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RESEARCH ARTICLE

ETHNOVETERINARY MEDICINAL PLANTS USED FOR ANIMAL THERAPY BY THE TRIBALS OF AMRABAD TIGER RESERVE FOREST OF NAGARKURNOOL DISTRICT, TELANGANA STATE, S. INDIA

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Abstract

Medicinal plants finds a significant role in the livestock health care system for a long period especially in remote areas. On an ongoing work on Ethnoveterinary studies, the present paper deals with the documentation of the medicinal plant species used for the treatment of various veterinary health diseases of the livestock practiced by the indigenous people of the Amrabad Tiger reserve forest of Nagarkurnool district of Telangana state. Periodic field trips, semi structured questionnaires and group discussions were conducted during Jan. 2018-July 2018 to collect the data. A total of 12 medicinal plants referable to 9 families have been recorded with ethnoveterinary uses. These include 6 herbs and 6 tree members. Among the plant families, Solonaceae represented by three genera, Apocynaceae by two, Capparidaceae, Moraceae, Acanthaceae, Lecythidaceae, Asclepiadaceae, Fabaceae, and Rhamnaceae by one genus each. Leaves, bark or whole plant were the consistently used parts. The study highlights that the local people of Amrabad Tiger Reserve forest of Nagarkurnool district holds rich ethnoveterinary knowledge to cure livestock diseases.

Introduction:-

"Livestock" plays an important role in the human survival. Domesticated animals are one of the vital economic sources forming integral part of the rural community. Since, the time immoral many medicinal plants are in usage for human well-being. Besides human well-being, plants are also in usage in their domesticated animal health care termed as "Ethnoveterinary medicine". The ethnoveterinary practices are common among the rural areas in many parts of the country, due to poor availability of modern healthcare facilities and poverty of rural people, they depend on local medicinal plants for their domesticated animal health care. Work on Ethnoveterinary and Ethnobotanical studies are known by some of the earlier workers like, Corkle, (1995), Gamble &. Fischer (1957), Manjunatha Prashanth kumar & Shiddamallayya Nagayya (2017), Naik et al., (2012), Rajkumar & Shivanna (2012), Jain, (2000), Ramesh et al.,(2019), Meen et al., (2020), Basha et al.,(2017). Limited data is available on studies related to ethnoveterinary medicinal plants and practices among the rural areas of Telangana state. Therefore, documentation of Ethnoveterinary medicinal plants of Amrabad Tiger reserve forest of Nagarkurnool district of Telangana state was undertaken and the present paper is an ongoing research work which deals with the documentation of the Ethnoveterinary medicinal plants, their preparation and application methods used by traditional healers in treating

