



PRELIMINARY STUDIES OF PHYTO-MEDICINAL FLORA FROM ANANDWAN AREA, TEHSHIL WARORA, DISTRICT CHANDRAPUR, MAHARASHTRA, INDIA

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ABSTRACT: The Present investigation was carried out to study Phyto-medicinal flora of Anandwan, Tahsil Warora, District Chandrapur, Maharashtra, India. Anandwan, which was also known as “Forest of Joy”, established in 1949 by Honourable Baba Amte on the deserted rocky wasteland. Anandwan is well known for balancing between development in human sense and sustenance of biodiversity. The preliminary survey was conducted to study the Medicinal Flora of Anandwan throughout the year 2021. During the investigation total 76 medicinal plant species belonging to 36 families were recorded. A list of plant species along with their botanical name, local name, family name, plant parts used and uses in different ailments is given.

Key words: - Phyto-medicinal, Anandwan, flora, digital herbarium, Scrub jungle

INTRODUCTION :

Use of plants as a source of medicine has been inherited and is an important component of the Healthcare system in India. In the Indian systems of medicine, most practitioners formulate and dispense their own recipes hence this requires proper documentation and research. In the Western world also, the use of herbal medicines is steadily growing with approximately 40% of population reporting use of herb to treat medical illness within the past year. Public, academic and government interest in the traditional medicines is growing exponentially due to the increased incidence of the adverse drug reactions and economic burden of the modern system of medicine. Since last three decades, economically developed countries such as Europe, US, Japan, China are seeing an ever-growing interest in natural remedies. It has been pointed out that the present global market for this products maybe near about 20 billion US dollars and is growing at the rate of 10% to 15% annually. According to Botanical Survey of

India 8000 plant species are known and used in Indian systems of medicine in our country. The commercial demand for plant drugs has put the medicinal plant resources under great stress, whereas many of the wild medicinal plant species are facing a serious threat of extinction. It has become imperative to strengthen the Phyto- medicinal resource base in the country (Ved. D.K and G. S. Goraya 2007). Nowadays ethno-botany has emerged as an important branch of study which focuses on the utility of different plant species and their properties as food, medicine and other uses (Allen et.al. 1990, cotton 1997). Plants are a great source of medicine especially in traditional medicine, which was useful in the treatment of various diseases (Boko et.al 2005). About 1748 medicinal plants were reported from Indian Himalaya (Samant et.al 1998). Chauhan et.al (2020) documented 78 medicinal plant species from Yavatmal district, Maharashtra, India. Rajurkar BM (2018) investigated 23

ethnomedicinal species from Warora Tehsil of Chandrapur district, Maharashtra, India.

In the present scenario where the whole world is struggling to come upon an efficient cure for the covid-19 pandemic, many health professionals have pointed that boosting the body's immune system can help dampen the effect hasten the recovery from the disease. In this appalling time, Phyto - medicinal flora has surfaced at possible cure. In such condition the exploration, conservation and commercial cultivation of medicinal flora would be a very profitable agribusiness for local farmers. So far no phyto-medicinal Flora studies are conducted in Anandwan area of Warora Tahsil district Chandrapur, Maharashtra, India is undertaken during the investigation.

MATERIALS AND METHODS:

The preliminary survey was carried out during 2021-2022 to collect the appropriate information on the phytomedicinal flora found in Anandwan area of Waroratehshil , Chandrapur district (M.S.), India. Regular field visits are conducted covering all seasons so as not to miss seasonal plants having medicinal value. During the field visits, information on the use of phytomedicinal flora was obtained by interviews with local people and informal conversations with traditional healers. Vaidus , experienced persons. Local names of the plants, disease on which they are used, method of drug preparation, and their therapeutic uses were noted. The plants were collected and brought to the laboratory for identification. The identification of plants was done by Standard floras (Cook 1967., Ugemuge – 1986., Jain 1991, Sharma et al 1996; Nalk 1998; Singh and Karthikeyan 2000; Yadav and Sardesai 2002;). After the identification specimens are properly processed, mounted on herbarium sheets, and deposited in the department of Botany Anand Niketan College of Science, Arts and Commerce, Warora Dist. Chandrapur (M. S.)

RESULT AND DISCUSSION:

During the preliminary survey of Phyto-medicinal flora in Anandwan area of Warora Tahsil, district Chandrapur ,Maharashtra, India rereported 76 medicinal plants species belonging to 36 families. These are documented alphabetically with their botanical names followed by family, local names, parts used and Ailment is given in Table Number 1

During the survey it is also observed that villages around the area of study developed their traditional knowledge related to plant medicine to cure many diseases like cough, dysentery, diarrhoea, diabetes, fever, jaundice, headache, Snake bite, hypertension, piles, asthma wound healing etc.It is also noticed that medicinal flora of this region are under threat due to destructive methods of collection by local people and there is an urgent need of their conservation (Burlakoti and Kunwar 2008)

Anandwan lived up to its title that is forest of joy. While working for the rehabilitation and upliftment of destitutes, Anandwan has also taken great efforts in preserving, conserving the rich flora and fauna of the entire region. Anandwan was a barren, rocky piece of land at the beginning. But today it is highly rich in forms of flora and fauna, all this is result of continuous and consistent efforts put by Anandwan in this regard. It also has a great area under miyawaki plantation method to develop a great arboretum. Therefore once a barren land, Anandwan now coevolved and metamorphosed into a Biosphere with modernization.

