

Folk Herbal Medicine from some Tehsils of Buldhana District (Maharashtra) in India

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Abstract

The tribals and rural folks in Buldhana district sustain their healthcare on plant-based drugs for combating different ailments and disorders. They mostly belong to economically weaker sections of the society and the modern healthcare amenities are beyond their reach. The objective of the present investigation was to document ethnomedicinal claims of some notable medicinal herbs employed by the various tribal and rural folks in Buldhana district. Methodology adopted to investigate ethnomedicinal claims consist of regular field visits, gathering of data from tribal/rural people, patients and elder men/ women denizen of study area. Ethnomedicinal applications informed by at least five informants were taken into account. Present investigation revealed that people in the area studied are usually employing 58 plant species belonging to 33 families of angiosperms. They are found useful to combat as many as 35 different human health complaints. The tehsil areas studied is a treasure house of medicinal plants. These may help find out new lead molecules for human betterment. The fund of data accrued from tribal/rural people would be very useful to especially those researchers engaged in medicine. However, the fast rate of acculturation in the area reinforces the need for conservation of their traditional treasure of medicinal knowledge.

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Key Words: Ethnomedicine, Buldhana district, Maharashtra

Introduction

Rigveda, recently declared to be world's heritage, is the oldest record of Indian medicine *vis-à-vis* medicinal plants. Later records of indigenous medicines can be traced back to the sixteenth century. Garcia da Orta (1563) documented Indian plantlore / medicolore in his 'Colloquios dos simples e drogas e cousas medicinas de India'. Christobel Acosta (1578) noted some medicinal plants in his 'Tracado de las drogas medicinas de las Indians Orientalis'. Hendrik Adriaan Van Rheede took notice of local medicinal plants in his 12 volumes of 'Hortus Indicus Malabaricus' during 1678 to 1693 [Manilal 1999]. Medicinal utilities of Indian herbs have been recorded in Indian subcontinent before Indian Independence [Roxburgh 1832, Watt 1889-1896, Bodding 1925, 1927]. After Indian Independence (1947), plant utilities as exclusive topic of research were seriously started by the scientists of Botanical Survey of India. Ethnomedicinal/ethnobotanical study in India although initiated recently, such investigation has now firm footing. It is widely acknowledged that in the developing countries, there is a whole parallel knowledge based system generated by people who live in the laboratory of life. This system is based on their empirical wisdom and experience [Mashekar 2002]. There has been explosion of interest in ethnomedicine driven by some obvious causes e.g. the accelerated loss of indigenous plantlore and attention on its documentation, biodiversity rich nations considering indigenous plantlore as their national heritage, rise in research of natural products, emergence of new drugs from ethnomedicinal plants and becoming western medicine more open to alternative approaches to healing, etc. [Cox 2005].

The history of ethnomedicine is nearly as old as human civilization. Modern societies are seeking to understand the treasures of indigenous medicolore with the help of tribals and forest dwellers. Investigations on ethnomedicines have offered immense scope and opportunities for the development of new drugs. Some modern well known Indian modern drugs have been developed through ethnomedicine e.g. Ninbolin, Livomyn, Carimnozyme and others [Dixit 2005]. Even some ethnomedicinal claims find place in modern medicinal uses e.g. *Urena lobata*, *Garuga pinnata*, *Tylophora indica* against rheumatism, asthma and bronchitis respectively and many such other sources are on record [Patil 2006]. The drugs quinine, digoxin, ephedrine, cocaine, artemisine, etc. also form such classic examples [Patil 2008]. Thus the indigenous wisdom and ethnomedicinal practices can be validated on modern scientific lines such as bioassay and improved methods of fractionation, isolation and characterization of compounds.

It is not only the modern societies that are deprived of their ancient/traditional knowledge, but also the tribal societies due to the forces of acculturation. There is an urgent need to inventories and document all ethnomedicinal or even entire ethnobiological information among diverse ethnic communities before the traditional cultures are completely lost [Rao 1996]. It is, therefore, felt worthwhile by the present authors to extend ethnomedicinal studies in some revenue tehsils of Buldhana district (Maharashtra, India). The results of our studies in the said area form the subject matter of this communication.