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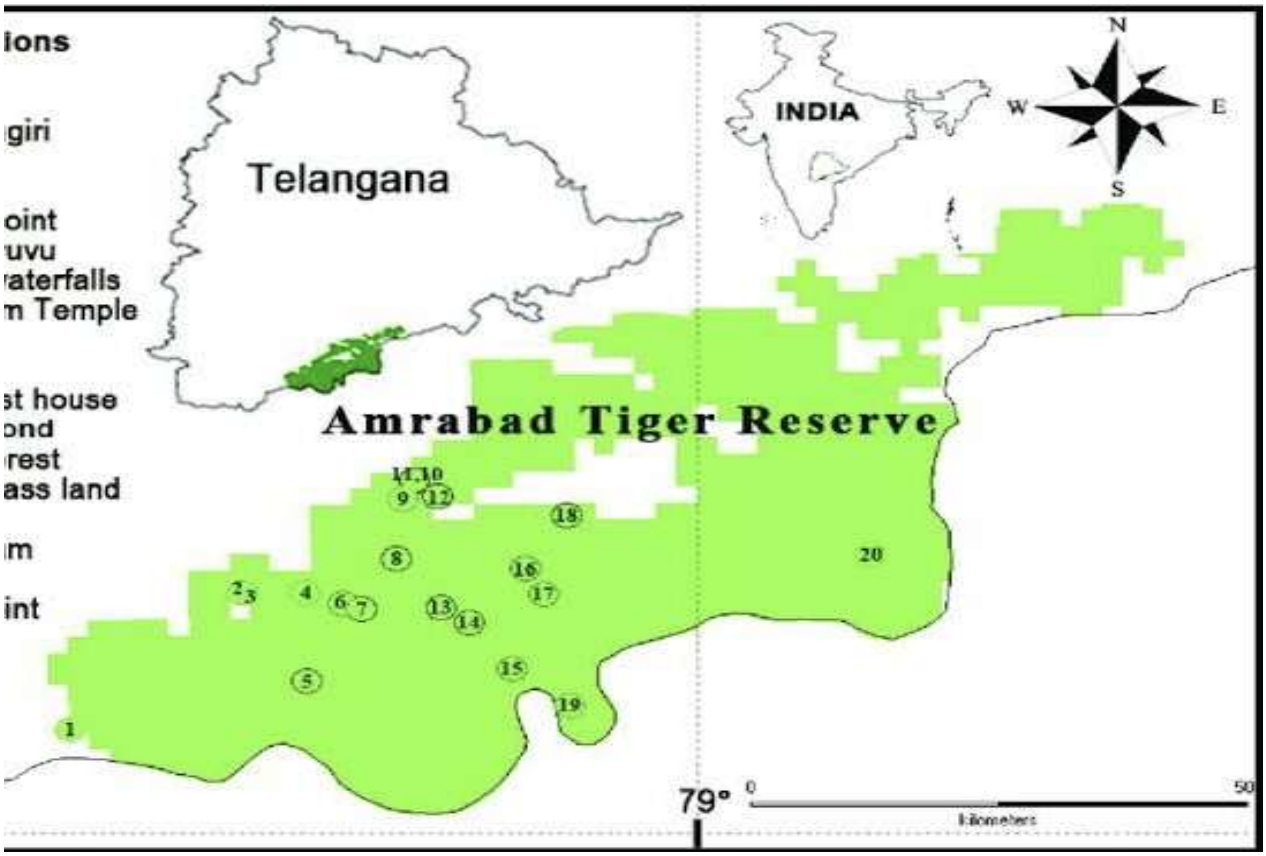
different animal diseases during Jan. to July 2018 in the study area of Amrabad Tiger reserve forest of Nagarkurnool district of Telangana state.

Materials And Methods:-

Study area:

The Amrabad Tiger Reserve which is part of the Nallamala Forest track has rich biological diversity with several endemic species of flora and fauna. This Forest tract is home to the largest number of Tigers in Telangana State. This Tiger Reserve (ATR) is one of the largest tiger reserves in India that extends about 2611.4 Sq Km over Nagarkurnool, and Nalgonda districts of Telangana State (Map-1). Major reservoirs like the Srishailam Dam and Nagarjunsagar Dam are fed by the river Krishna and its several perennial streams that originate in the Tiger Reserve. The Tiger researve which lies in the "Nallamala hills", is home for wide variety of medicinal plants occurs naturally. Presence of indigenous cattle breed "Poda thurupu cattle" (Thurupu edlu) which is a unique cattle breed is endemic to Amrabad area. **T**he tribal people of this region include "Lambadas" and primitive tribes "Chenchus" .



Map 1:- Showing the geographical location of the Amrabad Tiger Reserve of Nagarkurnool district of Telangana state.

Figure 1:- Interacting with the healers and local elders of the study area.

Data Collection:

Information of ethnoveterinary medicinal plants was obtained through periodic field trips, semi structured questionnaires and group discussions with the local healers and field observations conducted during Jan. 2018-July 2018 (Fig.-1). The selected healers were well-known in the community due to their long practice in providing services related to traditional veterinary medicinal plants. The healers had a very high intention to keep their traditional knowledge secrete and none of them was ready to transfer their knowledge. With the help of the locals elders we have convinced the healers to gather the information.

