



Floristic survey of medicinal plants in Sur Sarovar wet land, Kheetham, Agra, India

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Abstract: Wildlife has a very important value in human life in various ways. Wild plants really help to cure various dangerous diseases. Sur Sarovar lake, a National Bird Sanctuary and National Wet land at Agra District also has several valuable medicinal plants which is observed by the survey. Wild plants like herbs, shrubs, weeds, plants and trees used to cure in many kind of diseases like piles, Jaundice, liver diseases, cough, cold, skin diseases, fever, purgative, diuretic, antiworms, antituberculosis, foementation, antitoxin, rheumatism, but most of these plants are ruined by farmers and people due to lack of awareness. Here 49 different plant and species are mentioned accordingly with their botanical names, family, nature and parts of plant which are of medicinal use. Present study has highly focused additional quality of Sur Sarovar lake Agra district, U.P. (India).

Keywords: Wild plants, Medicinal use, Keetham lake, Agra

INTRODUCTION

As we know that nature has provided us the best criteria to survive a fruitful life with fresh air, water and greenery. But due to lack of knowledge human always destroy the nature by cutting the wild plants and indirectly affecting the environment in various ways ultimately harming own self. From the ancient time India is a place of sages of different religions, perching love for every living being and conservation of nature. All over the world every body is familiar to Agra district of U.P. in India due to special love monument "Taj Mahal". Besides, there is a Keetham lake also known as Sur Sarovar National Bird Sanctuary which has been declared in 1991 Sur Sarover potential as a natural wonder has been recognized by the U.P. forest Department. Recently has been declared as National wetland in Nov. 2007 by Central forest and Ministry of Environment (Gautam and Gautam, 2008). Keetham Lake a place that ignited by passions of lord Krishna and Radha and inspired the famous poet Surdas to compose the Bhakti Kavya.

Sur Sarovar Lake is located at a distance of 20 km from Agra city in U.P. and at a distance of 180 km from Delhi. Keetham initially covering an area of 4.03 sq. kms has been expanded to an impressive area of 7.83 sq. kms. This pentagonal shaped lake's depth varies from 5m to 8m. Sur Sarovar "Keetham Lake" from the riverine belt of the Yamuna River. Keetham also has wild life conservation in form of bear rescue facility and python point as well. Further this lake is surrounded by different kind of wild vegetations. Various kinds of medicinal herbs, shrubs, weeds, plants and trees make this lake very special area

for its study. Keetham is a house of medicinal plants due to different whether conditions, there is complex biodiversity in different towers.

From the old times, plants cure life from various diseases without any side effect but only some people like Vaidyes, Sadhu, Grand parents, plant collectors have been used to medicinal value of the plants. People of local areas do not aware about importance of Keetham vegetation. Present survey depicts the quality of herbal medicinal plants which are mostly used to detach by the people. Wild plants also have aesthetical and therapeutic appeal to all kinds of medicines and now a days due to side effect of chemist medicine, people try to explore plant medicines, which are highly effective in all kind of treatments. These may be panacea treatment for several diseases like rheumatism, pain, fever, piles, heart diseases etc. The present survey deals with various common plants which have medicinal values in Keetham lake, also providing very interesting information data about Keetham lake vegetation at Agra.

MATERIALS AND METHODS

A survey of study May 2008 to May 2009 in Keetham Lake, Agra was done periodically to observe the vegetation in different towers and areas. Plants like herbs, shrubs, weeds and trees were collected at the time of flowering and fruiting throughout the whole year. Methods of collection of plants and their identification were following standard methods, used earlier by Sinha (1996), Swami (2000) Salunkhe and Yadav (2001) Auti *et al.* (2004).

Table 1. List of medicinal plants in wet land Sur Sarovar "Keetham" Lake.