Methodology

Description of study area

Buldhana district extends between 19°51' and 21°17' north latitude and 75°57' and 76°59' east longitude with area of 9745 sq km. It is bounded on the north by Nimar district of

state of Madhya Pradesh, whereas on the west, east and south is delimited by common boundaries with Jalgaon, Akola, Jalna, Parbhani and Hingoli districts of Maharashtra. Present authors investigated in Malkapur, Nandura, Motala and Khamgaon tehsils of Buldhana district (Figure-1).

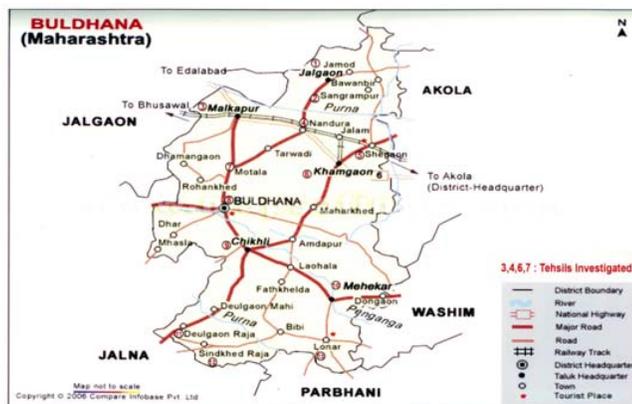


Figure 1 : Buldhana district showing study area (3,4,6,7)

The district receives average annual rainfall 796 mm due to south west monsoon season. The rainy monsoonal season lasts from June to September, October and November being the post-monsoonal months. It rains normally for 47 days in a year. July is the rainiest month in the district. The relative humidity ranges between 25 to 30 % in the afternoons in the summer. It is about 70% during the south-west monsoon. Major period of the year is dry with the sky clear. Temperature fluctuates season-wise. December is the coldest month in the winter with mean daily temperature about 15 °C. Temperature rises rapidly after mid-February till May, May being the hottest month of the year. The temperature rises up to 47 °C in May.

Chief drainage system is Purna and Penganga rivers with many tributaries like Katepurna, Nalganga, Vishwaganga, Banganga, Dhamna, Koradi, Mun, etc. The forests in the district are mainly 'Southern Tropical Dry Deciduous' type. There are reserved forests (about 1082 sq km) and protected forests (94.52 sq km) in the district. Main tree species belong to *Acacia*, *Tectona*, *Hardwickia* and *Boswellia*, which are associated with the species of *Terminalia*, *Eugenia*, *Lagerstroemia*, *Wrightia*, *Anogeissus*, *Diospyros*, *Salmalia*, *Pterocarpus*, etc.

In general, the district is agrarian and inhabited by various sects of religion and castes. They speak Marathi, the state language, apart from their own dialects. Besides the rural folks, the conglomerate of tribals and other scheduled caste people cohabit the area under study such as Bedar, Dohor, Dom, Ganda, Ghasi, Kaikadi, Kotia, etc. The artisan caste people like Sutar, Lohar, Beldar, Kumbhar, Panchal, Patrats, Rangari, etc also form integral part of the society. The people in the area have an intimate and long-time association with the surrounding plant wealth for fulfilling their daily needs of fuel, fodder and other minor and major forest products. Economically weaker sections of these communities rely largely on the plants in their ambience. Diseases and disorders are a part of their life for which they normally recourse to the easily available plant-based sources.

