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Ethnomedicinal Studies of Some Weeds of Ulhasnagar

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A B S T R A C T

The aim of the present work was the identification and documentation of ethnomedicinal weeds growing on barren land in Ulhasnagar region of Thane district. Our survey was also aimed at the possibility of discovering new ways by which such plants could be better utilized for the welfare of human health. A total of 75 species of plants representing 65 Genera and 27 families were collected. In addition to the first hand collection of ethnomedicinal information from the inhabitants of the area, additional traditional uses were obtained through a study of the pertinent literature. These results suggest the weeds of these fields were mostly ones which were common, unwanted and easily grown in any place. However, our results also show that there are many ways of properly utilizing such weedy species in the promotion of human welfare. Moreover, the collection of these medicinal weeds provided farmers with a most welcomed additional income.

Introduction

In earlier times, all drugs & medicinal agents were derived from natural substances. Most of these remedies were obtained from wild herbs, referred to as weeds. Weed is considered undesirable, unattractive, troublesome, growing where it is unwanted. Biodiversity of weeds is a good indicator of the net effect of environment change. The present study was carried out in Ulhasnagar located at 19° 22' N ; 73° 15' E , about 60 km away from Mumbai. Main aim was to unfold the

importance of ethno-medicinal weeds and to create an environmental awareness among the local people. Ethno-medicine is the use of plants and their properties by human beings as medicines (Jain, 2004).

Materials and Methods

The survey of medicinal plants was done by frequent visits fortnightly, to the different location in and around Ulhasnagar throughout each growth season. The

information was collected from different villagers, old knowledgeable people, traditional healers/vaidyas who use the plants for medicinal purpose. Ethnomedicinal data was collected through interviews and discussions among the local practitioners in their local language, according to the methodology suggested by (Jain, 2004) and (Ganesan, et al., 2004). The specimens were identified with the help of Flora of Maharashtra (Almeida, 2001). A literature survey was carried out for cross checking/compilation of existing information on the medicinal value of weeds.

Results and Discussion

Ethnomedicinal preparations are the traditional medicines possessing bio-active

chemicals without a side effect and hence they are very much popular. The species belonging to families Asteraceae and Convolvulaceae were abundant, herbaceous life forms were most frequently used. *Achyranthes aspera*, *Calotropis* spp., *Ricinus communis*, *Tridax procumbens*, *Lantana camara* are the leading species used as remedies against various ailments. Most of the species are used as antirheumatic, antipyretic, for respiratory disorders, skin diseases, hemorrhoids and as diuretic. Some of the species are vulnerable and endangered. This attempt describes traditional uses of the medicinal weeds and identifies the need for their conservation and protection. These are few photographs supporting the work (Fig.1).

