

Original Research Article

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Eco-Floristic Survey of Asansol Industrial Belt, West-Bengal with Reference to their Economic and Medicinal Value

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ABSTRACT

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Eco-Floristic Survey of the plants growing in the Asansol Industrial Belt of West-Bengal is compiled indicating habit, habitat and frequency of occurrence to detect the nature of flora of this locality. A total of 156 plant species of which 54 Dicot families containing 128 genera and 143 species and 10 Monocot families containing 13 genera and 13 species were recorded. The floristic composition of this locality is of mixed type with dominance of the family Asteraceae. Investigated taxa have been arranged alphabetically on the basis of available local names, family, occurrence in the field and their economic and medicinal values. The paper also deals with the observations of some exotic plants with high medicinal values and are naturalized in this industrial belt. Plants like *Acacia nilotica*, *Anagallis arvensis*, *Grewia asiatica*, *Hemigraphis hirta*, *Hyptis suaveolens*, *Lantana camara*, *Mikania sandens*, *Parthenium hysterophorous*, *Tamarindus indica*, *Tephrosia purpurea*, *Terminalia arjuna*, etc. are recorded throughout the investigated area.

Introduction

Asansol in Burdwan district is an industrial belt surrounded by various types of industries and coal mines. Eco-floristic survey helps to correlate interaction between plants of environment of a bio-zone concerned. The concerned locality is famous for its huge automobile engineering industry and world famous steel plant IISCO. The local flora therefore is influenced by the surrounding industries. The industries have a direct impact on the floristic composition of the locality in revealing the economical as well as medicinally important plants.

The present investigation provides significant information regarding the

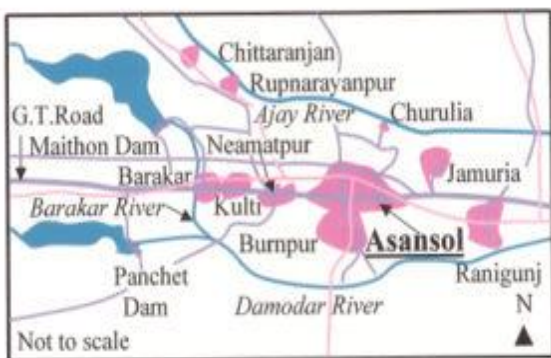
medicinal plants, economically important plants and some exotic plants of this locality which are new to the existing inventory of Indian medicinal plants (Tables 1 & 2). There is a global resurgence of interest in herbal medicine for the treatment of various ailments. Herbal medicines are also the treatment options which are available and affordable to the rural populace as about 80% of the world population depending on traditional medicines for their primary healthcare needs. It is estimated that only about 30,000 botanical species have been documented for their medicinal properties (Jain, 1963; Kayode and Kayode, 2008;

Lawal *et al.*, 2013; Mandal, 1988, 1994; Olatunji *et al.*, 2014; Sen *et al.*, 1992).



Geography & Climate

Asansol industrial belt is a quiet large area of Burdwan district surrounded by various other Industrial areas like Durgapur, Burnpur & the coal belt of Jharkhand. The river Damodar is passing through the industrial belt and one tributary of Damodar called Nunia is passing through the heart of the Asansol city. The soil type of the city is fertile and mainly black.



The climate is dry and the presence of seasonal changes is clearly expressed. Summer ranges from mid-February to June and monsoon starts from the end of the June to September while winter begins from October and extend up to February. April is the hottest month with maximum temperature of 46°C sometimes the temperature reaches up to 50°C. January is the coldest month of the year if temperature

ranging from 10.5°C to 11°C. average maximum rainfall ranges from 293.6mm to 316.6mm.

Materials and Methods

The present investigation is based on the results of extensive fields' studies about the flora of Asansol industrial belts. Fields studies were carried out for last two years (July 2009 to June 2011) covering interior pockets of the locality with a view to find out the nature of flora, their medicinal and economic value in respects of the life style pattern and need of the local people. Appropriate medical terms were judiciously used for precision. The collected species are enumerated in alphabetical succession of the Plant names. The medicinal uses have been recorded on the basis of empirical and authoritative approaches with local medicine man and other tribal guru. The field study also includes the exotic plants specimens which are naturalized in this industrial belt. Field observations like habit, habitat, frequency, available local name, uses, etc. have been thoroughly noted.