S. No.	Nature	Name of Medicinal Plants	Family	Common name	Occurrence	Flowering & fruiting	Medicinal Part of plant	Medicinal use	Status
1	Herb	<i>Ranunculus scleratus</i> Linn.	Ranunculaceae	Jaldhaniya	Near water	Summer and Winter	Leaves	Vesicant	NE
2	Herb	<i>Argemone mexicana</i> Linn.	Papaveraceae	Pili Ktaili	Waste place and Road sides	Rainy season and Autumn	Leaves and Seeds	Psoriasis, Leprosy	NE
3	Herb	<i>Cleome viscosa</i> Linn.	Capparidaceae	Sticky cleome	Waste place and Crops	All season	Seeds	Carminative	EN
4	Herb	<i>Silene conoidea</i> Linn.	Caryophyllaceae	-	Cultivated field and Waste place	Winter	Whole plant	Foemmentation	NE
5	Shrub	<i>Hibiscus rosa-sinensis</i> Linn.	Malvaceae	Gudhal	Garden	Summer and Rainy season	Flower	Cold	NE
6	Herb	<i>Abutilon indicum</i> Linn.	Malvaceae	Kangji	Waste places and Road side	Winter and Summer	Seeds	Cough	EN
7	Herb	<i>Sida cordifolia</i> Linn.	Malvaceae	Berela	Waste place	Monsoon	Entire part of plant	Wound healing, facial paralysis, Nervous disease, Fever.	EN
8	Herb	<i>Melva sylvestris</i> Linn.	Malvaceae	-	Road side, Waste place	Summer	Leaves	Mouth ulcer	NE
9	Tree	<i>Melia azadirach</i> Linn.	Meliaceae	Bakayan	Waste land	Autumn season	Leaves, Seeds	Intestine worm Rheumatism	EN
10	Tree	<i>Azadirachia indica</i> Juss	Meliaceae	Neem	Waste land and road side	Rainy season	Leaves, Fruit, Flowers	Skin disease, Eczema, Skin disease, Leprosy	NE
11	Plant	<i>Sesbania sesban</i> Linn.	Papilionaceae	Jait	Waste land	Summer	Seeds	Diarrhoea and Menstrual flow	NE
12	Vail	<i>Dolichos lablab</i>	Papilionaceae	Saim	Near any plant	Winter and Summer	Leaves	Ringworm (Skin diseases)	NE
13	Tree	<i>Tamarindus indica</i> Linn.	Caesalpinaceae	Injali	Waste land	Summer	Fruit	Carminative, laxative	NE
14	Tree	<i>Casia fistula</i> Linn.	Caesalpinaceae	Amaltash	Road side and Waste place	Summer	Pods and Bark	Purgative, Tonic	NE
15	Shrub	<i>Casia tora</i> Linn.	Caesalpinaceae	Senna	Waste place and Road side	Winter	Root, Leaf and Seed's	Eye problem, Wound healing	NE
16	Shrub	<i>Casia auriculata</i>	Caesalpinaceae	Avarai	Waste land and Road side	Winter and summer	Leaves	Jaundice, purgative	EX
17	Trees	<i>Soraca indica</i>	Caesalpinaceae	Ashok	Garden side	Winter	Bark	Menstrual disorder	NE
18	Tree	<i>Acacia arabica</i> Wild	Mimosaceae	Babool	Waste land and Road side	Summer	Leaves pod	Impotency, Antihworm and Diarrhoea	NE
19	Herb	<i>Eclipta prostrata</i> Linn.	Compositae	Bhangra	Near the wet place or water	All season	Whole plant	Spleen size, Jaundice	NE
20	Weed	<i>Xanthium strumarium</i> Linn.	Asteraceae	Bilia	Waste land	Monsoon	Fruit	Leucorrhoea	EX

Table 1. contd.