CONCLUSION:

These phyto-medicinal flora should be chemically analyzed for identification of their active constituent for their efficacy by various pharmaceutical industries to give a lead to development of new herbal drug molecules and there is clear need for public supported research as well as further investigation to the phyto-

chemical and pharmacognostical can validate the claims of traditional knowledge regarding medicinal utilities. So, as to conserve and restore the population of medicinal plants consistent efforts should be made.

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Table 1. List of Plant Species Collected during survey with their ailments

Sr. No	Botanical name	Family	Local name	Part used	Ailments
1.	<i>Abrus precatorius</i>	Fabaceae	Gunj	Seeds, leaves and roots	Treating hair fall, arthritis pain; and nerve stimulant
2.	<i>Abutilon indicum</i> L.	Malvaceae	Atibala	Stem and Leaves	Demulcent, diuretic, sedative, astringent
3.	<i>Acacia leucophloea</i> (ROXB) WILLD.	Mimosaceae	Hiwar	Pods and roots	Wounds, ulcer, vomiting and bronchitis
4.	<i>Adhatoda vasica</i> (L.)	Acanthaceae	Adulsa	Roots, Seeds, whole Plant,	Root extract used in piles, wounds, jaundice, asthma, pneumonia and it is used as antihelmintic. Seeds used in sinus and stomach disorder. While total plant extract is used in snakebite.
5.	<i>Aegle marmelos</i> (L.) Corr.	Rutaceae	Bel	Fruits	Fruit pulp is used to cure diarrhea and dysentery.
6.	<i>Ailanthus excelsa</i> Roxb	Simaroubaceae	Maharukh	leaves	pain, indigestion, dysentery, piles, worms, cough, diabetes and skin diseases.
7.	<i>Aloe vera</i> L	Liliaceae	Korphad	Leaf pulp	Antibacterial, antioxidants
8.	<i>Andrographis paniculata</i> (Burm. F.) Wall Ex. Nees	Acanthaceae	Bhui-neem	Whole Plant and Leaves	Whole plant used in diabetes, itches, cholera and piles Leaf extract used in malaria, fever, stomach pain and dysentery.
9.	<i>Argemone Mexicana</i> L	Papaveraceae	PiwlaDhotura	Seeds, leaves	The paste of seeds with salt and mustard oil is used as tooth paste by those suffering from pyorrhea. The Bhils apply fresh leaves or their juice on eyes in conjunctivitis.
10.	<i>Acacia nilotica</i>	Mimosaceae	Babhul	Bark	Decoction used for gargling in toothache
11.	<i>Asparagus racemosus</i> WILLD.	Liliaceae	Shatavari	Root, leaves, stems	Stomach ulcer, dementia, pain
12.	<i>Asteracantha longifolia</i> (L.) Nees	Acanthaceae	Talimkhana	Whole plant	general debility, jaundice, distention of abdomen, swelling, difficulty in urination, impotency, diuretic and aphrodisiac.
13.	<i>Azadirachta indica</i> . JUSSU	Meliaceae	Neem	Leaves, bark, seeds	Antibacterial, antifungal
14.	<i>Achyranthes aspera</i>	Amaranthaceae	Agadha	Leaves Whole plant	Boiled leaves used to relieve internal piles and

