

Ethno-botanical wealth of Bhadra wild life sanctuary in Karnataka

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Ethno-botanical surveys were conducted during 1998 and 99 in villages of Bhadra Wild Life Sanctuary area, situated in the Western Ghats region of Karnataka. Results of the study indicated that 60 plant species belonging to 50 genera and 35 families were used for preparing at least 78 herbal drugs by the medicine men. Among the plant species, the utilization of leaves of *Centella asiatica*, roots of *Ichnocarpus frutescens* and decoction of leaves of *Bambusa arundinacea* in the treatment of jaundice, diabetes and for expulsion of placenta in human's and animals, respectively, are note worthy. Apart from the above, a few drugs formulated by the local people are not known to literature. According to a CAMP survey, *Tylophora indica* and *Artocarpus hirsutus* are vulnerable while, *Dipterocarpus indicus* and *Rauwolfia serpentina* are endangered and *Spondias pinnata* is a lower risk category plant. The information collected from these 'local specialists' enriches the countrywide database on the availability of biodiversity resources and gives full credit to the origin of information at different levels.

Keywords: Ethno-botanical survey, Bhadra Wild Life Sanctuary, Western Ghats, Karnataka.

Bhadra Wild Life Sanctuary situated in the Malnad region of the Western Ghats, Karnataka, is very unique in its formation and bestowed with lofty hill ranges of Mullainagiri, Hebbegiri, Gangegiri and also Bhadra river. The sanctuary is composed of dry-evergreen to dry-deciduous type of vegetation and harbours many endemic, rare and endangered species as well as scores of economically important plant species. There are 35 villages in the sanctuary area. The local medicine men of different communities residing in these villages are

very conservative in nature and have a great faith in their own traditional system of medicine.

It has been pointed out that in most underdeveloped and developing countries, the flora remain virtually unexplored from the point of view of their practical utilization. In recent years, however, efforts to record the knowledge of ethno-medicinal plants being used by natives of various countries have drawn close attention of scientists. The information on medicinal plants and folk drugs is being handled with renewed vigour to investigate new biodynamic compounds of potential therapeutic value.

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There are reports of intensive ethno-botanical surveys conducted in different parts of India, viz. Bihar¹, Orissa², Arunachal Pradesh³, Assam⁴ and Madhya Pradesh⁵. Most ethno-botanical information in Karnataka is restricted to Ayurvedic^{6,7} and ancient medicinal formulations^{8,9}. However, a few reports are also available on the ethno-botanical exploration. Bhandary *et al*^{10,11} and Gopal *et al*¹² have surveyed Uttara Kannada and Biligirirangana hills in Mysore districts, Karnataka, respectively and reported ethno-medicine being practiced by tribal people. However, there is no documentary evidence of ethno-botanical survey of Bhadra Wild Life Sanctuary area. Although a few studies on the flora and vegetation of this area have been made, ethno-botanical aspects were almost neglected. The present study was undertaken to fill this gap and present little known native uses of plants for wider circulation and to explore possibilities of utilization of the ethno-botanical knowledge of communities residing in the sanctuary area.

Materials and Methods

Ethno-botanical explorations were undertaken during 1998 and 1999 in different areas of Bhadra Wild Life Sanctuary. The sanctuary covering an area of 492.46 sq km is situated between 13° 21' and 13° 50' northern latitude and 75° 15' and 75° 50' eastern longitude. The sanctuary is located in the Western Ghats regions of Chikkamagalore, Narasimharajapura and Tarikere taluks of Chikkamagalore district and Bhadravathi taluk of Shimoga district.

The sanctuary area was divided into 11 study regions: 1) Aldera, 2) Thammadihalli, 3) Kakanahosudi, 4) Lakkavalli, 5) Singanamane, 6) Madhuguni, 7) Muthodi, 8) Madla, 9) Kagemanegiri, 10) Hebbegiri, and 11) Gangegiri (Table 1 and Fig. 1).