Data Collection

Structural interviews were conducted as well as open discussions with the informants following the method suggested by Jain (1987). The area under study included Malkapur, Khamgaon, Nandura and Motala tehsils of Buldhana district. The area was investigated during 2006-2009. Prior to initiation of actual field work, rapport was established with few persons preferably the chief of a community, village or hamlet in the study area. Contact was then established with other informants, whether tribal or rural, and their guidance was sought. The author acknowledged well with social standing, geography and such other essential aspects, besides the local language and dialects. Experienced people usually ranging between 50-65 years of age, healers, medicine-men and women, headmen, elder farmers and farm labourers, etc. provided useful information on locally employed medicinal plants. A discussion about a particular herb with different informants from different localities tended to be more cooperative to suffice various queries. A special diary was prepared to jot down the information with respect to plant/plant part or product used, local plant name, disease treated, method of preparation of medicine and its administration, dosage, age and sex of the patients to be treated, etc. Also, personal observations on different visits or occasions were particularly helpful for verification of the data provided by the aforesaid informants and patients treated from different places. Thus only specific and reliable information cross-checked with 5 to 8 informants has been incorporated in the present investigation.

In view of authenticity, plant specimens were collected alongwith the useful parts or products. Herbarium specimens have been prepared using standard methods [Jain and Rao, 1977]. Determination of botanical name and family was completed using state, regional various district floras [Cooke, 1958, Naik, 1998, Patil 2003, Kshiragar and Patil 2008, Patil 1968, Singh and Karthikeyan 2000a, 2000b, Diwakar and Sharma 2000, Sharma *et al* 1996]. These have been housed

in the Post-graduate Department of Botany, L. K. Dr. P. R. Ghogrey Science College, Dhule (M.S.) India.

Results

During our ethnobotanical forays 58 plant species representing 50 genera and 33 families are documented as traditional medicine in Buldhana district (Table 1). The eight families Mimosaceae, Asteraceae, Amaranthaceae, Papilionaceae, (Fabaceae), Lamiaceae, Euphorbiaceae, Solanaceae and Combretaceae contain three species each associated with the treatment of diseases noted. These are seven families viz., Malvaceae, Annonaceae, Papavaraceae, Caesalpiniaceae, Cucurbitaceae, Euphorbiaceae, and Oleaceae with two species each useful ethnomedicinally. In the majority of families (18) only one species are used from each. All the three useful species belong to a single genus *Terminalia* (Combretaceae), whereas other genera with three species useful belong to either two genera each (05) or three genera each (04). The highest number of plant species

documented as being used to combat single disease problem are recorded for cough (05), followed by joint-ache, wound, asthma, piles and hepatitis (04). Similarly, disease problem such as injury, mouth ulcer, rheumatism, burns, urinary stone and tooth-ache are treated each with two species and 21 diseases are cured by one species each in the area studied. The 58 species are found associated with total 69 use-reports. It is interesting to note that the leaves were the most commonly used part (35 use-reports), comprising nearly 50 % of the use-reports. This is followed by fruits (08 use -reports) and roots (08 use-reports), seeds (07 use-reports), and flowers (06 use-reports). Stem has just two use-reports, whereas bark and rhizome had one use-report each. In one case only, the latex of the leaves was employed. The trees (22 species) and herbs (21 species) are the dominant growth forms among the plant species recorded. Total 10 species of shrubs and 05 species of climbers were also found useful ethnomedicinally.

Table 1: Ethnomedicinal plants, herbarium number, local names, preparation of recipe, administration, disease treated and citation frequency

