

Folk medicine used by the tribes of Kinwat forest of Nanded district, Maharashtra, India

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An ethnomedicinal survey was carried out during 2007-2009 to collect information on the use of medicinal plants from herbal practitioners of *Gond, Andh Kolam and Pradhan* tribes of Kinwat Forest range of Nanded district of Maharashtra. The tribes are mainly depending upon forest flora for their livelihood and for curing the ailments and diseases. A total of 25 ethnomedicinal plants have been recorded here which are used in formulation of 25 different ethnomedicinal preparations for curing 25 types of diseases and ailments. Of these 19 are administrated as polyherbal preparations to cure diseases like leucorrhoea, jaundice, gangrene, piles, sneezing, vomiting, etc. and in remaining cases, monoherbal preparations are used for the treatment of typhoid, paralysis, colic pain, malarial fever, indigestion, etc. Of these 21 ethnomedicinal preparations are new as they have not been recorded earlier in standard literature. Information of medicinal plants with botanical name, local name, family, part(s) used, medicinal value and formulation along with dose and duration is given.

Keywords: Folk medicine, Kinwat forest, Maharashtra, Medicinal plants, Nanded District.

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Introduction

Alternative system of medicine like Ayurveda, Sidha, Unani and traditional medicine has gain its importance in the recent few years of its high potential in curing various diseases with less side effects as compared with the synthetic drugs. Natural products of plant and animal origin offer vast resource of new medicinal agents with potential in clinical use. The value of medicinal plants to the mankind is very well proven. Nature has been a source of medicinal plants for thousands of years and an impressive number of modern drugs have been isolated from natural sources and has potential to treat diseases all over the world (higher plants as source of medicinal compounds have continued to play a dominant role in the maintenance of human health since ancient times).

The Kinwat taluka is situated at the north east of Nanded district of Maharashtra. Geographically it is situated at 19°25' to 19°55' N latitude and 77°51' to 78°19' E longitude with 314 m above sea level covering an area of 2012 sq km with 57,800 ha under forest cover (27.25%) and the population is 2,42,650 of which about 29.68% is inhabited by tribes i.e.

Gond, Pradhan, Kolam and Andh. The annual rain fall, altitudinal range, bio-geographical location makes the vegetation luxuriant and high species richness. Kinwat is one of the phytogeographically rich areas of the region with greater endemism. The area is treasure trove of medicinal plants and wild relatives of cultivated crops.

The rustics and aborigines are forest dwellers and practice agriculture and have been using various plants and their parts as medicine. The knowledge of the use of these plants has descended down traditionally i.e. it has been transferred from one generation to other without any documentation. The literature survey shows that a little ethnobotanical work has been done and the Kinwat taluka is still under ethnobotanical exploration^{1,2}. Thus, there is an urgent need of documentation of such knowledge about the use of medicinal plants for their long term conservation. Therefore, present study was planned to document the ethnobotanical observations from 2007-2009 and the present paper is a segment of this study on documenting the information.

Methodology

The present data is an outcome of field research carried out as a part of floristic and ethnobotanical

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Kinwat forest



A Gond medicine practitioner



Abelmoschus ficulneus



Abrus precatorius



Annona squamosa



Argemone mexicana



Cadaba fruticosa



Dioscorea bulbifera



Limonia acidissima



Mimosa pudica



Morinda pubescens



Tribulus terrestris

Plate 1—Some important ethnomedicinal plants of Kinwat forest and medicine practitioner

studies during 2007 to 2009. The ethnomedicinal data were collected from tribal, rustics and knowledgeable persons who practice herbal therapy and much familiar with forest areas (Plate 1). The collected plants were identified by using standard floras³⁻⁷. The plants were enumerated alphabetically along with their botanical name and vernacular name. The voucher specimens were deposited in the Department of Botany, Dnyanopasak College, Parbhani.

Results and Discussion

The present study provides information about some therapeutic uses of 25 angiospermic plant species belonging to 21 families (Table 1, Plate 1). The enumeration has been compared with important standard literature and it was observed that 21 usages were not recorded earlier. However, uses of the remaining 4 plants studied i.e. *Abelmoschus ficulneus*

(Linn.) Wt. & Arn. ex Wt., *Achyranthes aspera* Linn., *Dioscorea bulbifera* Linn. and *Martynia annua* Linn. have also been reported earlier by other workers⁸⁻¹⁴. Some noteworthy plants are: seed powder of *Abrus precatorius* is used to stop leucorrhoea, bark powder of *Bauhinia purpurea* is used to reduce debility, leaf decoction of *Cadaba fruticosa* is used to cure hemiplegia, fruit powder of *Diplocyclos palmatus* is used to cure urinary complaints, leaf decoction of *Limonia acidissima* is used to cure jaundice, root extract of *Momordica dioica* Roxb. ex Willd. is used to cure gangrene, bark extract of *Morinda pubescens* is used to cure typhoid, rhizome extract of *Nymphaea pubescens* is used to control leucorrhoea, dried fruit powder of *Tribulus terrestris* is used to treat urinary problem, root extract of *Typha domingensis* is used to cure dysuria and leaf extract of *Xanthium strumarium* is used to cure malarial fever.