These divisions were made in accordance with the jurisdiction ranges being followed by the State Forest Department, Karnataka. The villages in this region are inhabited by Adikarnataka, Banjara, Kumbarasetty, Maratinayaka, Reddy, TAMILIAN and Vokkaliga communities (Table 1). There are no tribal communities in this area¹³. Ethno-botanical information was collected from the people of these communities who practice herbal medicine. A questionnaire, prepared based on WHO format, was circulated among the medicine men. The questionnaire consisted of information highlighting the social status, educational qualification, occupation and financial position, their expertise to cure disease, plant products recommended as medicine, adjuvant in a recipe, mode of application, dosage and duration, precaution and the local names of plants. Three visits were made to these regions and medicine men were interviewed and the information was documented following consistent reveals. The resident people of the study area who were treated with herbal medicine for their diseases were also interviewed and information documented. The medicine men were persuaded to reveal the local or vernacular names of medicinal plants and their habitat in and around their villages.

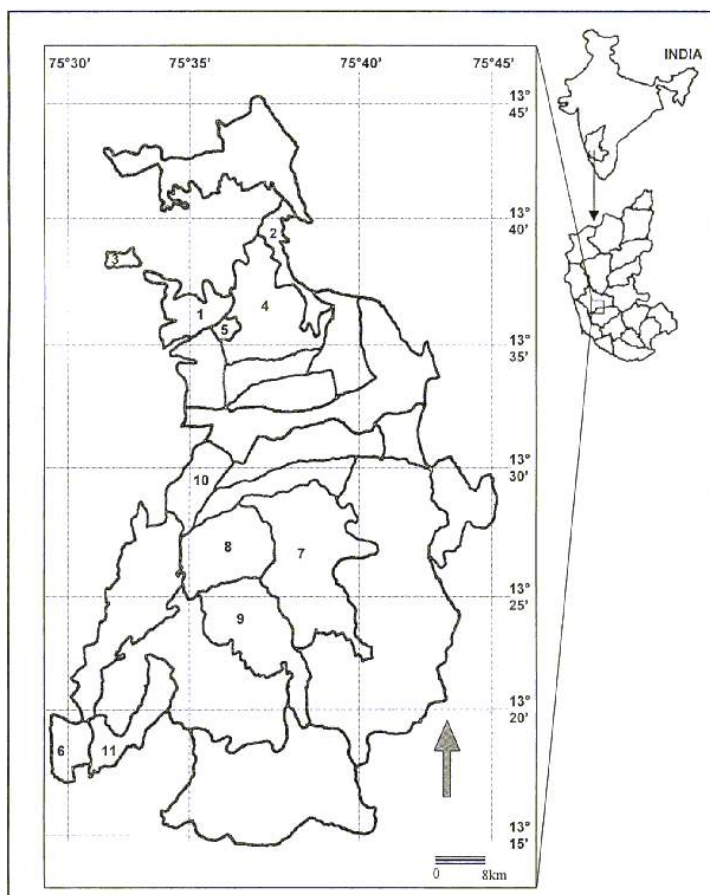


Fig. 1 — Regions of Bhadra Wild Life sanctuary for ethnobotanical study 1. Aldera, 2. Tammadihalli, 3. Kakana Hosudi, 4. Lakkavalli, 5. Singanamane, 6. Maduguni, 7. Muttodi, 8. Madla, 9. Kagemane Giri, 10. Hebbegiri, 11. Gange Giri

The medicinal plants were identified, photographed and collected for preparing the herbarium. Plants were characterized based on the identification keys given in standard identification manuals like Flora of Madras Presidency¹⁴, Hassan¹⁵ and Chikkamagalore¹⁶ districts. The information that is obtained from the survey was compared with the already existing literature on ethno-botany.