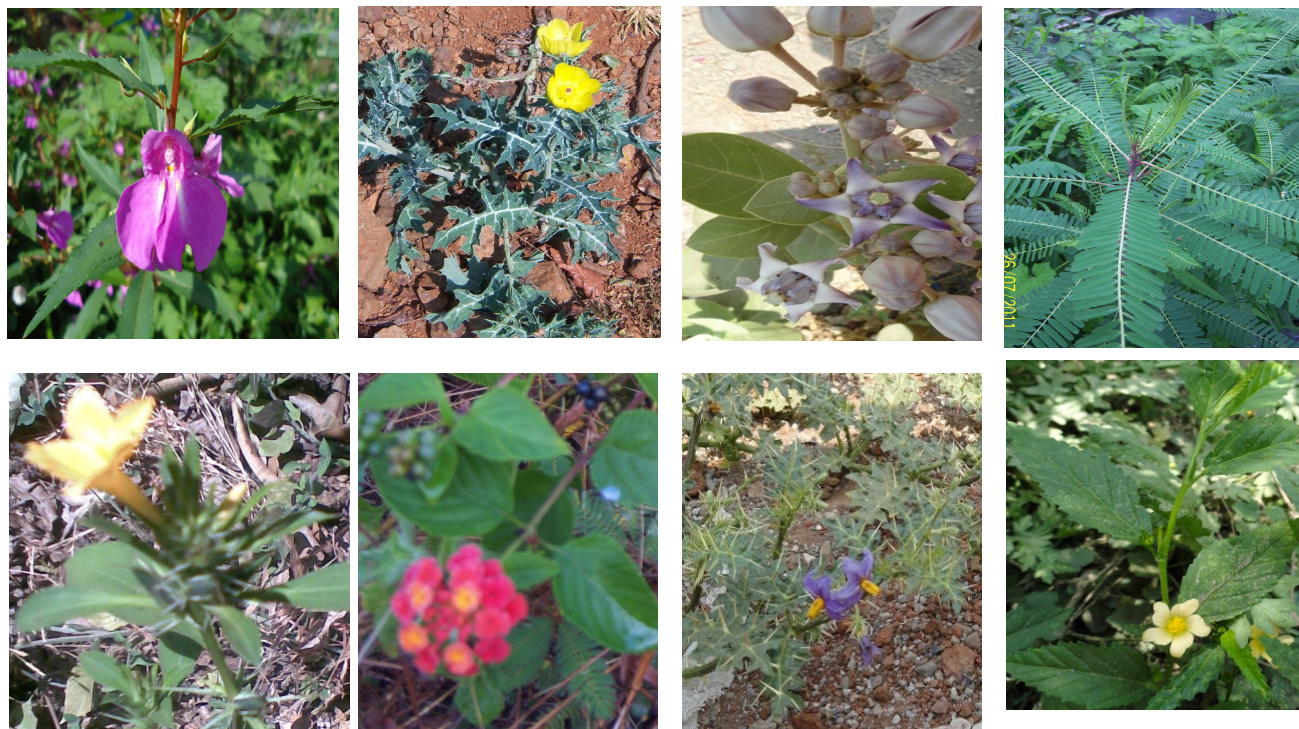


Figure.1 Medicinal plants

Table.1 Medicinal Plants and their medicinal values

Sr. No.	Therapeutic activity/ Properties	Medicinal weeds
1	Analgesic	<i>Parthenium hysterophorus</i> (Pandey, 2007; Narsimhan <i>et al</i> , 1984), <i>Impatiens balsamina</i> (Tailor <i>et al</i> , 1997), <i>Mollugo hirta</i> (Alagesaboopathy, 2009), <i>Merremia gangetica</i> (Elumalai <i>et al</i> , 2011), <i>Ricinus communis</i> (Nicolson and Blaustein, 1972).
2	Anthelmintic (Vermifuge)	<i>Celosia argentea</i> (Vetrichelvan <i>et al</i> , 2002), <i>Sphaeranthus indicus</i> (Galani <i>et al</i> , 2010), <i>Cyathocline purpurea</i> (Joshi <i>et al</i> , 2011), <i>Sesbania bispinosa</i> (Momin and Kadam, 2011), <i>Gloriosa superba</i> (Alagesaboopathy, 2009)
3	Antidysentric	<i>Hygrophila auriculata</i> (Hussain <i>et al</i> , 2010), <i>Tridax procumbens</i> (Habla <i>et al</i> , 2010; Sharma and Kumar, 2008), <i>Sida cordata</i> (Karou <i>et al</i> , 2006), <i>Corchorus olitorius</i> (Ndlovu and Afolian, 2008), <i>Triumfetta rhomboidea</i> (Mevy <i>et al</i> , 2006).
4	Antipyretic (Febrifuge)	<i>Vernonia cinerea</i> (Arivoli <i>et al</i> , 2011; Alagesaboopathy, 2009), <i>Ipomoea muricata</i> (Patil <i>et al</i> , 2013), <i>Alysicarpus vaginalis</i> (Patel <i>et al</i> , 1991), <i>Leucas aspera</i> (Khanam and Hassan, 2005), <i>Sida rhombifolia</i> (Ouédraogo <i>et al</i> , 2013).
5	Antirheumatic	<i>Barleria prionitis</i> (Singh <i>et al</i> , 2008), <i>Calotropis gigantea</i> (Patil <i>et al</i> , 2010), <i>Ageratum conyzoides</i> (Nyunai <i>et al</i> , 2011), <i>Hyptis suaveolens</i> (Edoga <i>et al</i> , 2006), <i>Boerhavia diffusa</i> (Mahesh <i>et al</i> , 2012), <i>Vitex negundo</i> (Tondon and Gupta, 2006).
6	Carminative	<i>Cleome viscosa</i> (Alagesaboopathy, 2009), <i>Cyperus rotundus</i> (Singh <i>et al</i> , 2012), <i>Desmodium triflorum</i> (Lai <i>et al</i> , 2010), <i>Leucas aspera</i> (Alagesaboopathy, 2009), <i>Solanum indicum</i> (Syu <i>et al</i> , 2001).
7	Diuretic	<i>Amaranthus spinosus</i> (Patil <i>et al</i> , 2010), <i>Xanthium indicum</i> (Bhogaonkar and Ahmad, 2012), <i>Typha angusta</i> (Pawar <i>et al</i> , 2011), <i>Impatiens balsamina</i> (Tailor <i>et al</i> , 1997), <i>Argyrea nervosa</i> (Padhi <i>et al</i> , 2013).
8	Hemorrhoids (Piles)	<i>Sphaeranthus indicus</i> (Galani <i>et al</i> , 2010), <i>Operculina turpethum</i> (Kohli <i>et al</i> , 2010), <i>Jatropha curcas</i> (Habou <i>et al</i> , 2011), <i>Urena lobata</i> (Ali <i>et al</i> , 2013), <i>Cynodon dactylon</i> (Alagesaboopathy, 2009).
9	Jaundice	<i>Achyranthes aspera</i> (Patil <i>et al</i> , 2010), <i>Eclipta prostrata</i> (Patil <i>et al</i> , 2010), <i>Xanthium indicum</i> (Bhogaonkar and Ahmad, 2012), <i>Cuscuta reflexa</i> (Ashwani <i>et al</i> , 2012), <i>Boerhavia diffusa</i> (Mahesh <i>et al</i> , 2012).
10	Poultice	<i>Alternanthera sessilis</i> (Arollado <i>et al</i> , 2010), <i>Synedrella nodiflora</i> (Bhogaonkar <i>et al</i> , 2011), <i>Phyllanthus niruri</i> (Tripathi <i>et al</i> , 2006), <i>Cassia tora</i> (Jain and Patil, 2010), <i>Solanum nigrum</i> (Perez <i>et al</i> , 1998).
11	Respiratory disorders	<i>Adathoda vasica</i> (Amin and Mehta, 1959), <i>Alternanthera sessilis</i> (Arollado <i>et al</i> , 2010), <i>Solanum surattense</i> (Alagesaboopathy, 2009), <i>Phylla nodiflora</i> (Alagesaboopathy, 2009; Shukla <i>et al</i> , 2009).

