International Journal of Science and Research (IJSR)
ISSN (Online): 2319-7064
Index Copernicus Value (2015): 78.96 | Impact Factor (2015): 6.391

A Study on Medicinal Flora of Yamunanagar

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Abstract: ***One of the most interesting and valuable pact of study of economic botany lies in the study of medicinal plants. In this we were mainly focused on the distribution of medicinal flora in various regions of the Yamunanagar and its applications in daily life for human use. To get more information regarding medicinal plants in this area we went to "Shatavari Vatika" and"Choundhary Devi Lal Herbal Park" from where we got ethno-medico uses of local plants from Aryvedic practioners. We have taken photographs of medicinal plants from root to tip and some close resolution photo of leaves and flowers for proper identification of the plants. After identification of plants economic and medicinal values of plants were mentioned in this study. Due to habitat destruction by humans these plants were conserved by ex-situ method or by propagation.***

Keywords: Medicinal flora, Applications, conservation, propagation strategies

1. Introduction

One of the most interesting and valuable pact of study of economic botany lies in the study of medicinal plants. The branch of science that deals with the study of drugs plants, their history, selection, collection, identification, preservation and the extraction and preparation of drugs from the plants is called "pharmacognosy". The flora of India is one of the richest in the world. Due to the wide range of climate, topology and environment in the country. India has served 6% total plant species in the world. There are about 45000 medicinal plants species in India which were located in the regions of eastern Himalayas, Western Ghats and Andaman and Nicobar Island. In these only 3000 plants species are in use but rest of 6000 species are unknown. India is the largest producers of herbs and is called as the Botanical Garden of the world (Samant et al., 1998). Haryana has proved to be a great area for the herbal farming which increases our economy as well as the health of people. The eastern side of the Himalayas has great source of the medicinal plants which are mentioned in the "kalika Kashetra" in Ayurvedic system (Singh1976). In Haryana several herbal parks as been developed for the sustainable development of the medicinal plants which was regulated by the forest department of Haryana. A 5000 hec Vanaspati van has been established in Shiwalik hills for in-situ conservation of medicinal plants wealth. Similarly, 160 medicinal plants are conserved under ex-situ garden named "Tau Devi Lal Herbal Nature Park" has been created in district Yamunanagar in Indo-Gangentic plains. Herbal Farming in Haryana prove to be boon for the economy as well as health. Our main focus on the study distribution of medicinal plants in various regions of Yamunnagar and their applications in daily life of human or how can we conserve and propagate the medicinal plants for future. Some work was done on medicinal plants in Banaras by (verma *et al.*, 2007). In this he included the information regarding traditional medicinal uses of 72 plants species in Uttar Pradesh. Giacomettic, (1990) estimated that tere were about 800 species of economic or social value in the Amazon basin. Of, these 190 are fruits plants, 20 are oil plants and there were 100 of medicinal plants were reported by Berg, (1982). Farnsworth (1991) reported 35,000-70,000 species of plants have been used at one time or another for medicinal purposes, Govaerts, (2001) also found that out of total flowering plants reported from the world more than 50,000 were used for medicinal purpose. Giday documented 83 medicinal plants that were used to treat 37 types of livestock sliments. Anonymous et al., (1997) recorded that about 400 plants are used in regular production of Ayurvedic, Unani, Sidha and Tribal medicines.

2. Material and Methodology

Haryana has proven to be a great area for herbal farming which increases our economy as well as the health of people. Haryana is landlocked state in northern India. It is located 270 39' to 300 35' latitude and between 740 28' and 770 36' longitude. The latitude of Haryana varies between 700 to 3600 ft above the sea level.

2.1. Study area

The present study has been carried out in different areas Yamunanagar. The places which were taken under this study are the three herbal parks under consideration. The first survey was carried out in "ShatavariVatika" which is in Dhausa road and denoted as (H1). It covers the 125 acres area which provides the medicinal information and help in conservation of these resources. The second survey was carried out in "Surender Singh Memorial Herbal Park denoted as (H2) and third in "Choudhary Devi Lal Herbal Park, Chuharpur near Khizrabad on BhudKalan road denoted as (H3).