Results and Discussion

Survey of the study area indicated ethno-botanical information of 60 plant taxa belonging to 50 genera and 35 families; of these 20 are edible and 3 spices (Tables 2 and 3). Among them, some are cultivated. Communities living in and around forests in the sanctuary area have been practicing herbal medicine to cure diseases of local communities

Table 1 — Medicine men of different communities residing in different villages of study areas in Bhadra Wild Life Sanctuary

	Study areas	Villages	Communities practicing medicine
1.	Aldera (1.34 Sq km)	Junction Hunasekatte	Vokkaliga-1* Reddy-3
2.	Kakana Hosudi (2.2 Sq km)	Umblebylu Kakanahosudi Siddammajihosur	Muslim-1 Nil Nil
3.	Thammadihalli (11.95 Sq km)	Thammadihalli Gonibeedu Malligenahalli	Ediga-2, Tamilian-1 Vokkaliga-4 Nil
4.	Singanamane (1.29 Sq km)	Shanthinagar Singanamane B.R. Project	Tamilian-1 Adikarnataka-1 Nil
5.	Madhuguni (10.42 Sq km)	Balegadde Karegadde Ambuguli Maduguni	Uninhabited Uninhabited Achari-1 Nil
6.	Muthodi (97.07 Sq km)	Muthodi Karvani	Kumbarasetty-1 Nil
7.	Madla (10.04 Sq km)	Kurkulmane Madla Hipla Vaddarashatti Dabgaru	Adikarnataka-1 Adikarnataka-1 Kumbarasetty-1 Vokkaliga-1 Vokkaliga-1
8.	Kagemanegiri (33.54 Sq km)	Kesave	Nil
9.	Hebbegiri (21.15 Sq km)	Hebbe	Maratinayaka-1 (Bhavasara kshatriya)
10.	Gangegiri (43.39 Sq km)	Kodi Shiragola Gundihambala Hoggaru Mattuvani Hirebella Karugadde Trasmata Paradeshappanamata	Kumbarasetty-1 Banajara-1 Nil Nil Nil Nil Nil Nil Nil
11.	Lakkavalli (260.07 Sq km)	Doddakundur Channayyanakere	Vokkaliga-1 Kumbarasetty-2

* Number following community represents the number of persons practicing herbal medicine.
'Nil' There are no medicine men in the particular hamlet.

since long time. Many medicinal plants of the sanctuary are endemic to the Western Ghats (Tables 2 and 3) and are being exploited commercially. Some of the taxa identified in the sanctuary have been listed in the IUCN Red Data Book¹⁷. They include — *Tylophora indica* and *Artocarpus hirsutus* reported vulnerable from Northern, Northeastern and Central India; *Dipterocarpus indicus* and *Rauvolfia serpentina* reported endangered from Southern, Northeastern and Central India and *Spondias pinnata* listed under lower risk category¹⁸.

The medicine men belonging to different age groups and communities had regulation of knowledge of traditional medicine from their ancestors. Quite often, the medicine men were reluctant to disclose the ethno-botanical information. Through repeated contacts and persuasions, the secrets of herbal treatment were revealed. The medicinal formulations like powder, decoction or infusion were prescribed for treatment of various ailments along with spiritual chanting. Majority of the herbal drug recipes were prescribed by medicine men as a single plant drug or in combination. Generally, fresh leaves, bark and roots were preferred and in the absence of fresh materials, the dried ones were also prescribed.

The common ailments, botanical and local names of medicinal plants and their uses are detailed in Tables 2 and 3. The authenticity of reveals, therapeutic practices and types of treatment were confirmed by discussion with residents and also referring to authentic literature.

Some of the noteworthy observations of the survey work, not reported anywhere, are the utilization of certain plant species in curing specific diseases and disorders. For example, roots of *Ichnocarpus frutescens* and *Solanum xanthocarpum* for treatment of diabetes and breast cancer, respectively; leaves of *Centella asiatica* and *Gymnosporia montana* for curing jaundice; bark of *Cassia fistula* and *Holoptelea integrifolia* for treating herpes and *Bambusa arundinacea* for expulsion of placenta of humans and animals.

