorius* L., *Cissus repanda* Vahl., *Caralluma adscendens* var *fimbricata* (Wall.) Gravely & Mayumath, *Caesulia axillaris* Roxb., *Acacia leucophloea* (Roxb.) Willd., *Canvalia cathartica* Linn., *Bauhinia acuminata* Linn., *Abelmoschus moschatus* Medik. Since all these plant species were used in more or less proportion throughout the world, there is wide scope for their bioprospecting. Thereafter our prime duty becomes to protect and conserve these plants via ex-situ or in-situ ways urgently in a proper way.

Acknowledgement:

Author's thanks to the Dr. C.R. Jadhav, (Botanical Survey of India, Western Reginal office, Pune) and Dr. P.P. Sharma (Deogiri Mahavidyalaya, Aurangabad) for valuable guidance and hearty support in editing of the paper. The author is also thankful to the notified and denotified rural, tribal and non-tribal groups, Vaidyas and traditional healers from the study area for their immense help and co-operation during the entire study and field work.

Thanks are also due to the authorities of forest department of Ahmednagar district for their immense co-operation and permission for collection and preparation of voucher specimens.

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