Sr. No.	Botanical Name & Family	Herbarium No. & Local Name	Part used, recipe & administration
1.	<i>Abutilon indicum</i> L. Malvaceae	PSP 441 Dabba, Atti	Powder of dried fruit homogenized with coconut oil, applied on joints for 10-15 days to treat joint-ache.
2.	<i>Acacia leucophloea</i> (Roxb.) Willd. Mimosaceae	PSP 252 Hiwwar	Paste of green fruit prepared using cow-urine, applied on injury daily once.
3.	<i>Acacia nilotica</i> (L.) Willd. Mimosaceae	PSP 37 Babhul, Teli Babhul	Powder of dried leaves mixed with alum (10:1 proportion) used while cleaning tooth to treat tooth ache and remove foul smell of mouth.
4.	<i>Acanthospermum hispidum</i> DC. Asteraceae	PSP 195 Bokharu	Ash obtained from leaves mixed with coconut oil, applied on wounds daily once till cure.
5.	<i>Aerva lanata</i> (L.) Juss. Amaranthaceae	PSP 331	Spoonful of leaf extract orally administered twice daily for 3 days to cure malaria and typhoid.
6.	<i>Aloe vera</i> L. Liliaceae	PSP 102,124 Korphad	Latex tapped from leaves mixed with turmeric powder, applied on injuries daily once till cure.
7.	<i>Amaranthus hybridus</i> L. Amaranthaceae	PSP 72 Rajgira	Pellets (About 5 gm each) prepared from root paste, 2 pellets advised daily for 7 days to check acidity.
8.	<i>Annona reticulata</i> L. Annonaceae	PSP 458 Ramphal	A spoonful of leaf extract prepared in cow milk drunk against liver-complaints once daily for 7-8 days.
9.	<i>Annona squamosa</i> L. Annonaceae	PSP 115,222 Sitaphal	Two spoonful of powder of dried fruit and honey (1:1 proportion), consumed twice daily for 24 days to treat asthma.
10.	<i>Argemone mexicana</i> L. Papavaraceae	PSP 177 Satyanashi	Fumes obtained after burning dried roots passed on wounds caused due to piles daily once for 3-4 days.
11.	<i>Aristolochia bracteolata</i> Lamk. Aristolochiaceae	PSP 347,243 Gindiyan	Leaf extract, 2-3 drops, dropped into ears to check pus formation daily once for 4-5 days.
12.	<i>Asphodelus tenuifolius</i> Cav. Liliaceae	PSP 347,243 Zar-kanda	Coconut oil applied on leaves, then warmed and wrapped around suppurating tumor for 3-4 days.
13.	<i>Balanites aegyptiaca</i> (L.) Del. Balanitaceae	PSP 196,94 Hengan-beth	Pulp of one fruit and a betel leaf consumed daily for few days against cough.
14.	<i>Barleria prionitis</i> L. Acanthaceae	PSP 311 Kate- Karote	Young leaves (4-5) chewed twice daily to cure mouth ulcer till cure.

