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Ethanobotanical Studies on *Balanites aegyptiaca* (L.) Del. among the Folk Peoples of Nizamabad District, Telangana State

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Abstract

The study documents indigenous *Balanites aegyptiaca* used for folk and tribal medicine in Nizamabad district medicinal system. A survey was undertaken amongst the village and tribal peoples in concern district and it was found that the plant is commonly used for certain diseases states like conception, spermatogenesis, tonic, leprosy, eye infection, children hiccough, vomiting, hernia, eye infection, to reduce intestinal worms in cattle's and the fruits are used as Fish poison.

Keywords *Balanites aegyptiaca,* Ethnobotany, Medicinal plants

INTRODUCTION

Nizamabad district is one of the 10 districts of Telangana state. It lies between 18-5' and 19' of the northern latitudes, 77-40' and 78-37' of the eastern longitudes. The district is bounded on the North by Adilabad district, East Bay Karimnagar District, South by Medak district and West by Bidar District of Karnataka and Nanded district of Maharashtra. The geographical area is 7956 Sq. Km's i.e. 19, 80,586 acres spread over 923 villages in 36 mandals. Major rivers, such as, **Godavari** and **Manjeera** crosses Nizamabad district with some other streams Kalyani, Kaulas, Peddavagu also exist in the district.

Lambada, Naikpod, Yerukalas are major tribal groups in the area. Besides these tribal groups, several other communities are residing as forest dwellers.

MATERIALS AND METHODS

For documentation of ethno-botanical information and collection of plant material, several tours were undertaken during the period from 2012 to 2014. Data presented here is based on personal observations and interviews with traditional healers (*Viz.* Medicine men, Hakims and old aged people) and the methodology used is based on the methods available in the literature [8,12].

Ethnobotanical information about *Balanites aegyptiaca* was documented in data sheets. For collection of plant material, local informer accompanied to authors. Plant identification was done by using regional floras and flora of adjoining districts and The Herbarium no. is HDCA 1076 [6,16].

Plants used were compared with major published literature [1-5, 9-11, 13-15, 17-20]. Uses which are not mentioned in the literature are considered as uses less known

in India and are marked by asterisks(*) in the present paper.

RESULTS AND DISCUSSION

The plants that have been authenticated earlier for various diseases and ailments in the study are included below. The results show that gender and age class differ in their traditional knowledge with regard to medicinal plants reported. Old males had more traditional knowledge about medicinal plants and their uses than females. This may be attributed to their involvement in trade related activities. In most of the cases the older people were noted as being better informants and the vivid reason for this may be their personal experience of using these plants since old times. Respondent's young age were less aware of the potential of medicinal plants than their older counterparts who have gathered knowledge from the point of view of their traditional health care and their day to day practices. This difference in the perception of the two age classes is a result of knowledge loss over time. Since ancient times plants have been indispensable sources of both preventive and curative traditional medicine preparations for human beings and livestock. The medicinal and edible plant *Balanites aegyptiaca* is used in different areas of Nizamabad district.

Ethnobotanical uses of *Balanites aegyptiaca*: -

Medicinal

1. To avoid conception: Root powder with 'hing' (*Ferula asafoetida)* powder in taken equal proportions, and few drops of *Piper betle* leaf juice crushed together and made in to pills, taken 2- 4 pills once a day for 9 days, soon after the menstruation is over.
2. *Spermatogenesis and tonic: One table spoon of powder of seeds with sugar taken orally once a day for 30 days.
3. *Leprosy: 1 small glass of extract of stem bark taken early morning with empty stomach for 41 days.
4. Eye infection: 3-4 drops of fruit juice put in eye weekly twice for 3 weeks**.**
5. *Children Hiccough & Vomiting: Fruit, with *Limonia acidissima* leaf juice and *Cuminum cyminum* seeds powder mixed together and, 1 tea spoon given orally with mother's milk for check hiccough & vomiting.
6. *Hernia: Root paste applied externally twice a day until cure hernia.

Veterinary medicinal

1. Eye infection of cattle: 10-15 drops of fruits juice put in eye twice a day until cure.
2. Intestinal worms: 50 ml juice of single fruit given orally once a day for three days to cattle.

Fish poison: Stem bark and fruit used as a fish poison.

Phytochemistry

The phytochemistry of its root, stem bark, leaves, fruit and seed has been studied by different workers. The information obtained suggested that *B. aegyptiaca* is a rich source of saponins that are glycosides consisting of sugar residues (one or more units of glucose, galactose, etc.) linked through oxygen with complex multiring compounds usually containing 27–31 carbon atoms. The aglycone part, which is also called sapogenin, is either a steroid (C27) or a triterpene (C30) [7]. Saponin containing plants are used in folk medicine, especially in Asia, and are intensively used in food, veterinary and medical industries. *B. aegyptiaca* contains different types of saponins, namely, balanitin[1-7]. The present investigation has brought to light certain little known potential ethno medicinal plants of therapeutic value employed to cure conception, spermatogenesis, tonic, leprosy, eye infection, children hiccough, vomiting, hernia and eye infection of cattle, reduce intestinal worms in cattle and the fruits are used as a Fish poison. We think that the present status of the economically and medicinally important plants of the study area needs to be determined in order to develop plans for their protection. Proper documentation of indigenous knowledge about the plant could be supportive in achievement of objectives. As every year a considerable amount of foreign exchange is spent for the import of drugs and other products, sustainable utilization of indigenous drug resources in local pharmaceutical and herbal industries will increase the importance of the plant resources of these areas. Utilization of indigenous drug resources will increase the importance of the local industry on one hand and minimize the expenditure incurred on the purchase of foreign drugs on the other. And we are also giving the phytochemistry of *Balanites aegyptiaca.*

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