21	Herb	<i>Catharanthus roseus</i> G. Don	Apocynaceae	Sadabahar	Waste place, Garden Plant	All season	Plant leaves, Bark, Roots	Letcorrhoea, Diabetes, Hypertension	NE
22	Herb	<i>Thevetia peruviana</i> pers.	Apocynaceae	Pili Kanner	Road Side & Garden	All season	Bark	Fever and Cure tumours	NE
23	Herb	<i>Cataractis procera</i> Alt.	Asclepiadaceae	Aak	Road side and Waste place	Summer	Latex leaves	Abortion, Foemntation	NE
24	Herb	<i>Convolvulus platicaulis</i> choisy	Convolvulaceae	Shankhpushi	Grass land	Winter	Leaves, Whole plant	Improve learning capacity	EN
25	Weed	<i>Convolvulus reflexa</i>	Convolvulaceae	-	Waste places	Monsoon, Summer	Whole plant	Exema	EN
26	Parasitic hert	<i>Cuscuta reflexa</i> Roxb.	Convolvulaceae	Anar tail	Parasitic in nature	Winter, Summer	Seeds, Stem	Carminative, Gall bladder problem, Blood purifier	NE
27	Shrub	<i>Ipomoea fistulosa</i> Mert.	Convolvulaceae	Akua	Near the water	Monsoon	Leaves	Foemntation	NE
28	Herb	<i>Ipomoea tropica</i>	Convolvulaceae	Himkhuri	Waste grassland and Creeper	Winter	Leaves	Anti dysenteric	EN
29	Herb	<i>Solanum nigrum</i> Linn.	Solanaceae	Makoi	Waste land road side	Summer	Whole plant	Liver repairing	NE
30	Herb	<i>Solanum xanthocarpum</i>	Solanaceae	Bhat Kateri	Desert place road side	Summer	Anther, Flower	Cough	VEX
31	Herb	<i>Withania sonnifera</i> Dunal	Solanaceae	Asgandh	Waste land	Winter & Summer	Roots, Leaves	Foemntation, Diuretic, Leucoderma, Tuberculosis, Rheumatism	EN
32	Herb	<i>Datura stramonium</i> Linn.	Solanaceae	Datura	Waste place	Monsoon	Seeds, Leaves	Pronchitis, Narcotic, Spasmodic	NE
33	Herb	<i>Datura metel</i>	Solanaceae	Kala Datura	Waste place, Road side	Winter	Seeds and Leaves	Narcotic, Ashma, Breast problem	VEX
34	Shrub	<i>Lantana irafica</i> Roxb.	Verbenaceae	Kuri	Road side waste place (Mostly watering area)	Winter and Summer	Leaves	Antitoxin of snake bites	NE
35	Shrub or Herb	<i>Ocimum basilicum</i> Linn.	Labiatae	Vantuli	Waste place	Winter and Summer	Seeds, Leaves	Dysentery, Mosquito repellents	EN
36	Herb	<i>Leucas aspera</i> wild	Labiatae	Chum	Waste place	Winter and Summer	Leaves	Psoriasis, Skin eruption and cough	EX
37	Herb	<i>Ocimum gratissimum</i>	Labiatae	Dona Manua	Waste place	Summer	Seeds Leaves	Headache, Mosquito repellents	EN
38	Herb	<i>Amaranthus spinosus</i> Linn.	Amaranthaceae	Chauli	Greals and waste place	Monsoon and Winter	Root and Leaves	Laxatives	NE
39	Herb	<i>Achyranthes aspera</i> Linn.	Amaranthaceae	Lajjeera	Desert place, Road sides	Winter and Summer	Whole plant	Skin diseases, Warts, piles, Cough, Diuretic	NE
40	Herb	<i>Polygonum glabrum</i> Willd	Polygonaceae	Bhhangni	Waste place	Summer and Winter	Leaves	Colic pain	VEX

Table 1. contd.

Sl. No.	Plant Name	Family	Local Name	Waste place	Season	Whole plant	EN
41	<i>Euphorbia hirta</i> Linn.	Euphorbiaceae	Choti dugdhi	Waste place	All season	Whole plant	EN
42	<i>Ricinus communis</i> Linn.	Euphorbiaceae	Andaia	Waste place, Road side	Summer	Seeds	NE
43	<i>Phyllanthus niruri</i> Linn.	Euphorbiaceae	Mokh	Waste place, Garden	Rainy	Whole plant	VEX
44	<i>Tribulus terrestris</i> Linn.	Zygophyllaceae	Cokharu	Desert place	Summer	Fruit	EN
45	<i>Boerhavia diffusa</i> Linn.	Nyctaginaceae	Vishkipara	Waste place, Cultivated fields	Monsoon	Seeds, Root and Leaves	NE
46	<i>Nyctanthus</i>	Nyctaginaceae	Haaringar	Garden plant	Monsoon	Leaves	NE
47	<i>Cynodind dactylon</i> Linn.	Poaceae	Doob	Waste field	All season	Plant	NE
48	<i>Aloe vera</i> Linn.	Liliaceae	Gwar Ka patha	Desert place, Waste place	Winter	Whole plant	NE
49	<i>Moringa oleifera</i>	Moringaceae	Soljana	Waste places	Summer	Pods	EN

NE-Not endangered; EN-Endangered; EX-Extinct; VEX-On the verge of Extinct

RESULTS AND DISCUSSION

Fortynine plants species belonging to different families were recorded. Table of medicinal plants clearly depicts plant nature, name of the medicinal plant, common name, occurrence, flowering and fruiting time with cultivated parts to the medicinal uses. On the basis of this study plants species were categorised as extinct, on the verge of extinct, endangered and not endangered species of Keetham area which may be due to the climatic changes and man made pollution.

Present findings support Gaur *et al.* (1983) who indicated that in process of drug industry usually conservation philosophy is not followed, that has resulted over exploitation of certain medicinal plants. An enormous medicinal plants of commercial value are collected for the requirements of crude drugs industry of our country. Sharma *et al.* (2001) reported nearly 443 species along with their medicinal uses. Kaushik and Dhiman (2000), Kaushik (1988), Khilare and Saindandshiv (2004), Kumar *et al.* (1997), Kulkarni and Khilare (2008); and Kumar and Kumar (2008) have described many plants with medicinal and their proper uses. Due to man made pollution today environment is facing critical conditions that is why a number of plant species are on the verge of extinction. According to Gowda *et al.* (1985) considerable number of species are now facing threat of extinction, some endangered also. The present findings aware local people to grow the different plants species which are on the verge of extinction, endangered and on a large scale.

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