Table 1 — Some important ethnomedicinal uses of Kinwat forest

S No.	Plant name/Family/Local name/ Voucher No.	Resource Person	Uses
1	<i>Abelmoschus ficulneus</i> (Linn.) Wt. & Arn. ex Wt./ Malvaceae/ <i>Ran Bhendil</i> DPG 36	Pendar Manohar	Root extract (about one teaspoonful) is given twice a day for three days to cure abdominal pain.
2	<i>Abrus precatorius</i> Linn./ Fabaceae/ <i>Gunj</i> / DPG 155	Suryabhan Atram	Dried seed powder (about half teaspoonful) is chewed along with betel leaf twice a day for three days to control leucorrhoea.
3	<i>Achyranthes aspera</i> Linn./ Amaranthaceae/ <i>Aghada</i> / DPG 46	Deepak Bhagat	Root extract (about two teaspoonfuls) is mixed with 25 ml of cow milk and a piece of marking nut (<i>Semecarpus ancardium</i> Linn. f.) bibba. This mixture is advised twice a day for three days to cure jaundice.
4	<i>Annona squamosa</i> Linn./ Annonaceae/ <i>Sitaphal</i> / DPG 30	Deepak Bhagat	Leaf decoction (about two teaspoonfuls) is mixed with half spoon of Lemon juice (<i>Citrus aurantifolia</i>) and 1g of salt. This mixture is given twice a day for three days to cure vomiting.
5	<i>Argemone mexicana</i> Linn./ Papaveraceae/ <i>Bilayat</i> / DPG 58	Suryabhan Atram	(i) A piece of root is chewed along with betel leaf thrice a day for three days to treat hemorrhoid. (ii) Root extract (about one teaspoonful) is given orally twice a day for five days to cure jaundice.
6	<i>Bauhinia purpurea</i> Linn./ Caesalpiniaceae/ <i>Aptal</i> / DPG 156	Pendar Manohar	Dried root bark powder (about one teaspoonful) is mixed with half tea spoon powder of <i>Laung</i> (<i>Syzygium aromaticum</i>) and half tea spoon powder of <i>Flaichi</i> (<i>Elettaria cardamomum</i>). This mixture is given twice a day for 21 days to reduce debility.
7	<i>Cassia fistula</i> Linn./ Caesalpiniaceae/ <i>Bahaval</i> / DPG 115	Suryabhan Atram	A pod paste is applied on scorpion sting area as an antidote.
8	<i>Cadaba fruticosa</i> (Linn.) Druce/ Capparaceae/ <i>Taklan</i> / DPG 67	Deepak Bhagat	Leaf decoction (about half teacup) is given orally thrice a day for three days and in addition to this leaf paste is also applied on the area to cure hemiplegia.
9	<i>Datura innoxia</i> Mill./ Solanaceae/ <i>Pandhra Dhotra</i> / DPG 16	Dongai Mantute	A small piece of leaf is chewed along with betel leaf early in the morning for two days to cure ague.
10	<i>Dioscorea bulbifera</i> Linn./ Discoraceae/ <i>Jata shankat</i> / DPG 116	Pendar Manohar	A piece of rhizome is chewed along with betel leaf twice a day for four days to increase lactation in women.