					decoction of plant used against Kidney Stone
15.	<i>Alstonia scholaris</i>	Apocynaceae	Saptaparni	Leaves, Latex and fresh bark	Bark useful in cough, skin diseases and ulcers
16.	<i>Albizia lebbek</i>	Mimosaceae	Shirish	Bark, seeds, leaves and fruits	Used against cough, flu, gingivitis, lung problem and abdominal tumors.
17.	<i>Annona squamosa</i>	Annonaceae	Sitaphal	Leaves	Juice of leaves given to check the habit of liquor consumption.
18	<i>Bauhinia vahlii</i> Wight and Arn.	Fabaceae	Chamul / Mahul	Fruits and Whole Plant	The Fruits are light, dry and have binding properties to cure diseases of pitta and the whole plant is healer and coagulant. It purifies blood and checks body weights.
19.	<i>Boerhavia diffusa</i> L.	Nyctaginaceae	Punarnava	Root leaves and seeds	Asthma, diuretic
20.	<i>Bombax ceiba</i> Linn.	Bombacaceae	Katesaori/ cotton tree	Stem bark	Bark is used to cure permato-urea.
21.	<i>Boswellia serrata</i> Roxb.	Burseraceae	Dinkyaa	leaves	The leaf-juice is used to cure eye infection and bark decoction is taken orally to cure chronic cough and cold.
22.	<i>Butea monosperma</i> (Lam.)	Fabaceae	Palash	Flower and seeds	Dried flowers soaked in water and used for taking bath for preventing sunstroke. Seeds used in diarrhea and diabetes.
23	<i>Calotropis procera</i> R. BR.	Asclepiadaceae	Rui	Flower	Stomach ulcers, joint pain
24.	<i>Cassia fistula</i> L.	Caesalpinaceae	Bahawa	Beans (Fruits), Stem bark, Leaves	The flesh of the fruit is used as a laxative and anti-helminthic. Bark is used in skin infections. Few drops of leaf juice are dropped in ears twice a day for earache.
25.	<i>Cassia tora</i> L.	Caesalpinaceae	Tarota	Seeds	Malarial fever
26.	<i>Celosia argentea</i> L.	Amaranthaceae	Kombda	Whole plant, root	Plant powder with a cup of milk is given to the ladies twice a day for a week to cure white discharge. The root decoction is effective in the treatment of kidney stone.
27.	<i>Caesalpinia pulcherima</i>	Caesalpinaceae	Chota Gulmohar	Roots, bark and leaves	Used for fever, jaundice, kidney diseases and gastro intestinal disorders.
28.	<i>Cissus quadrangularis</i> linn	Vitaceae	Hadjodi	Tender stems	Bone fractures, Asthma and piles
29.	<i>Clerodendron infortunatum</i>	Verbenaceae	Khanduchakka	Leaves	injury and bone joining.
30.	<i>Clerodendron</i>	Verbenaceae	Takal	Leaves	applied for relief from

	phlomidis (Linn) L. F				rheumatic and filarial swellings.
31.	Clitoria ternatea Linn.	Fabaceae	Gokarn	Roots & seeds	Histeria, insanity, and urinogenital disorders.
32.	Coccinia grandis (L.) Voigt	Cucurbitaceae	Tondali	Root tubers	curing rheumatic pains
33.	Cocculus hirsutus L.	Menispermaceae	Vasan	Leaf, root	Leaf extract is taken in peptic ulcers. The leaf extract taken internally along with milk for treatment of supermatorrhoea. The extract of root is taken internally in paralysis
34.	Convolvulus micropyllus	Gentianaceae	Shankhapush pi	Leaves, Whole plant	Leaves with cumin and milk are used in fever, nervous disorder and loss of memory
35.	Cuscuta chinensis Lam	Convolvulaceae	Amarvel	Entire plant and seeds	constipation, liver, spleen diseases, diarrhea, headache, labour pain, bone fracture, fever,
36.	Cyperus rotundus	Cyperaceae	Nagarmotha	Roots	Root paste used for treating hair problem.
37.	Datura metel	Solanaceae	Dhotra	Leaves	Skin diseases, fever
38.	Dalbergia sissoo	Fabaceae	sisam	Wood, Bark and fruits	Used in treatment of obesity, Vitiligo, fever, ulcers and intestinal parasites
39.	Euphorbia hirta	Euphorbiaceae	Dhudhani	Whole plant	Cough, coryza, bronchitis and asthma
40.	Eucalyptus globulus LABILL	Myrtaceae	Neelgiri	Leaves	Astringent, vermifugal
41.	Eugenia jambolana Lam.	Myrtaceae	Jamun	Bark, fruits	Flatulence, dysentery
42.	Feronia limonia (L) SWINGLE	Rutaceae	Kavath	Leaves	Antimicrobial
43.	Ficus benghalensis	Moraceae	Vad	Fruits	Fruit latex is used to cure diarrhea, dysentery, nausea, toothache and leucorrhoea.
44.	Ficus racemosa L.	Moraceae	Umbar	Latex	Hemorrhoids
45.	Ficus religiosa L	Moraceae	Peepal	Leaf petiole and roots	Central nervous system disorder like unconsciousness
46.	Gardenia gummifera L.	Rubiaceae	Dikemali	Bark, Leaves, Root	Bark is used in headache, juice of leaves is given in body pain. Root powder is used in impotency.
47.	Gloriosa superba L.	Liliaceae	Kal-lavi	root	to regularize menstrual disorder and apply on head to kill the lice.
48.	Helicteres isora	Malvaceae	Muradsheng	Stem, roots and seeds	Seeds cures dysentery and stomach pain, root and stem bark are