2.2. Data Collection

Information on ethno-medico uses of local plants, has been gathered from local Ayurvedic practitioners. Data and growth performance regarding medicinal plant species were also collected from staff of choudhary Devi Lal Herbal Park, Chuharpur, Yamuna Nagar. Identification of some plants also done with the help pf literature available such as "Flora of Haryana" compendium contains 1000 species belonging 586 genera and 132 families. The book of "Flora of Haryana" co-supervised by (Jain *et al.,* 2000). Photographs of medicinal plants has been taken from high resolution Sony digital camera fully from roots to tip after their identification

the economic and medicinal values of plants has been mentioned in this study.

3. Results

List of medicinal flors found in Yamunangar with its family, botanical names and application

S.No.	Family	Botanical Name	No.of species	Applications
1.	Amaryllidaceae	*Agave amerciana*	One	Roots are used as diurectic, antisyphilitic, laxativeinscury and leaves in poultice
2.	Apiaceae	*Centellaasitatica*	One	Antihelmintic, blood disease, blood dysentery, brain tonic, cholera, cooling cough, diuretic, leprosy
3.	Araceae	*Acoruscalamus*	One	Toothache, deafness, epilepsy, vertigo, rejuvenatorof nervous system, asthma, bronchitis
4.	Asteraceae	*Eclipta alba* *Eclipta prostate*	Two	Liver tonic, cholesterol, inflammation, hypertension, jaundice, haemorrhages, elephantiasis, ophthalmic
5.	Balsaminacea	*Murrayakoenigii*	One	Dysentery, vomiting inflammation, ulcer cooling aromatic used in vitiated condition of kapha and pitta
6.	Boraginaceae	*Cynglossumwallchi*	One	Healking wound, antidiarrheal, analgeric, anticatarrhial, antimitotic, astringentand vulnerary
7.	Casealpiniaceae	*Casealpiniaboudue* *Cassia fistula* *Cassia tora*	Three	Roots- fever, cough, asthma, intestinal worms, leaves-elephantitasis, skin diseases, tuberculosis, pustules, cardiac disorder, constipation
8.	Cannabaceae	*Cannabis sativa*	One	Antidote in scorpion sting, antiseptic, asthma, cholera, dropsy, eczema, epilepsy, stomach diseases toothworms
9.	Combretaceae	*Terminaliaarjuna* *Terminaliabellirica* *Terminaliachebula*	Three	Asthma, dysentery, diabetes, piles, chroniculcer
10.	Convoluulaceae	*Cuscutareflexa*	One	Astringent. Expectorant, carminative, tonic aphrodisiac, antihelmintic, bronchitis, paralysis
11.	Cucubitaceae	*Cocciniaindica*	One	Aphrodistic, burning senation and uterine discharge, intermittent fever, jaundice, anaemia and stomatitis
12.	Euphorbiacea	*Euphorbia hirta* *Mallatusphilippens* *Phyllantusemblica* *Ricinuscommunis*	Four	Bronchitis, removing worms, stomach pain, roots are used to stop vomiting, appetizer, alexiteric, scabies, jaundice, wound, castor oil which is used in child birth, joint pains
13.	Fabaceae	*Abrusprecatorus* *Buteamonosperma*	Two	Dyspepsia, dysentery, haemorrhoids, diabetes, pimples, inflammation, constipation, arthritis, herpes and skin diseases
14.	Lamiaceae	*Salivaaegptiaca*	One	Diabetes, wound healing, anti-inflammation, septicaemia and herpes
15.	Liliaceae	*Aloe-vera* *Asparagus Adsendens* *Asparagus Racemose* *Urginiaindica*	Six	Cosmetics, rejuvenating, healing or soothing properties, vomiting, diarrhea, appetizer, antipyretic, bronchitis, scabies, cholera and salmonella
16.	Lythraceae	*Lawsoniainermis*	One	Antihaemorrhagic, intestinal antineoplastic, cardioinhibitory, hypotension, sedative, headache, jaundice, leprosy
17.	Malvaceae	*Hibiscus rosasin*	One	Cough, diarrhea, fertility treatment, antihelmintic, urethritis, earache, asthma, burns, laxative and menstrual irregularties
18.	Meliaceae	*Meliaazadirachta*	One	Astringent, helminithiasis especially tapeworm, typhoid fever, gastropathy, verminosis
19.	Menispermaceae	*Tinosporacordiflora*	One	Diarrhea and dysentry
20.	Mimosaceae	*Acacia catechu*	One	Melancholia, conjunctivitis, antidysentric, antipyretic, leucodema, anemia
21.	Moraceae	*Ficusbenghelensis* *Ficusreligiosa*	Two	Antiarthrictic, ophthalmic, diaphoretic, antidiarrheal, ulcer, removing worms, promotes milk in women, urinogential complaints
22.	Moringaceae	*Moringaoleifera*	One	Circulatory stimulant, antitumor, antipyretic, antiepileptic, antiulcer and antidiabetic
23.	Myrtaceae	*Syzgiumcumini*	One	Sore throat, asthma, dysentry and diabetes
24.	Nyetaginace	*Borrhaviadiffusa*	One	Anaemia, asthma, dropsy, eczema, epilepsy, eye complaints, gonorrhoea, liver complaints
25.	0xalidaceae	*Oxalis conuculata*	One	Astringent, cooling to touch, digestive, haemorrhoid and opthalmopathy
26.	Pinaceae	*Pinusrombexii*	One	Inflammatory, arthritis, asthma, cardiovascular diseases, bleeding renal dosorders and pruitus
27.	Poaceae	*Cymbopogen martini* *Cyanodondactylon*	Two	Constipation, depurative, haemostatic, haemorrhoid, leprosy, abortion, fungicides, cardiac fatigue, acne and dryeczema
28.	Rutaceae	*Aegelemarmelos*	One	Seminal weakness and gastric irritability, opthalmia, deafness, inflammation and asthmatic
29.	Solanaceae	*Cestrum noctrnum* *Daturametel*	Five	Seizure diseases, epilepsy, headache, naervous imbalance, dystonia,ulcer, insanity, anodyne narcotic, mumps, rhenumatoid, tuberculosis, whooping