Certain medicinal plants that commonly grow in the sanctuary also grow in other regions and are being used to prepare herbal drugs by tribal and folk communities residing elsewhere. The utilization of the herbal drugs were in some cases similar. For instance, drugs obtained from *Centella asiatica* and *Careya arborea* were used to treat and cure menstrual disorders and dysentery, respectively, by the folk of the sanctuary as well as by the ‘Siddis’ of Uttara Kannada district¹⁰. *Achyranthes aspera*, a common herb, is being used as an antidote for treatment of scorpion sting by the sanctuary folk and ‘Gowlis’ of Uttara Kannada as well¹¹. *Holarrhena antidysenterica* was used by the folk of the sanctuary to cure diarrhoea. Mahato *et al*¹⁹ also found this plant being exclusively used to cure diarrhoea by ‘Singhbhum’ people. On the other hand, the therapeutic value of herbal drugs was not always similar in different regions. *Elephantopus scaber* growing commonly in different parts of India is being used by different communities to treat different

Table 2—Ethno-medicinal plants and their mode of use in the treatment of infectious diseases caused to local folk in Bhadra Wild Life Sanctuary area

	Ailments	Botanical name (Local name)	Family	Parts and mode of use
1.	Cough	<i>Piper nigrum</i> L.*† (Menasu)	Piperaceae	Fruits boiled with water and taken as tea and also in the form of tablets.
2.	Dysentery	<i>Careya arborea</i> Roxb. (Kavalu or Doddala)	Lecythidaceae	Bark powder mixed with cow milk and taken internally on empty stomach in the morning.
		<i>Alseodaphne semicarpifolia</i> Nees (Mashe mara)	Lauraceae	Leaf extract taken with cow milk and sugar, 2 times a day.
		<i>Eugenia jambolana</i> Lam. † (Nerale)	Myrtaceae	Bark powdered and taken with milk 2-3 times a day.
3.	Fever and throat irritation	<i>Adhatoda zeylanica</i> Medic. (Adusoge)	Acanthaceae	Leaves and flowers mixed with milk and used as a drink.
		<i>Jasminum sambac</i> Ait. (Mallige)	Oleaceae	Leaf extract taken with milk.
		<i>Zanthoxylum rhetsa</i> DC.* (Gimmana mara)	Rutaceae	Fruits homogenised with lime juice and used.
4.	Hair loss by infection	<i>Holoptelea integrifolia</i> Pl.* (Tapsi or tabase)	Ulmaceae	Leaf bud mixed with lime juice and applied externally to affected area.
5.	Herpes	<i>Cassia fistula</i> L. (Kakke mara)	Caesalpinioideae	Bark extract given with brandy and applied.
		<i>Holoptelea integrifolia</i> Pl.	Ulmaceae	Bark powder mixed with cardamom powder and used till marks disappear.

(Contd)

Table 2—Ethno-medicinal plants and their mode of use in the treatment of infectious diseases caused to local folk in Bhadra Wild Life Sanctuary area —*Contd*

Ailments	Botanical name (Local name)	Family	Parts and mode of use
6. Skin problems a) Scabies	<i>Calotropis procera</i> R.Br. (Ekka)	Asclepiadaceae	Paste of the flower made with castor oil and turmeric and applied externally on affected area.
	<i>Datura fastuosa</i> L. (Karedatturi)	Solanaceae	Seeds mixed with rauwolfia root, lime juice and boric acid, made into paste and applied externally.
	<i>Argemone mexicana</i> L. (Arishina datura)	Papaveraceae	Seeds mixed with <i>Datura fastuosa</i> seeds and lime juice, made into paste, and applied externally.
	<i>Thevetia neriifolia</i> Juss. (Kadu kasi)	Apocynaceae	Flowers and seeds crushed into powder, mixed with butter milk and applied externally.
b) Ring worm	<i>Artocarpus hirsutus</i> Lam.* † (Maddhalasu)	Moraceae	Bark burnt and applied externally with coconut oil.
	<i>Vitex negundo</i> L. (Lakkipatre)	Verbenaceae	Leaf paste made with lime juice and applied externally.
c) Dobi's itch	<i>Dillenia pentagyna</i> Roxb. (Kanagauly)	Dilleniaceae	Latex with coconut oil is applied.
	<i>Artocarpus hirsutus</i> Lam.	Moraceae	Bark burnt and mixed with coconut oil and used.
	<i>Erythrina indica</i> Lam. (Halwana)	Papilionaceae	Flower mixed with butter and used.

