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Ethnoveterinary practices for reproductive ailments by villagers nearby Ambabarva Wildlife Sanctuary, Buldhana District, MS, India

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ABSTRACT

The Amba Barwa Wildlife Sanctuary is situated in satpuda hills of Buldhana District of Maharashtra. The current study is based on a comprehensive field survey that the authors conducted in this area for ethnoveterinary applications, with a focus on reproductive problems, between June 2019 and July 2022. Traditionally, local and tribal people in this area have used locally accessible ethnoveterinary medicines to treat a variety of illnesses affecting the animal populations. This study report contains data gathered from 68 Vaidus or informants, in the specified region. The 21 families comprise a total of 25 plants that were mostly used to treat reproductive diseases and abnormalities in domestic animals, such as anestrus condition, placenta retention, uterine prolapse, etc.

Keywords: Reproductive ailments, Ethnoveterinary, Ambabarva Wildlife Sanctuary.

INTRODUCTION

Since human civilization man use medicinal plants to cure various ailments of cattle. A cattle farming is one of the most income generating occupation in India. It also helps in agricultural work and maintenance in various ways to enhance Indian economy even present day. Ethnoveterinary medicine, deals with traditional animal health care which encompasses the knowledge, skill, methods, practices concerning animal health care (Kumar and Nagayya, 2017). These ethnoveterinary medicines are used by villagers traditionally to treat animals. Many authors documented traditional ethnoveterinary practices of Buldhana district Maharashtra State (Marathe *et al.*, 2010; Patil *et al.*, 2010; Pocchi, 2013; Patil and Rothe, 2017). This is totally based on knowledge acquired by traditional healers from his ancestry. This indigenous knowledge of the veterinary health care is sometimes also be transmitted orally from one generation to next generation. Thus, it is time need to conserve the whole documentation of these indigenous knowledge.

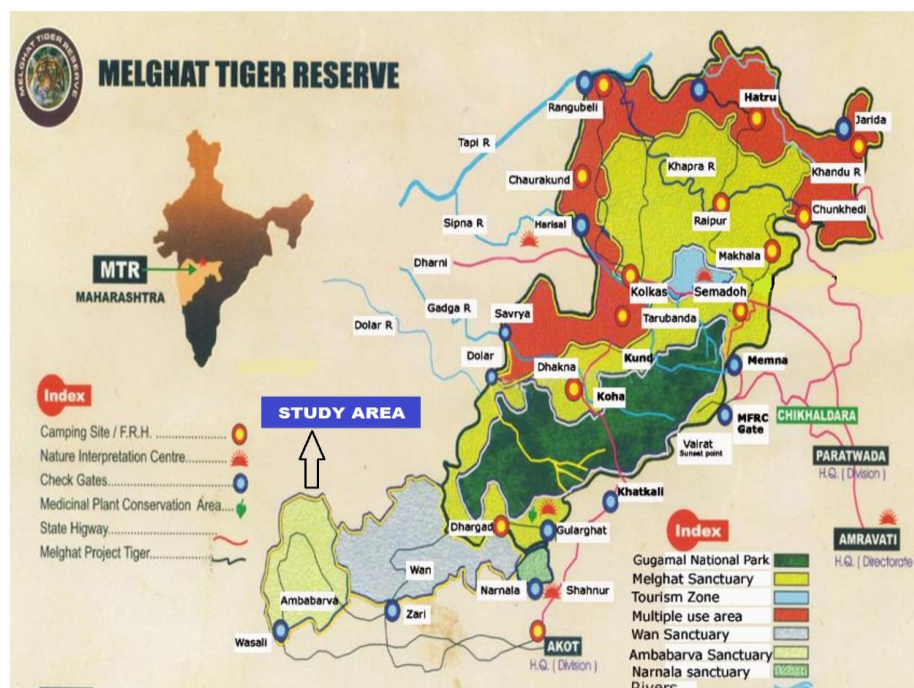


Fig. 1 Study area of Ambabarva wildlife Sanctuary, Buldhana district

Study Area:

Ambabarva Wildlife Sanctuary is rich biodiversity region. It is situated in the western side of Melghat Tiger Reserve in the Sangrampur Tahsil of Buldhana district of Maharashtra state, India. It includes reserve forest of 102.10 Km². Protected forest 22.62 Km² and remaining is under cultivation and inhabited by tribal *Ambabarva*, *Chunkhadi* and *Rohinkhidki* of Sangrampur Taluka of Buldhana District (Fig. 1).