		Daturastromium Solaniumnigrum WithaniaSterculia		cough, senile dementia, conjunctivitis, parkinson's diseases
30	Sterculiaceae	*Sterculia*	One	Diuretic, cooling, aphrodiriae, impotency treatment, edema, ascites and hypertension
31.	Verbenaceae	*Lantana camara*	one	Tetanus, malaria, epilepsy, gastropathy, dysentery, pustules and rheumatism
TOTAL NUMBER OF SPECIES Fifty				

4. Conclusion

Plants biodiversity is indispensible resources providing raw material and agriculture and forestry. Other than providing food, fibre and timber, plants have high medicinal value. Since ancient times, local people have been using various medicinal plants. In our present study, surveys were carried out in ShatavarVatika, Choundhary Devi Lal Herbal Park and Surender Singh Memorial Herbal Park for study the different medicinal plants. These areas are helpful in restoring the medicinal plants and preserve them for future use. A total number fifty species of plants, which have their medicinal values were studied. Various medicinal plants such *Acrouscalamus, Aloe vera, Boerrhaviadiffusa, Cannabis sativa, Daturastromium, Ecliptaalba, Ficusbengalensis, Lawsoniainermis and Urginiaindica etc.* were studies. Under survey found that plants recorded from the sites were highly valuable for medicinal purposes including Tetanus, malaria, epilepsy, gastropathy, dysentery, pustules and rheumatism Diuretic, cooling, aphrodiriae, impotency treatment, edema, ascites and hypertension etc. some work on medicinal plants in Banaras (India) was done by (Verma *et al.*, 2007). Now these days these plants were on the verge of extinction due many reasons. To tackle these problems in-situ and ex-situ conservation were followed. The ex-situ conservation were more necessary in those areas where mining activities were prevalent in this botanical gardens , tissue culture, vegetative propagations, in-vitro propagation and cryopreservation were helpful in conservation of plants biodiversity. Present investigation is preliminary work to conserve some endangered medicinal plants in captive conditions. Therefore there is need for long term conservation of endangered and threatened plants particularly important therapeutic uses.

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