(Contd)

Table 2—Ethno-medicinal plants and their mode of use in the treatment of infectious diseases caused to local folk in Bhadra Wild Life Sanctuary area —*Contd*

Ailments	Botanical name (Local name)	Family	Parts and mode of use
	<i>Cassia fistula</i> L.	Caesalpinioideae	Leaf paste made with lime juice and applied externally.
	<i>Nerium indicum</i> L. (Kanagale)	Apocynaceae	Flower burnt, made into paste with water and applied on affected area.
d) Pimples	<i>Cassia sophera</i> L.† (Chakkade)	Caesalpinioideae	Flowers made into paste and applied externally.
	<i>Lawsonia inermis</i> L. (Mehandi or goranti)	Lythraceae	Leaves crushed with neem leaves and applied externally.

* Plants endemic to the Western Ghats of India.

† Edible plants

Table 3 — Ethno-medicinal plants and their mode of use in treating non-infectious diseases caused to local folk and their domestic animals in Bhadra Wild Life Sanctuary area

Ailments	Botanical name (Local name)	Family	Parts and mode of use
1. Anaemia and weakness	<i>Calotropis procera</i> R.Br. (Biliekke)	Asclepiadaceae	Infusion of dried roots along with dates and sugar candy made with milk and used for 42 days.
2. Asthma	<i>Tylophora indica</i> W. & A. (Adumuttada balli)	Asclepiadaceae	Leaves and roots with betel leaves, cardamom and garlic made into tablets and used.
3. Boils and burns	<i>Dipterocarpus indicus</i> Bedd. (Bili doopada mara)	Dipterocarpaceae	Gum obtained from the bark applied externally.
	<i>Cassia fistula</i> L.	Caesalpinioideae	Bark paste applied with coconut oil.
	<i>Tectona grandis</i> L.f. (Thega)	Verbenaceae	Young leaves made into paste and applied externally.

(Contd)

Table 3 – Ethno-medicinal plants and their mode of use in treating non-infectious diseases caused to local folk and their domestic animals in Bhadra Wild Life Sanctuary area—*Contd*

Ailments	Botanical name (Local name)	Family	Parts and mode of use
	<i>Psidium guajava</i> L. (Bikke or perala)	Myrtaceae	The young leaves burnt and the char applied on burns along with coconut oil.
4. Bone fracture	<i>Holarrhena antidysenterica</i> Wall.* (Kodasinge or halukodasu)	Apocynaceae	Bark and leaves made into powder and taken with milk till the pain vanishes and bark paste applied externally.
Bone fracture in cattle	<i>Holarrhena antidysenterica</i> Wall. (Kodasinge or halukodasu)	Apocynaceae	The bark powder given to drink along with buttermilk.
5. Breast cancer (tumour)	<i>Solanum xanthocarpum</i> Sch. & Wendl. (Ramagulla)	Solanaceae	Roots mixed with <i>Ziziphus</i> roots, <i>Cassia sophera</i> , made into paste with lime juice and applied as ointment.
6. Chest pain	<i>Alseodaphne semicarpifolia</i> Nees (Mashe mara)	Lauraceae	Leaf paste prepared with water or milk and externally applied.
7. Crack heels	<i>Curcuma longa</i> L. (Arishina)	Zingiberaceae	Rhizome powder mixed with castor oil and lime, heated for 30 minutes and applied externally.
8. Dog bite	<i>Moringa oleifera</i> Lam. (Nugge)	Moringaceae	Bark paste made with water applied externally and also taken internally with milk.
9. Ear bleeding	<i>Allium sativum</i> L. † (Bellulli)	Liliaceae	Cloves of garlic boiled with coconut oil and cooled and used as ear drop.
10. Eye pain	<i>Ervatamia coronaria</i> Stapf (Nandibattalu)	Apocynaceae	Flowers washed thoroughly with clean water and extract used to wash eyes.
	<i>Piper betle</i> L.* † (Veelyadele)	Piperaceae	Leaves washed thoroughly with water, crushed with milk and common salt and used to wash eyes.
Cataract	<i>Erythrina indica</i> Lam. (Halwana)	Papilionaceae	Juice put drop-wise to the infected eye.

