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Ethno-veterinary medicinal plant species of Vijayapur (Bijapur) district of Karnataka, India

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Abstract

An ethno-veterinary survey of Vijayapur district of Karnataka comprising five tehsil was conducted during February 2014 to June 2016. The purpose of this survey was to document the Ethno-veterinary medicinal plant species. The present study was initiated with an aim to identify Ethno-veterinary medicinal plant resources from traditional practitioners of Vijayapur district. There are about 13 species of angiosperms belonging to 13 genera and 11 families were found to be used.

Keywords: ethno-veterinary medicinal plant species, Vijayapur, Karnataka

Introduction

Animal husbandry dairying and livestock rearing have been integral part of Indian agriculture. The local available plants Used for the treatment of conventional diseases of livestock are generally called ethnoveterinary medicinal plants. Allopathic medicines are costly and inaccessible to rural community. Traditional herbal medicines are very cheap and easily available. To understand ailments is difficult task in animals; by symptoms traditional healers understand ailments. Ethno veterinary medicine deal with traditional animal health care which encompasses the knowledge, skill, methods practices concerning animal healthcare. Ethno veterinary medicine is developed by farmers in fields, rather than by scientists in laboratories (Gotruvalli manjunath *et al*). The present study was initiated with an aim to identify Ethno-veterinary medicinal plants resources from traditional practitioners of Vijayapur district to treat livestock diseases.

Material and Methods

Ethnobotanical Data collection

Ethno-veterinary medicinal plants survey conducted on February 2014 to June 2016. in Vijayapur district. For this, frequent field trips were made to 25 villages belonging to all 5 tehsils of the district. thirty-one traditional practitioners (29 men and 2 women) Data and information recorded in the standard questionnaire. Prior Informed consent (PIC).

Vocher specimen collection and identification

Collected data and information include, Vernacular name of traditionally used medicinal plants, part used, method of preparation and dosage. Medicinal plant species were photographed in the field. Plant specimens were identified consulting with experts, by referring Flora of Gulbarga District ^[7], three volumes of the Flora of Presidency of Madras ^[1]. The voucher specimens were stored at the herbarium centre, Department of post graduate studies and Research in Botany, Gulbarga University, Kalaburagi.

Data Analysis

The collected data were organized and relative frequencies citation (RFC=FC/N) is summarised in table and percentage were calculated for different plant parts were used to ethnoveterinary treatment.

Study Area

The Vijayapur district of Karnataka state is located between north latitude 16°01', 17°45', and east longitude 75°03', 76°29'. The district has its border with Belgaum, Bagalkot, Raichur, Gulbarga district and to north, Sholapur district of Maharashtra state.

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Vijayapur district is plain Deccan plateau, which is from 365-610 met height above sea level. This region is slope towards west to east. The river Doni, Krishna, Bheema, and their tributaries are flows according to the slope. The total area of Vijayapur district is 10,541 sq kms. There are five talukas of Vijayapur district i.e., Vijayapur, Muddebihal, Sindagi, Basavanbagevaadi and Indi. Bordered by the Bheema River in the north and the River Krishna in the south. The district consists of the dry and arid tract of the Deccan Plateau. The temperature varies between 42°C during summer and 15°C during winter season respectively. In May mean maximum temperature is 40°C. The climate of this region is arid, tropical and steppe type. The soil of Vijayapur district area is rich in content of basalt rock, magnetite, magnesium, aluminium and iron oxide. The Vijayapur district receives normal rainfall 578.0 mm and the vegetation of this region is mainly dry and deciduous and may broadly as vegetation on plains. The natural vegetation near Alamatti Dam area is like dry and hot having rich flora. Many local traditional practitioners collect the plants from this area to cure the diseases.

Result and Discussion

In the present account, 13 species of angiosperms belonging

to 13 genera and 11 families were reported for ethnoveterinary treatment. The predominant family is cucurbitaceae with 3 species. Data obtained from the survey is compiled in Table 1. All plant species scientific name, family, local name, Habit, Part used and mode of administration are provided. Different plant parts were used ethnoveterinary treatment. Among these leaves were used (75%), followed by fruit (8.3%), seeds (8.3%), root (8.3%), stem bark (8.3%), decreasing order. Among the reported ethnoveterinary plant species Relative frequency of citation (RFC) has calculated, the most frequently cited species were *Capparis decidua*, *Caesalpinia bunducella* and *Coccinia grandis* (0.25), *Citrullus colocynthis* (0.22). *Mangifera indica* and *Ruellia humilis* (0.19), *Argemone maxicana* and *Ipomea obscure* (0.16.) 12% ethnoveterinary medicinal plant species were reported by less than five informants. In Karnataka, Ethno-veterinary medicine practice studies conducted in Uttar Kannada [4], Hassan [3], Chitradurga [6], Shimoga [5], districts. However Ethno-veterinary medicine practice study in Vijayapur (Bijapur) [2] district has not been reported. Most of the people dependent on traditional herbal medicine because availability of effective drug plants. Hence, these plants can be taken up for further pharmacological and clinical studies.