It is a land of small holdings and 70% of population practice subsistence agriculture, but the most tribal and farmers are not self-sufficient. They have to rear domestic animals such as oxen, cows, buffaloes, goats and sheep. As per the 20th livestock census (2019), there are total numbers of cattle was 461529, buffaloes were 134148, sheep were 125280 and goats were 364689 in the Buldhana district (Anonyms (2019)).

MATERIAL AND METHODS

Extensive field survey was done to document ethnoveterinary practices which are used by ethno-veterinary medicine practitioners, rural and tribal people of Jalgaon Jamod & Sangrampur Taluka of Buldhana district resided near Ambabarva Wildlife Sanctuary. A survey sheet/ data sheet was carefully prepared for documentation. Weekly tours are

organized with the local informants to observe the ethno-veterinary practices in rural as well as tribal areas of the region. Local or tribal people were interviewed in most formal way. The ethno-veterinary medicinal plant species will be collected during the field trips and will be brought to the laboratory. Plant species will be identified using standard floras (Naik, (1998); Sharma *et.al.* (1996); Singh & Karthikeyan, (2000); Diwakar & Sharma (2000); Singh *et al.*, (2001). Herbarium specimens were prepared and deposited in the Herbarium, N. E. S. Science College, Nanded.

RESULTS AND DISCUSSION

In present study, 25 ethnoveterinary medicinal plant species of 21 families have been recorded for their important ethnoveterinary medicinal practices in study area (Table 1, Fig. 2). The total of 68 informants were systematically interviewed at their local home places through convenience sampling. Among these 57 informants were old, young informants 11 were between the age of 30-45 years. The majority of informants were 80 years & above. During the interrogation it was observed that old & illiterate group herbal healers have more traditional knowledge than young and educated class. All the informants were interviewed in local languages. In collected information 1 shrub, 2 climbers, 11 herbs and 11 trees (Fig. 3).

Table 1: Medicinal plants and their traditional utility to treat various reproductive diseases of livestock in Jalgaon (J) & Sangrampur Tahsil

Sr. No.	Plant name/Local Name/Life Form	Family	Plant part used and mode of Administration
1	<i>Allium sativum</i> L. Local Name-Lahsun (Herbs)	Amaryllidaceae	Bublets are given to cure anestrus condition
2	<i>Butea monosperma</i> (Lam.) Taub. Local Name-Palas (Tree)	Fabaceae	Flowers are given orally to retain placenta
3	<i>Colocasia gigantea</i> (Blume) Hook f. Local Name-Bramha Raksha (Herbs)	Araceae	Leaves Cake with Gram flour is given for pregnancy/ conceived 1/4 th part of leaf along with jawar cake given in anestrus condition Leaves paste recommended Uterine prolapsed
4	<i>Commiphora wightii</i> (Arn.) Bhandari Local Name (Tree)	Burseraceae	Gum along with jaggery is given to cure anestrus condition
5	<i>Cyphostemma setosum</i> (Roxb.) Alston Local Name-Karmod Kand (Climber)	Vitaceae	Tuber paste recommended Uterine prolapsed
6	<i>Datura innoxia</i> Mill. Local Name-Dhotra (Herb)	Solanaceae	Fruits/seeds given to cure anestrus condition
7	<i>Dendrocalamus strictus</i> (Roxb.) Nees Local Name-Bambu (Tree)	Poaceae	Leaves are given orally to retain placenta
8	<i>Drimys indica</i> (Roxb.) Jessop Local Name-Ran kanda (Herbs)	Asparagaceae	Bulb paste recommended Uterine prolapsed
9	<i>Ficus benghalensis</i> L. Local Name-Vad (Tree)	Moraceae	Young prop roots given to cure anestrus condition
10	<i>Hibiscus cannabinus</i> L. Local Name-Ambadi (Herbs)	Malvaceae	Leaves + Jawar cake/grains are given orally to retain placenta
11	<i>Limonia acidissima</i> Groff. Local Name-Kawat (Tree)	Rutaceae	Leaves +oil given orally to retain placenta
12	<i>Linum usitatissimum</i> L. Local Name-Jawas (Herbs)	Linaceae	Seeds are given orally to retain placenta
13	<i>Madhuca longifolia</i> (J. Koenig ex L.) J.F. Macbr. Local Name-Moha (Tree)	Sapotaceae	Flowers/ seeds are given orally to retain placenta
14	<i>Melia Azadirachta</i> L. Local Name-Bakana Neem (Tree)	Meliaceae	Leaves are given orally to retain placenta
15	<i>Mimosa pudica</i> L. Local Name-Lajalu (Herbs)	Fabaceae	Leaves paste recommended Uterine prolapsed
16	<i>Mirabilis jalapa</i> L. Local Name-Kalahari (Herbs)	Nyctaginaceae	Tuberous roots paste is applied to cure Uterine prolapsed
17	<i>Morus alba</i> L. Local Name-Tuti (Tree)	Moraceae	Leaves paste recommended Uterine prolapsed
18	<i>Pergularia daemia</i> (Forssk.) Chiov. Local Name-Utaran (Climber)	Apocynaceae	Leaves are given orally to retain placenta
19	<i>Phoenix dactylifera</i> L. Local Name-Date palm (Tree)	Arecaceae	Seeds along with clove in wet flour given orally to retain placenta
20	<i>Ricinus communis</i> L. Local Name-Erandi (Shrub)	Euphorbiaceae	Leaves are given orally to retain placenta
21	<i>Striga angustifolia</i> (D. Don.) C. J. Saldanha Local Name-Taukala (Herbs)	Orobanchaceae	Seeds used in Pranayradhan (Sexual stimulation) i.e. anestrus condition
22	<i>Tectona grandis</i> L. f. Local Name-Sag (Tree)	Lamiaceae	Root along with jaggery is given to cure anestrus condition Seeds are given orally to retain placenta
23	<i>Tragia involucrata</i> L. Local Name-Aagya (Herbs)	Euphorbiaceae	Root is given along with jawar cake to cure anestrus condition Leaves paste recommended Uterine prolapsed
24	<i>Tridax procumbens</i> L. Local Name-Kamarmodi, Alguja (Herbs)	Asteraceae	Whole plant paste is applied to cure Uterine prolapsed
25	<i>Triticum aestivum</i> L. Local Name-Gahu (Herbs)	Poaceae	Sprouted grains are given to cure anestrus condition