(Contd)

Table 3 — Ethno-medicinal plants and their mode of use in treating non-infectious diseases caused to local folk and their domestic animals in Bhadra Wild Life Sanctuary area—*Contd*

Ailments	Botanical name (Local name)	Family	Parts and mode of use
	<i>Breynia rhamnoides</i> M. Arg. (Hulikaddi)	Euphorbiaceae	Exudate oozing from stem collected and put into eyes for 2 to 3 days early in the morning.
11. Expulsion of placenta	<i>Bambusa arundinacea</i> Willd. † (Bidiru)	Poaceae	Decoction of leaves taken after child birth for the removal of placenta.
Expulsion of placenta in cattle	<i>Bambusa arundinacea</i> Willd. (Bidiru)	Poaceae	Leaves given to eat which act as laxative and removes placenta.
12. Headache	<i>Plumbago zeylanica</i> L. (Chitramula)	Plumbaginaceae	Root tied to opposite sides of the aching part of the ear.
	<i>Leucas aspera</i> Spr. (Thumbe)	Lamiaceae	Leaf paste made with lime juice and applied externally.
	<i>Mirabilis jalapa</i> L. (Madyana mallige)	Nyctaginaceae	Fruits paste made with coconut oil and used externally.
Half headache (migrain)	<i>Leucas aspera</i> Spr.	Lamiaceae	Flowers macerated and extract put drop-wise into opposite side nostril.
13. Intestinal worms	<i>Citrus medica</i> L. † (Nimbe)	Rutaceae	Leaf paste taken with milk.
	<i>Chenopodium album</i> L. † (Taggi gida)	Chenopodiaceae	Leaf juice taken in early morning on empty stomach.
Intestinal worms in cattle	<i>Elephantopus scaber</i> L. † (Nelmucha)	Asteraceae	Roots given internally.
14. Jaundice	<i>Centella asiatica</i> Urb. (Vondelaga)	Apiaceae	Leaves mixed with cumin seeds, sugar candy, almond, dry grapes, <i>khasakasi</i> and dates with coconut milk and used.

(Contd)

Table 3 – Ethno-medicinal plants and their mode of use in treating non-infectious diseases caused to local folk and their domestic animals in Bhadra Wild Life Sanctuary area —*Contd*

Ailments	Botanical name (Local name)	Family	Parts and mode of use
	<i>Gymnosporia montana</i> Benth.* (Thanasi)	Celastraceae	Extract of leaf mixed with cow milk and used up to 3 days early in the morning.
15. Menstrual disorder	<i>Erythrina indica</i> Lam. (Halwana)	Papilionaceae	Bark and flower powder mixed with milk and used for 2-3 days.
	<i>Centella asiatica</i> Urb.	Apiaceae	Leaf extract mixed with milk and taken 3 times a day for about 3 days.
	<i>Spondias pinnata</i> Kurz.* (Amate mara)	Anacardiaceae	Bark powder mixed with garlic, pepper and taken with milk.
	<i>Eugenia jambolana</i> Lam. (Nerale)	Myrtaceae	Infusion of bark made with water and used.
	<i>Asparagus racemosus</i> Willd. (Shathavari balli)	Liliaceae	Root powder mixed with fresh milk and used.
	<i>Hibiscus rosa-sinensis</i> L. (Dasavala)	Malvaceae	Flower infusion mixed with milk and used.
	<i>Phyllanthus niruri</i> L. † (Nelaneli)	Euphorbiaceae	Whole plant used as vegetable.
16. Scorpion sting	<i>Leucas aspera</i> Spr.	Lamiaceae	Leaves made into paste with lime juice applied externally.
	<i>Achyranthes aspera</i> L. † (Uttarane)	Amaranthaceae	Root paste made with lemon juice and applied.
17. Stomach pain	<i>Hemidesmus indicus</i> R. Br.*† (Sogade)	Asclepiadaceae	Whole plant washed thoroughly, ground with milk and used for 2 to 3 days.
18. Snake bite	<i>Artocarpus hirsutus</i> Lam.	Moraceae	Bark paste made with coconut oil and applied.
	<i>Ruta graveolense</i> L. (Nagadali)	Rutaceae	Root paste applied externally.
	<i>Malva sylvestris</i> L. † (Bendi gida)	Malvaceae	Extract of leaf mixed with lime juice and used.