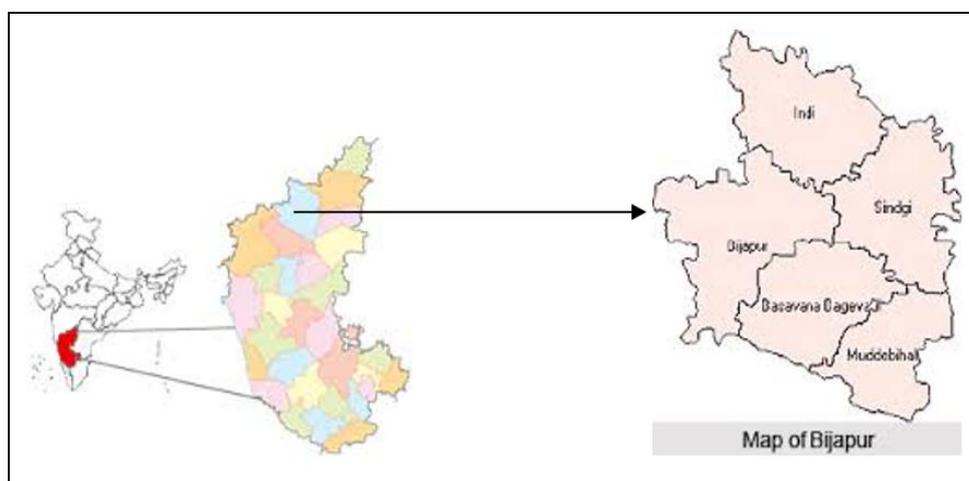


Fig 1: Map of the study area

Table 1: Ethno-Veterinary medicinal plant species used to treat lives stock diseases of vijayapur (Bijapur) district

Scientific name	Family	Local/ Vern name	Habit	Part used	RFC	Ailment	Mode of administration
<i>Argemone mexicana</i> L. HGUG-5029	Papavaraceae	Golalaki gida	Herb	Root	0.16	Swelling of stomach and fever	Fist of leaves ground and feed the cattle
<i>Biophytum sensitivum</i> HGUG-5039	Oxalidaceae	Olamuuchaka	Herb	Leaves	0.09	Retention of placenta	Handful of leaves, <i>Coccinia grandis</i> leaves ground and one aracanut feed with bread
<i>Capparis decidua</i> (Forsk.)Edgew HGUG-5043	Capparadaceae	Nemathyan Kanti	Shrub	Leaves	0.25	Ectoparasites (Ticks and mites)	Ground and sieve the young leaves apply on infected part.
<i>Caesalpinia bunducella</i> (L.) Roxb HGUG-5041	Fabaceae	Gajaga	Shrub	Fruit	0.25	Ectoparasites (Ticks and mites)	Five fruit, Pinch of Carom seed Garlic and 1 gm of Asafoetida ground and given to drink
<i>Citrullus colocynthis</i> (L.) Schrad HGUG-5053	Cucurbitaceae	Kadukavadi	Climber	Seeds	0.22	Stomach ache	Feed powder of seeds of two fruits
<i>Coccinia grandis</i> (L.) Voigt HGUG-5055	Cucurbitaceae	Thonde kaayi	Climber	Leaves	0.25	Crepitation swelling over hip, back and shoulder	Handful of leaves, fist of solanum nigrum leaves and pinch of salt ground and apply
<i>Cocculus hirsutus</i> (L.) Diels	Ascepidaceae	Chat tappal	Herb	Leaves	0.12	Blood dysentery	To feed leaf extract.

HGUG-5056							
<i>Ipomoea obscura</i> (L.) Ker Gawl. HGUG-5073	Convolvulaceae	Gundeli thappal	Climber	Leaves	0.16	Blood dysentery	Handful of leaves, 5 pepper, 5 cardomum ground wix with geggery water and feed until cure
<i>Limonia acidissima</i> HGUG-5077	Rutaceae	Balula Kaayi	Tree	Leaves	0.12	Skin disease	Handful of leaves and <i>Cocculus pendulus</i> leaves ground and applied on skin
<i>Luffa acutangula</i>	Cucurbitaceae	Kahi heerekayi	Climber	Leaves	0.12	Ectoparasites (Ticks and mites)	Ground the handful of leaves and apply on infected skin
<i>Mangifera indica</i> L. HGUG-5078	Anacardaceae	Mavin gida	Tree	Stem bark	0.19	Blood dysentery	20 gm of inner bark, 20gm bark of <i>Acacia leucophloea</i> , 20 gm bark of <i>Acacia nilotica</i> ground and 50ml of edible oil mixed well filled in bottle containing water fed to the cattle
<i>Physalis minima</i> L. HGUG-5090	Solanaceae	Kuppasa kaki	Herb	Leaves	0.16	Fever	Handful of leaves, five flowers of <i>Calotropis gigantea</i> , five pepper, pinch of <i>Acoromus calamus</i> , fist of <i>Aristolochia bracteata</i> leaves and fist of <i>Leucas aspera</i> leaves ground and squeezed in mouth and ear.
<i>Ruellia humilis</i> Poir. HGUG-5099	Acanthaceae	Kaachi thappal	Herb	Leaves	0.19	Bone fracture	500 gm leaves ground apply on leg and tie with cloth and apply milk of dry banana

*Capparis decidua**Caesalpinia bunducella**Coccinia grandis**Ipomoea obscura**Limonia acidissima**Ruellia humilis*

Conclusions

Ethno-veterinary medicinal plants survey conducted on February 2014 to June 2016 in Vijayapur district. The main purpose of this survey was to document the traditional use of Ethnoveterinary medicinal plants in Vijayapur district. 13 species belonging to 13 genera and 11 families were found to be used. The scientific name, family, local name, habit along with part used and mode of their administration are provided. This traditional knowledge can transfer from one generation to generation. The study also suggested that the present information on Iethnoveterinary medicinal plant species used by the traditional practitioners of Vijayapur district may be used for phytochemical and pharmacological research in future for the development of new sources of drugs.

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