Fig. 1 Photo plate : Medicinal plants used to treat various reproductive diseases of livestock in Jalgaon (J) & Sangrampur Tahsil

- a.** *Colocasia gigantea* (Blume) Hook f. **b.** *Datura innoxia* Mill. **c.** *Dendrocalamus strictus* (Roxb.) Nees
d. *Hibiscus cannabinus* L. **e.** *Mimosa pudica* L. **f.** *Phoenix dactylifera* L.
g. *Pergularia daemia* (Forssk.) Chiov. **h.** *Striga angustifolia* (D. Don.) C. J. Saldanha **i.** *Tectona grandis* L.f.

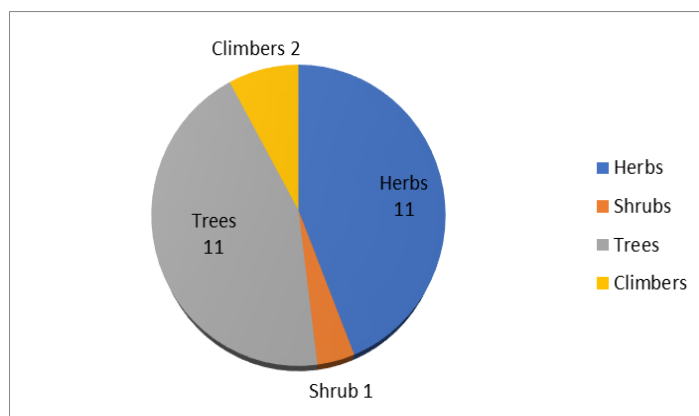


Fig. Pie Diagram: Shows habit diversity of Medicinal Plant species

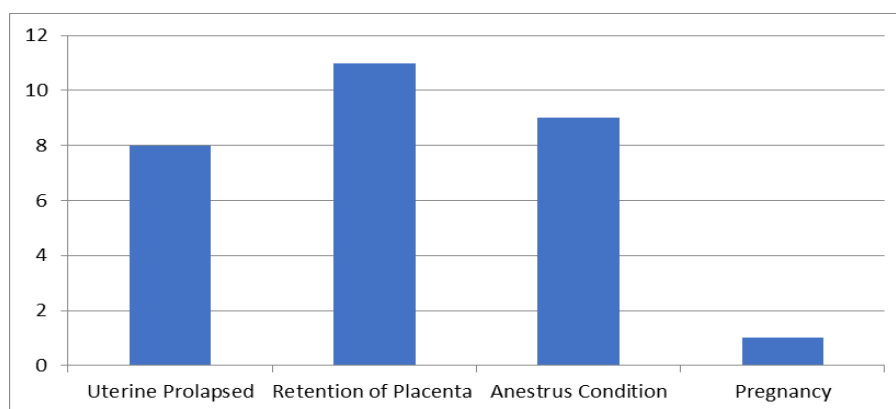


Figure: I Shows disorders and Number of Plant Species used by local people

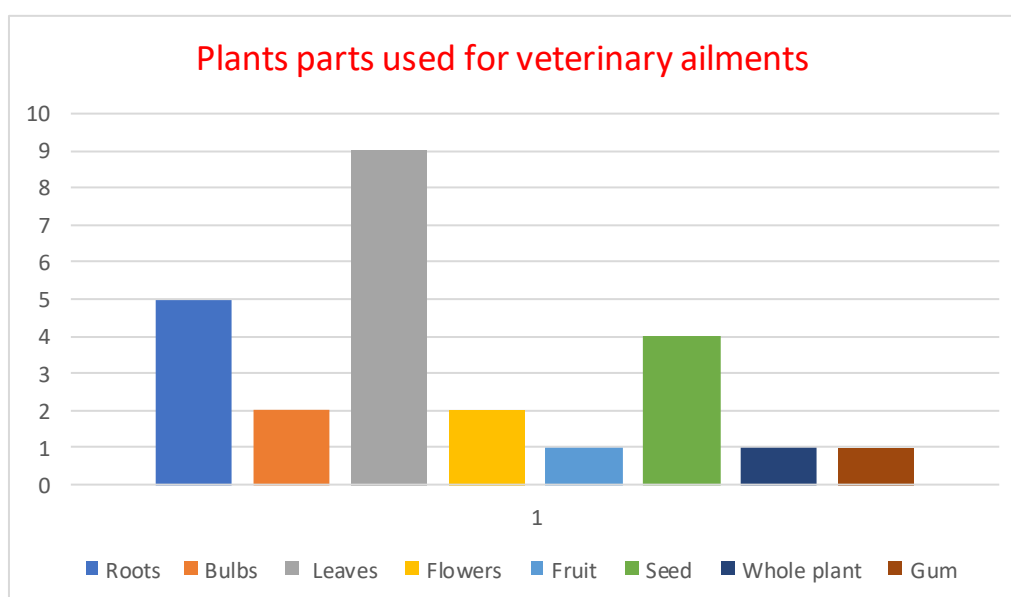


Figure: II Shows plants parts used for veterinary ailments.

Out of which plant's parts used for reproductive ailments were roots 5, bulbs 2, leaves 9, flowers 2, fruit 1, seed 4, whole plant 1 and other plant material as a gum 1 (Fig. 5). Disorders and Number of Plant Species used by local people are shown in Fig.4. Different herbal medicines are used by local herbal practitioners to treat their livestock in different regions of our country but some used herbal ingredients are common in many regions. Reproductive disorders are very dangerous and becoming worldwide health problem in livestock. Rather than synthetic drugs the herbal medicine play very effective role in reproductive ailments.

CONCLUSION

Medicinal herbs are used by the Ambabarva indigenous population to heal their livestock. 25

medicinal plants were used by the herbal healers to treat ailments related to reproduction. While the knowledge and applications of these plants have been mostly lost, farmers in isolated communities and (Adhivasi) folk men have managed to retain our ancient knowledge of ethno-veterinary treatment. Oral transmission is typically used to pass it on from generation to generation. Research into ethno-veterinary medicines has a wide range of opportunities. Important medicinal plants include *Pergularia daemia*, *Madhuca longifolia*, and *Hibiscus cannabinus* are beneficial for helping placenta retention. Most commonly used plants to treat anestrus conditions include *Tectona grandis*, *Tragia involucrata*, *Triticum aestivum*, *Ficus benghalensis*, and others. *Tragia involucrata*, *Morus alba*, and *Cyphostemma setosum* are used to treat uterine prolapses. The current work makes a significant contribution to preventing the extinction of

knowledge based on native flora. This information is extremely valuable and has to be shared widely in order to preserve and propagate medicinal plant species.

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