A total of 09 knowledgeable informants with age group ranging from 35 to 71 years were selected from the study area with the support of local elders. The interviews conducted in Telugu language, the widely spoken local language in the area. Data on socio-demography of informants, local names of medicinal plants used in ethnoveterinary practices, parts used, preparation methods, mode of applications and diseases treated were collected. Voucher specimens of medicinal plants reported during interviews were collected, properly pressed, dried and identified by their scientific names and were deposited at U.C.S.S, O.U.

Results and Discussions:-

Twelve plant specimens having ethnoveterinary medicinal value were botanically classified and distributed into 09 families. Among the plant families, Solonaceae represented by three genera, Apocynaceae by two, Capparidaceae, Moraceae, Acanthaceae, Lecythidaceae, Asclepiadaceae, Fabaceae, and Rhamnaceae by one genus each. Leaves, bark or whole plant were the consistently used parts. Herbs were the most harvested for ethnoveterinary medicinal purpose and were followed by trees. A summary of the botanical and local names of the recorded Ethnoveterinary medicinal plants, and their indications, parts used, dosage used by the local healers, preparations, and routes of administrations is presented in Table-1.

Table 1:- Ethnoveterinary Medicinal Plants used for the treatment of Livestock ailments in Amrabad region of Telangana state.

S.No	Botanical name	Family	Local name	Part used	Ailment Treated	Dosage	Route
1	*Solanum xanthocarpum* Schrad. & Wendl.	Solanaceae	Ringni jhad Kantakari , nelamulaka)	Leaf	Wounded Eyes	Crush the leaf with salt and collect the extract	Extract poured in the eyes
2	*Capparis sepiaria* L.	Capparaceae	Nalla uppi	Bark	Cold/Sick	Burn the bark in the stones and mix with the urine and filter it	oral
3	*Ficus hispida* Linn.	Moraceae	Brahma medi	Fruit	Strength	Crush the fruit & leaf with the turmeric, leave for 3 days in half litre oil	Oral (feed about 10gm before the ox graze)
4	*Datura quercifolia* Kunth.	Solanaceae	Nalla ummettha	Leaf	Broken horns	Grind the leaf into paste	Tie to the horn
5	*Holarrhena antidysenterica* Linn.	Apocynaceae	Kola mukka Chekka	Bark	Cough and sneezing	Grind both bark and whole plant and feed empty stomach	oral
6	*Andrographis paniculata* (Burm.f.)	Acanthaceae	Nalemi (Nelavemu)	Whole plant	Gastrointestinal nematodes	Grind the fresh leaves in to juice	oral
7	*Nicotiana tabacum* L.	Solanaceae	Pogaaku	Leaf	Broken bones	Grind both leaves	Apply on Bones
8	*Careya arborea* Roxb.	Lecythidaceae	Budda dharmi	Bark	Loose motions	Grind and feed the filtrate	oral
9	*Gymnema*	Asclepiadaceae	Podapatram	Leaf	Cataract	Grind	Apply in

	***sylvestre* R.Br.**		**aaku**			**the leaf with dry ginger powder , apply every night for 4 days**	**eyes**
10	***Albizia amara* (Roxb.)Boivin**	**Fabaceae**	**Narling aaku**	**Leaf**	**Broken legs , stiffness in the legs**	**Grind the leaf & spread on a cloth and tie on the broken legs tightly**	**Bandage on legs**
11	***Wrightia tinctoria* R.Br.**	**Apocyanacea**	**Paala kursha**	**Leaf**	**Water in eyes**	**Crush the leaf and put the extract in eyes**	**In the eyes**
12	***Ziziphus maurtiana* Lam**	**Rhamnaceae**	**Regi mullu**	**thorn**	**Bare tail**	**Prick the tail and apply the milk**	**Application on tail**

Conclusion:-

The study highlights that the local healers of Amrabad Tiger Reserve forest of Nagarkurnool district holds rich ethnoveterinary knowledge to cure livestock diseases. The knowledge is passed from generation to generation in an oral manner. Without being properly documented this information it could easily be lost or distorted. The plant species need to be tested for their medicinal properties and validated their active ingredients in order to recommend effective preparations and treatments to this community.

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Competing Interests

The authors declare that they have no competing interests.

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