Sr. No.	Botanical Name & Family	Herbarium No. & Local Name	Part used, recipe & administration
15.	<i>Butea monosperma</i> (Lamk.) Taub. Fabaceae	PSP 542,259 Palas	Green fruits dried and powdered alongwith seeds of <i>Tectona grandis</i> L.(3:1 ratio by weight), paste applied on abdominal region daily once for 3 days to check flatulence.
16.	<i>Cassia obtusifolia</i> L. Caesalpiniaceae	PSP 206 Tarota	Bread prepared from seed powder consumed daily once for 7 days to treat joint ache.
17.	<i>Celosia argentea</i> L. Amaranthaceae	PSP 175 ,178 Killu, Karadu	2-3 spoons of root extract prepared in water giver orally 2-3 times a day to benefit during sun-stroke.
18.	<i>Cucumis calossus</i> (Rottl.) Cogn. Cucurbitaceae	PSP 143 Dendolya	Leaf paste applied on wounds daily once till cure.
19.	<i>Curcuma amada</i> Roxb. Zingiberaceae	PSP 33 Ambehalad	i)Dried rhizome powdered, 3-4gm powder with equal quantity of sugar mixed in wheat flour, pellets prepared and consumed at morning daily for 7-8days or more to treat rheumatism. ii) Rhizome powder mixed in coconut oil, applied on inflamed body part once daily till cure.
20.	<i>Emblica officinalis</i> Gaertn. Euphorbiaceae	PSP 122 Awala	Leaf ash mixed in coconut oil, applied on injuries caused after burns daily at night for 8-10 days
21.	<i>Euphorbia millii</i> Desmoul Euphorbiaceae	PSP 497 Katyathor	Stem baked in a hot ash and then extracted, a spoonful extract twice daily drunk for 3 days to check cough.
22.	<i>Hardwickia binata</i> Roxb. Caesalpiniaceae	PSP 68 Anjan	Leaves baked, paste prepared in coconut oil applied daily once on burns for 7-8 days.
23.	<i>Hibiscus schizopetalus</i> Hook f. Malvaceae	PSP 100 Jaswand	5 gm sugar mixed in flower extract, half cup of it drunk for 2-3 days daily once to treat pains in back-bone.
24.	<i>Jasminum sambac</i> (L.) Ait. Oleaceae	PSP 13 Mogra	Leaves and flowers (1:1 by weight) extracted together, applied against scabies and also etching once daily till cure.
25.	<i>Kalanchoe pinnata</i> (Lamk.) Pers. Crassulaceae	PSP 21 Panphuti	A spoonful of leaf extract administered only twice daily for a week to treat urinary stone.
26.	<i>Lablab purpureus</i> (L.) Fabaceae	PSP 354 Wal	Paste of leaves of this plant and also of <i>Lawsonia inermis</i> L. homogenized thoroughly in 1:1 ratio, applied on head for proper hair growth.
27.	<i>Lagerstoemia parviflora</i> Roxb. Lythraceae	PSP 80 Bondara	Leaf paste applied once daily on wounds for 5-6 days .
28.	<i>Luffa actutangula</i> (L.)Roxb. Cucurbitaceae	PSP 305 Dodke	Leaf juice (20-30 ml per meal) is mixed with cooked rice, consumed daily once for a week to better hepatitis.
29.	<i>Maytenus emarginata</i> (Willd.) Ding Hau Celastraceae	PSP 11 Henkal	Young leaves (4-5) chewed 2-3 times daily to treat mouth ulcer for few days.
30.	<i>Mentha spicata</i> L. Lamiaceae	PSP 307 Pudina	A spoonful of leaf extract drunk twice daily to check hepatitis, advised for 7-8 days.
31.	<i>Merremia emarginata</i> (Burm f.) Hall.f. Convolvulaceae	PSP 307 Pingali	Crushed fresh leaves bound around suppurating tumors, advised for 4-5 days.
32.	<i>Moringa concanensis</i> Nimmo ex Dalz.& Gibbs. Moringaceae	PSP 251 Kadu-sewaga	Roots crushed, extract mixed with coconut oil (1:1ratio), applied on joints to treat joint-ache.