(Contd)

Table 3 — Ethno-medicinal plants and their mode of use in treating non-infectious diseases caused to local folk and their domestic animals in Bhadra Wild Life Sanctuary area—*Contd*

Ailments	Botanical name (Local name)	Family	Parts and mode of use
	<i>Gymnosporia royleana</i> M. Laws.* (Chabbe)	Celastraceae	Root paste with cowmilk taken internally, also applied externally.
	<i>Ervatamia coronaria</i> Stapf	Apocynaceae	Root and bark infusion of <i>E.coronaria</i> and <i>Leucas aspera</i> leaves with root of <i>O. adscendens</i> and bark of <i>Artocarpus</i> mixed with milk and butter, filtered and used.
	<i>Ocimum adscendens</i> Wild. (Heddumbe)	Lamiaceae	
	<i>Calotropis procera</i> R. Br. (Biliekke)	Asclepiadaceae	About 3 drops of latex put on the bitten area and pressed downwards to bleed.
	<i>Rauwolfia serpentina</i> Benth.* (Sarpagandhi)	Apocynaceae	Roots and leaf bud crushed with milk and made into paste and used internally, also applied externally on the affected area.
Snake bite in cattle	<i>Leucas aspera</i> Spr.	Lamiaceae	Leaves with pepper and garlic chewed and spit into the nostril with force.
19. Thorn removal	<i>Calotropis procera</i> R. Br. (Biliekke)	Asclepiadaceae	Latex applied to the point where the spine or thorn is inserted, expels it within 24 hours
20. Ulcers	<i>Solanum nigrum</i> L. † (Kari kaki)	Solanaceae	Fruits mixed with mango seeds crushed into paste and used as tablets.
	<i>Cynodon dactylon</i> Pers. (Garike)	Poaceae	Rhizome powder mixed with milk and taken as tea.
21. Wounds and worms	<i>Holarrhena antidysenterica</i> Wall.	Apocynaceae	Bark paste made with water and applied.
Wounds and worms in cattle	<i>Leucas aspera</i> Spr.	Lamiaceae	Whole plant dugout early in the morning and made into paste with water applied externally and also taken internally.

(Contd)

Table 3 — Ethno-medicinal plants and their mode of use in treating non-infectious diseases caused to local folk and their domestic animals in Bhadra Wild Life Sanctuary area—*Contd*

Ailments	Botanical name (Local name)	Family	Parts and mode of use
22. Diabetes	<i>Ichnocarpus frutescens</i> (L.) R.Br. (Syamalatha)	Apocynaceae	Roots made into powder and taken with milk 2-3 times a day.
23. Toothache	<i>Amaranthus spinosus</i> L. † (Mullu harive)	Amranthaceae	Leaves burnt and made into ash, mixed with salt and applied on affected teeth and gums.
	<i>Solanum torvum</i> Sw. † (Sondekayi gida or Kadusunde)	Solanaceae	Smoke from the seeds inhaled.
	<i>Psidium guajava</i> L. † (Perale)	Myrtaceae	Leaves boiled with water and extract used for gargling twice a day.

* Plants endemic to the Western Ghats of India

† Edible plants

diseases. Srivastava & Rout²⁰ reported that this plant is used as a laxative and an appetizer, while Khanna & Mudgal²¹ reported its use for relieving fever in children. On the other hand, 'Gowlis' and 'Siddis' used this plant as a diuretic and also to relieve fever^{10,11}. However, the present survey indicated that this plant is used to deworm cattle.

Bhadra Wild Life Sanctuary was declared as protected area in the year 1974¹³. Under the protected area act, local communities were forbidden from residing there. Recently, residents living in the heart of the sanctuary are being rehabilitated to nearby urban areas. The implication of the rehabilitation is that these people will be forced to live in the urban areas and they might depend on the

popular allopathic medicine. This might result in the non-application of their local medicinal knowledge and deviation from their own ethnic knowledge of medicine which they followed for generations. In this paper, an attempt has been made to document traditional medicinal knowledge of the local communities of Bhadra Wild Life Sanctuary, which otherwise, would have been lost.

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