Season	Months
Summer	March to June
Monsoon	End of June to September
Winter	October to February

Coldest Month: January, Temp: 10.5°C-11°C
Hottest Month: April, Temp: 46°C(Max)
Maximum Rainfall: 293.6 mm to 316.6 mm
Humidity: 78% average

Field study was carried out in some tribal areas of Asansol which provides an inventory of Ethno-Medicinal plant

resources. The data on ethno medicinal uses of plants were collected directly from tribal medicine expert persons (tribe) and other knowledgeable persons of the concerned areas.

The collected plant specimens have been preserved as herbarium specimens and kept in the Visva-Bharati Herbarium (VBH) of the Department of Botany, Santiniketan for future references.

Results and Discussion

During the course of study a total number of 156 species of angiosperms were recorded out of which there are 54 Dicot families containing 128 genera and 143 species and 10 monocot families containing 13 genera and 13 species. The plant names were arranged in alphabetical order of name of the plant specimens in the Table 1 & 2.

Table.1 Statistical data of the investigated taxa

	Dicotyledons	Monocotyledons	Total
Families	54	10	64
Genera	128	13	141
Species	143	13	156

Table.2 List of collected plants from Asansol Industrial Belt

SL NO	NAME & FAMILY	FLOWERING PERIOD & HABIT	MEDICINAL USE
1	<i>Abutilon indicum</i> Malvaceae	Oct-Dec, US	Cough rheumatism, snake bite, boils, ulcers etc.
2	<i>Acacia nilotica</i> (L.) Willd.ex Delile Fabaceae	June-Aug, T	Astringent, demulcent, cough, bronchitis, diarrhoea, dysentery, burning sensation, stomach problems, piles etc.
3	<i>Acacia auriculiformis</i> A.Cunn.ex Benth. Fabaceae	June-Aug, T	A decoction of the root is used to treat aches and pains and sore eyes; an infusion of the bark treated rheumatism.
4	<i>Acalypha indica</i> L. Euphorbiaceae	Jun-Nov, H	Emetic, laxative, used in bronchitis, asthma, pneumonia,
5	<i>Achyranthes aspera</i> L. Amaranthaceae	Aug-May, H	Purgative, diuretic, astringent, emetic, colic, used in skin eruption, dropsy.
6	<i>Justicia adhatoda</i> L. Acanthaceae	Feb-March, S	Cough and cold, chronic bronchitis, rheumatism.
7	<i>Aegel marmelos</i> (L.)Correa Rutaceae	May- June, T	Chronic diarrhea, dysentery, astringent, digestive, ant diuretic, laxative, anthelmintic, antipyretic, tonic carminative.
8	<i>Aerva lanata</i> (L.) Juss. Amaranthaceae	Sep-April, H	Diuretic, relieve skin discomforts, relieve digestive discomfort.
9	<i>Ageratum conyzoides</i> L. Asteraceae	Whole year, H	Useful in cuts, sores, diarrhea, dysentery, colic, rheumatism, fever. The essential oil is anthelmintic.