Sr. No.	Botanical Name & Family	Herbarium No. & Local Name	Part used, recipe & administration
33.	<i>Moringa oleifera</i> Lamk. Moringaceae	PSP 210 Sewaga	Leaves of this plant and also of <i>Azadirachta indica</i> A.Juss. and <i>Dolichandrone falcata</i> (Wall. ex DC.) Seem, in equal quantity, powdered after drying, powder burnt on dung cake and fumes passed over body part/organ suffering from aching daily once for 3-4 days.
34.	<i>Nerium indicum</i> Mill. Apocynaceae	PSP 30 Kanhher	Flowers and roots in equal quantity made into paste using cow-urine, applied on injuries caused due to piles for 5-6 days.
35.	<i>Nicotiana tabacum</i> L. Solanaceae	PSP 97 Tambhaku	Dried leaves powdered, homogenized with lime (1:1 by weight), applied on wounds or injuries as wormicide for 4-6 days daily once.
36.	<i>Nyctanthes arbor-tristis</i> L. Oleaceae	PSP 172 Parijat	Pellets prepared from stem bark using cow-ghee, 3 pellets daily advised for 21 days to combat asthma.
37.	<i>Ocimum americana</i> L. Lamiaceae	PSP 295 Ran-tulashi	Two spoonful of leaf decoction given orally twice daily for 3-4 days to check fever and cough.
38.	<i>Ocimum teniflorum</i> L. Lamiaceae	PSP 291 Tulashi	2-3 drops of leaf juice poured into ears once daily to control ear-ache till cure.
39.	<i>Opuntia stricta</i> Haw. Cactaceae	PSP 87 Nivdung	Ripe fruits heated and 2-3 fruits consumed daily for 3-4 days to check cough.
40.	<i>Papaver somniferum</i> L. Papavaraceae	PSP 95 Khas-khas	About 5 gm seeds crushed in water, 2-3 drops of extract orally administered to infants in case of excessive weeping.
41.	<i>Piper nigrum</i> L. Piperaceae	PSP 78 Kali-miri	Seed powder applied on suppurating tumors or boils only once.
42.	<i>Pithecolobium dulce</i> (Roxb.) Benth. Mimosaceae	PSP 15 Amali-chinch	Seed paste applied on joints for 4-5 days to check joint-ache.
43.	<i>Portulaca quadrifida</i> L. Portulacaceae	PSP 69 Chidichi-bhaji	Root decoction (10-15 ml) drunk once daily for a fortnight to better hepatitis.
44.	<i>Psidium guajava</i> L. Myrtaceae	PSP 159 Jam , Peu	Leaf decoction used to gargle for reducing tooth-ache, advised for 2-3 days once daily.
45.	<i>Ricinus communis</i> L. Euphorbiaceae	PSP 186 Erandi	A cup of root extract and whey (1:1 ratio by volume) administered daily once as a remedy against urinary stone, advised for 15-20 days.
46.	<i>Salvadora persica</i> L. Salvadoraceae	PSP 195 Pilu –kathar	Leaf decoction mixed with common salt applied on joints daily for a week to reduce rheumatic pains.
47.	<i>Semecapus anacardium</i> L. f. Anacardiaceae	PSP 271 Biba, Bhilava	2 or 3 seeds boiled in a cup of milk, this decoction drunk twice a day to check cough.
48.	<i>Sesbania grandiflora</i> (L.) Poir. Fabaceae	PSP 286 Hadga	A cup of flower extract drunk twice daily to treat hepatitis advised till cure.
49.	<i>Solanum incanum</i> L. Solanaceae	PSP 285 Dorale-wange	Fumes obtained after burning seeds passed once over gums and tooth for deworming.
50.	<i>Solanum virginianum</i> L. Solanaceae	PSP 218 Bhui-ringani	Leaf extract and animal ghee (1:1 ratio),about 20-30 ml taken orally twice daily for 7 days to treat piles.
51.	<i>Tectona grandis</i> L. Verbanaceae	PSP 62 Sag	Seed paste prepared in water applied on abdominal region for 3-4 days to prevent excessive urination.

Sr. No.	Botanical Name & Family	Herbarium No. & Local Name	Part used, recipe & administration
52.	<i>Tagetes erecta</i> L. Asteraceae	PSP 300 Zendu	A cup of leaf extract drunk at early morning mixed with 2 spoonful animal ghee for 7 days to treat piles.
53.	<i>Terminalia arjuna</i> (Roxb.)Wight&Arn. Combretaceae	PSP 170 Arjun	Stem bark powder homogenized with coconut oil applied on injuries daily till cure.
54.	<i>Terminalia bellirica</i> (Gaertn.)Roxb. Combretaceae	PSP 46 Behada	Pellets prepared from fruit wall powder using goat-urine, one pellet daily advised to treat asthma for a fortnight
55.	<i>Terminalia chebula</i> Retz. Combretaceae	PSP 69 Hirda	Decoction of fruits gargled once daily for 3-4 days against mouth-ulcer, decoction mixed in whey also gargled to check toothache.
56.	<i>Tinospora cordifolia</i> (Willd.)Miers. Menispermaceae	PSP 226 Gulwel	Stem paste prepared in coconut oil, heated and then applied on eczema till cure.
57.	<i>Xanthium indicum</i> L. Asteraceae	PSP 230 Kutri, Bindare	Fresh leaves (3-4) and one bulblet of <i>Allium sativum</i> L. extracted together, 2-3 drops of it poured into nostrils to treat migraine for 2-3 days.
58.	<i>Zea mays</i> L. Poaceae	PSP 457 Maka	Flowers smoked or flower ash dissolved in water drunk (about-20-25 ml) to combat asthma, advised daily once for 4-5 days.