12	Skin Diseases	<i>Lepidagathis cristata</i> (Reddy and Rao, 2013), <i>Spilanthes oleracea</i> (Yadav <i>et al</i> , 2011), <i>Gloriosa superba</i> (Alagesaboopathy, 2009), <i>Euphorbia thymifolia</i> (Pahlewani, 2007), <i>Lantana camara</i> (Alagesaboopathy, 2009).
13	Stomachic tonic	<i>Caesulia axillaries</i> (Kumar <i>et al</i> , 2012), <i>Sida acuta</i> (Karou <i>et al</i> , 2006; Alagesaboopathy, 2009), <i>Phylla nodiflora</i> (Shukla <i>et al</i> , 2009; Alagesaboopathy, 2009), <i>Cyperus iria</i> (Venkitesan and Satyakumar, 1979), <i>Mollugo hirta</i> (Alagesaboopathy, 2009).
14	Toothache	<i>Barleria prionitis</i> (Dheer and Bhatnagar, 2010), <i>Spilanthes acmella</i> (Yadav <i>et al</i> , 2011), <i>Scoparia dulcis</i> (Saikia <i>et al</i> , 2011), <i>Phylla nodiflora</i> , (Shukla <i>et al</i> , 2009; Alagesaboopathy, 2009), <i>Lantana camara</i> (Alagesaboopathy, 2009).
15	Urino-genital diseases	<i>Eranthemum roseum</i> (Shukla and Bhaskar, 2009), <i>Euphorbia hirta</i> (Patil <i>et al</i> , 2009; Pahlewani, 2007), <i>Mimosa pudica</i> (Joseph <i>et al</i> , 2013), <i>Crotalaria juncea</i> (Kaleab <i>et al</i> , 2004), <i>Ocimum gratissimum</i> (Patil <i>et al</i> , 2010; Edoga <i>et al</i> , 2006).

Conclusion

Medicinal weeds unique to Ulhasnagar area should be brought under conservation by adopting various strategies and should be people participatory. Conservation of biodiversity of weeds would lead to: Phyto-remediation, Reduced erosion, Increased infiltration of rainfall to groundwater, Can slow/reduce the flow of water to rivers, Photosynthetic activity promoting evolution of oxygen, Enhance carbon sequestration.

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