					expectorant stem bark used for treating diarrhea
49.	<i>Jatropha curcas</i>	Euphorbiaceae	Ratanjyoti	Leaves, Fruit, seed, stem	Used against bacterial and fungal infections, muscle pain and jaundice
50.	<i>Lawsonia inermis</i> L.	Lythraceae	Mehandi	Leaves, flower and seeds	Sunburn and rashes on body.
51.	<i>Leucas aspera</i> Willd.	Lamiaceae	Kumbha	Leaves	Leaf juice (2-3 drops) dropped into nostrils to get relief from heavy cold. The leaves decoction is very useful in chronic rheumatism.
52.	<i>Lantana Camara</i>	Verbenaceae	Tantani or ghaneri	Leaves	Used against cancers, chickenpox, asthma, ulcers and malaria.
53.	<i>Mimosa pudica</i>	Mimosaceae	Lajalu	Leaves and root	Used against dysentery, fever, Ulcers, Leucoderma and Fistula
54.	<i>Magnifera indica</i>	Anacardiaceae	Aamba	Leaves, Flower, Fruit, Bark and Seed	Fruit juice is used as cardio tonic and brain tonic. Leaves used as curative of nausea
55.	<i>Moringa oleifera</i>	Moringaceae	Shevgaa	Stem, Bark, Leaves, Fruits, Leaves	Decoction of the bark used against stone in bladder. Powder of bark and dried SAP recommended for anosmia, Painful piles and migraine
56.	<i>Nerium indicum</i> MILLER	Apocynaceae	Kanher	Leaves	Anti Inflammatory
57.	<i>Ocimum sanctum</i> Linn	Lamiaceae	Tulas	Leaves, Roots, Seeds, whole plant	For treatment of bronchitis, asthma, diriaha and skin diseases
58.	<i>Phyllanthus emblica</i> L.	Euphorbiaceae	Awala	Leaves fruit	Improve digestion
59.	<i>Phyllanthus niruri</i> SENSUHOOK FNON LINN	Euphorbiaceae	Bhui Awla	Latex, leaves	Kidney stone
60.	<i>Pongamia pinnata</i> (L.) PIERRE	Fabaceae	Karanji	Leaves	Skin diseases, piles
61.	<i>Rauwolfia serpentina</i> Benth. ex Kurz	Apocinaceae	Sarpgandha	Roots	Insanity, epilepsy, and wound healing
62.	<i>Ricinus communis</i> L	Euphorbiaceae	Yerand	Leaves	Insomnia
63.	<i>Sida acuta</i>	Malvaceae	Chikna	Roots	Robronchial asthma, cold, flu, dysentery, stomach pain, headache, and nasal congestion.
64.	<i>Solanum nigrum</i>	Solanaceae	Amoni Kamoni	Leaves, Fruits	Leaf juice used in dysentery, stomach problem, itching and swelling.

					Fruit used for curing cough, asthma, throat diseases, skin diseases and jaundice
65.	<i>Tamarindus indica</i>	Fabaceae	Aambat Chinch	Fruit and seeds	Useful in jaundice and as a blood tonic.
66.	<i>Tephrosia purpurea</i> Linn.	Fabaceae	Diwali	Root	Decoction of root against diarrhea, rheumatism, asthma and urinary disorder.
67.	<i>Terminalia arjuna</i> (Roxb.)	Combretaceae	Aanjan	Bark	Bark powder is used for heart diseases.
68.	<i>Terminalia bellerica</i> Roxb	Combretaceae	Behda	Fruits	Tonic, indigestion, Cough & used for proper blood circulation.
69.	<i>Terminalia chebula</i> Retz.	Combretaceae	Hirda	Fruits	laxative, purgative, cough, piles, astringent, stomachic and healing of wounds .
70.	<i>Tinospora cordifolia</i> (WILLD) HOOK. F and THOMS	Menispermaceae	Gulvel	Stem and leaves	Immune modulator. Also used against fever, jaundice, chronic diarrhea and dysentery
71.	<i>Tribulus terrestris</i> L.	Zygophyllaceae	Gokhru	Fruit and root	Aphrodisiac, urinary anti-infective
72.	<i>Trichosanthes cucumerina</i> L.	Cucurbitaceae	Ran padval	Root tuber	cure on joint swellings.
73.	<i>Tridax procumbens</i> L.	Asteraceae	Kamarmodi	Leaves, Whole Plant	cure injury, wound, pain, Ulcer and scorpion bite. & diarrhea.
74.	<i>Vinca rosea</i>	Apocynaceae	Sadaphuli	Whole plant	Spaint
75.	<i>Vitex negundo</i> L	Verbanaceae	Nirgundi	Leaves, Roots	Leaf extract is used in rheumatoid arthritis and fever. Roots Cure epilepsy
76.	<i>Withania somnifera</i> (L.)	Solanaceae	Ashwaganda	Roots	piles, cough, fever & Stress. Increase fertility in women for conception.