Discussion

Majority of the species noted during this study are also used to treat one disease condition only. Nevertheless, there are certain taxa such as *Aerva lanata*, *Curcuma amada*, *Jasminum sambac* which are used to treat two different diseases each. There are disease conditions e.g. joint-ache, wound, asthma, piles, and hepatitis cured by four different species each. The medicinal recipes vary depending upon the kind of disease condition and method of administration. We recorded total 13 different recipes in the study area. Their split-up is as such: Extract (18), powder (11), decoction (06), paste (14), fumes or smoke, ash and simply chewing the plant part (03 each), juice (02), pellet (02), direct consumption of plant part, warming of leaves and simply wrapping plant part around a particular organ (01 each). Thus it is clear that recipes in the form of extract, paste powder and decoction are widely employed in the treatments. In few cases, instead of mature plant part, young ones e.g. young leaves of *B. prionitis* and *M. emarginata* are used. Freshly collected leaves to treat migraine of *X. indicum* are also notable. Such cases are certainly indicative of some specific chemical contents beneficial for treating the diseases. The local people are well versed with the age and contents of some species. Also, in few cases, different plant parts of the same species are employed to treat the same disease condition e.g. leaves and flowers of *J. sambac* to treat scabies and itching, flowers and roots of *N. indicum* to cure injuries caused due to piles. In case of *Z. mays* the same part viz., flower is used to treat the same disease by using different medicinal recipes e.g. smoke and ash. Some ailments are treated by using plant parts of different species e.g. 13, 15, 26, 33 and 57 (Serial No. in Table 1). Some domestic substances

are also added while preparing these recipes such as turmeric powder, cow milk, coconut oil, sugar, whey, animal ghee, etc.

The literature on Indian medicine indicated that some taxa (numbered as 19, 25, 38 and 47) are earlier reported from other parts of India (cf. Jain, 1991). These applications support earlier claims. Majority of taxa from Buldhana district are unique for their utilities. Some species are propagated in house-gardens for ready availability e.g. *Aloe vera*, *Annona reticulata*, *A. squamosa*, *Barleria prionitis*, *Emblia officinalis*, *Kalanchoe pinnata*, etc. These are mostly useful multipurposely for non-medicinal purposes as well. Some species e.g. *Terminalia arjuna*, *T. bellirica*, *T. chebula*, *Emblia officinalis*, *Aloe vera*, *Nerium indicum*, species of *Solanum*, *Ricinus communis*, *Ocimum tenuiflorum* and few others are familiar Ayurvedic medicinal plants (Warrier, 1994; Kirtikar and Basu, 1981). This indicates that such plant species have multifarious medicinal utilities. The traditional healers are also found interested in acquisition of knowledge from others, a fact noticed in case of Congolese tradipractioners (Banzouzi *et al.* 2008). Some taxa are exotics and have naturalized in this area e.g. *Acanthospermum hispidum*, *Argemone Mexicana*, *Xanthium indicum*, etc. These are also preferred as the indigenous ones. Similar observations re also made by Kayode (2008) and Koyode and Omotoyinbo (2009) in Nigeria.

Conclusion

It is ample clear that the people of Buldhana district are medicinally knowledgeable. Fairly, rich heritage of knowledge of medicinal plants of the local people is revealed by this investigation. The obvious forces of acculturation and biotic interference warrant conservation of their knowledge. However, studies on scientific lines such as chemistry of

species used, their biological activities, clinical trials, etc. are the need of hour. Such further studies will help develop new drugs in future (Robbers *et al.* 1996, Idu *et al.* 2008).

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