Table 1 — Some important ethnomedicinal uses of Kinwat forest—Contd

S No.	Plant name/Family/Local name/ Voucher No.	Resource Person	Uses
11	<i>Diplocyclos palmatus</i> (Linn.) Jeffrey/ Cucurbitaceae/ <i>Ghod kakadi</i> / DPG 161	Pendar Manohar	Dried fruit powder (one teaspoonful) is mixed with spoonful powder of Sag (<i>Tectona grandis</i> Linn. f.). This mixture is taken orally thrice a day for three days against urinary complaints.
12	<i>Ficus benghalensis</i> Linn./ Moraceae/ <i>Wad</i> / DPG 47	Dongai Mantute	Latex is applied on face twice a day for three days to cure pimples.
13	<i>Ficus carica</i> Linn./ Moraceae/ <i>Anjir</i> / DPG 87	Dongai Mantute	The leaves are warmed along with castor oil (<i>Ricinus communis</i> Linn.) there after these leaves are tied on head over night for three days to stop sneezing.
14	<i>Ficus religiosa</i> Linn./ Moraceae/ <i>Pimpal</i> / DPG 88	Suryabhan Atram	Leaf extract (few drops) are poured in the nostrils to get relief from nose problem.
15	<i>Limonia acidissima</i> Linn./ Rutaceae/ <i>Kauth</i> / DPG 150	Suryabhan Atram	Leaf decoction (about two teaspoonful) is mixed with half cup of cow milk and it is taken orally early in the morning for three days to cure jaundice.
16	<i>Martynia annua</i> Linn./ Martyniaceae/ <i>Waghnakhi</i> / DPG 65	Deepak Bhagat	A small piece of seed is chewed along with betel leaf twice a day for three days to cure migraine.
17	<i>Mimosa pudica</i> Linn./ Mimosaceae/ <i>Lajalu</i> / DPG 120	Deepak Bhagat	Root extract or leaf decoction, about two tea spoonful is given orally thrice in a day for three days to cure rheumatism.
18	<i>Momordica dioica</i> Roxb. ex Willd./ Cucurbitaceae/ <i>Kartoli</i> / DPG 117	Dongai Mantute	Root extract (one teaspoonful) is mixed with one spoonful of honey. This mixture is given thrice a day for one week to cure gangrene.
19	<i>Morinda pubescens</i> J. E. Sm./ Rubiaceae/ <i>Bartondi</i> / DPG 122	Suryabhan Atram	Bark decoction (about two teaspoonful) is taken orally thrice a day for three days to cure jaundice and typhoid.
20	<i>Nyctanthes arbor-tristis</i> Linn./ Oleaceae/ <i>Parijata</i> / DPG 71	Dongai Mantute	Leaf juice (about one teaspoonful) is mixed with one teaspoonful leaf decoction of <i>Tulsi</i> (<i>Ocimum sanctum</i> Linn.). This mixture is given orally early in the morning for three days to cure fever.
21	<i>Nymphaea pubescens</i> Willd./ Nymphaeaceae/ <i>Kamall</i> / DPG 41	Deepak Bhagat	About 20 ml of rhizome extract is mixed with 10 g of sugar candy. It is taken orally twice a day for three days to control leucorrhoea.
22	<i>Sapindus emarginatus</i> Vahl/ Sapindaceae/ <i>Rithal</i> / DPG 260	Suryabhan Atram	About one teaspoonful of roasted root powder is mixed with one cup of cow milk and is taken orally twice a day for three days to cure jaundice.
23	<i>Tribulus terrestris</i> Linn./ Zygophyllaceae/ <i>Sarata</i> / DPG 53	Pendar Manohar	About one teaspoonful of dried fruit powder is taken orally twice a day for three days to cure urinary problem.
24	<i>Typha domingensis</i> Pers./ Typhaceae/ <i>Pan kanis</i> / DPG 51	Pendar Manohar	(i) Root extract, about two tea spoonful is mixed with half cup of curd. This mixture is given orally three times in a day for three days to cure dysuria. (ii) Root extract, about two spoonfuls is mixed with 5 g of sugar candy and 2 g of <i>Zire</i> (<i>Cuminum cyminum</i> Linn.). This mixture is taken orally three times in a day for one week to reduce intestinal heat.
25	<i>Xanthium strumarium</i> Linn./ Asteraceae/ <i>Landgal</i> / DPG 50.	Dongai Mantute	Leaf extract, about few drops are poured in the nostrils to stop cephalagia and extract of leaf is applied on body to cure malarial fever.

Conclusion

It is learned through the survey that local people are still dependent on plant resources for treatment of various ailments, but this kind of dependence is decreasing. This is likely due to the uses of plants as medicine has not been recorded; it is orally familiar to the rustics and tribal. Present day traditional healers and elder medicine men became very old. Due to lack

of interest among younger generation and their tendency to migrate into cities for lucrative jobs, the wealth of traditional knowledge of the tribal of this area is declining. The region is still ethnobotanically under exploration; therefore, the present study may adduce a contribution to the existing knowledge of folk remedies. Now the time has come to compile and document medicinal potential of such herbal

plants. The pharmacological, phytochemical and antimicrobial studies should be taken up for the conformation of ethnomedicinal claims and also provides a lead in the development of drugs to be used in the modern system of medicine.

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