10	<i>Albizia lebbek</i> (L.)Benth Fabaceae	Apr-May, T	Useful in piles, diarrhea, night blindness
11	<i>Aloe vera</i> (L.)Burm.f. Xanthorrhoeaceae	Sep-Dec, S	In eye-disease, spleen enlargement, skin problems, lever complaints, vomiting, bronchitis, biliousness, asthma, jaundice, ulcers, anti-wrinkle.
12	<i>Alstonia scholaris</i> L.R.Br. Apocynaceae	Aug – Nov, T	Diarrhoea, malaria, febrifuge, ant choleric, used for beriberi and bowel complaints.
13	<i>Alternanthera sessilis</i> (L.) R.Br.ex Dc. Amaranthaceae	Oct-Nov, H	Snakebites, treatment of stomach ache, used as abortifacient and febrifuge.
14	<i>Amaranthus caudatus</i> L. Amaranthaceae	May-Nov, H	Diuretic, blood purifier, piles
15	<i>Amaranthus spinosus</i> L. Amaranthaceae	Aug-Nov, H	Astringent, diaphoretic, diuretic, emollient, febrifuge, internal bleeding, diarrhea, excessive menstruation, snake bite.
16	<i>Amaranthus tricolor</i> L. Amaranthaceae	Nov-May,H	Astringent, menorrhagia, diarrhoea, ulcer.
17	<i>Amaranthus viridis</i> L. Amaranthaceae	Aug-Dec, H	A decoction of the entire plant is used to stop dysentery and inflammation, The plant is emollient and vermifuge
18	<i>Anagallis arvensiis</i> L. Primulaceae	Jan-March, H	Gout,cerebral affections, hydrophobia, epilepsy, leprosy diaphoretic, diuretic.
19	<i>Andrographis paniculata</i> (Burm.f.)Wall. Acanthaceae	April-June, H	Anti-hepatotoxic, antibiotic, anti-malarial, antipyretic. anti-thrombogenic, anti-inflammatory, anti-snake venom,
20	<i>Anisomeles indica</i> (L.) Kuntze Lamiaceae	Oct-March, S	Analgesic, anti-hyperalgesic, anti-inflammatory, carminative, astringent, used in eczema snakebites, rheumatism, cold, fevers, abdominal pain.
21	<i>Annona reticulate</i> L. Annonaceae	Jan-March, July- Oct	Vermifuge, used on boils abscesses, ulcers, diarrhoea, dysentery, as astringent, in gums to relieve toothache.
22	<i>Annona squamosa</i> L. Annonaceae	April- June, T	Abortifacient, insecticide.
23	<i>Neolamarckia cadamba</i> (Roxb.) Bosser Rubiaceae	Nov-Apr, T	Bark as tonic , antidote in snake bite
24	<i>Antigonon leptopus</i> Hook. & Arn. Polygonaceae	Jun-Jul, Oct-Nov, Climbing shrub	Cough, throat constriction.
25	<i>Areca catechu</i> L. Areaceae	Feb-March, T	Sprains, bruises, contusions, tapeworm infestation, vomiting and diarrhea, headaches, abortifacient, fever and rheumatism
26	<i>Argemone Mexicana</i> L. Papaveraceae	Mar-June, H	Diuretic, purgative, destroys worms, leprosy, skin-diseases, inflammations and bilious fevers.
27	<i>Artemisia princeps</i> Pamp. Asteraceae	July-Nov,S	Anthelmintic, antispasmodic, stomachic, in the treatment of nervous and spasmodic affections, in asthma and in diseases of the brain, antiseptic and tonic.
28	<i>Asteracantha longifolia</i> (Linn.) Nees. Acanthaceae	Dec-June, S	For treatment of rheumatism, urinary tract infection, inflammation, jaundice, hepatic obstruction, pain, etc.
29	<i>Azadirachta indica</i> Juss Meliaceae	April-June, T	Antiseptic, skin diseases, ulcers, eczema, rheumatism, astringent, stimulant, antiseptic, in boils, ulcers, eczema, rheumatism, skin diseases.
30	<i>Bacopa monnieri</i> (L.) Wetts.	Throughout the year,H	Laxative, useful in bad ulcers, tumors, enlargement of spleen, indigestion, leprosy, inflammations, anemia, biliousness,

	Scrophulariaceae		leucoderma, syphilis, scabies diarrhea and fevers.
31	<i>Barleria prionitis</i> L. Acanthaceae	April-May, T	Useful in burns, dental caries, inflammation, ascites, edema, wounds, cracking heel, whooping cough and useful as diaphoretic and expectorant.
32	<i>Basella alba</i> L. Basellaceae	Nov-Feb, H	Applied in burning sensation, hemorrhages, skin diseases, sexual weakness, ulcer and as a laxative in children and pregnant women.
33	<i>Bauhinia purpurea</i> L. Fabaceae	Sep-Dec, T	Cough, bleeding piles, haematuria, sore throat, enorrhagia.
34	<i>Bauhinia variegata</i> L. Fabaceae	Feb-May, T	Used as antidote to snake poison, anti-inflammatory, antipyretic, astringent and tonic, for strains, ulcers, skin disease.
35	<i>Blumea lacera</i> L. Asteraceae	Mar- April, T	For treatment of rheumatism, urinary tract infection, inflammation, jaundice, hepatic obstruction, pain, etc.
36	<i>Boerhaavia repens</i> L. Nyctaginaceae	Mar-April, T	Fever, constipation, leucorrhoea, lumbar pain, skin diseases, cardiac disorders, urinary infection, anemia, dyspepsia, constipation, jaundice, diabetes, rheumatism, skin diseases.
37	<i>Bombax ceiba</i> L. Bombacaceae	Feb-April, T	Stimulant, tonic, impotency, emetic, aphrodisiac, demulcent.
38	<i>Borassus flabellifer</i> L. Areaceae	Feb-Apr, T	Cooling, restorative, diuretic, stimulant, in burning sensation, inflammation, constipation, intestinal worm, skin diseases.
39	<i>Butea monosperma</i> (Lamk.)Taub Fabaceae	Feb- May ,T	Astringent, anti-diarrheal, anti-dysenteric and as a febrifuge.
40	<i>Caesalpinia pulcherrima</i> (L.) Sw. Fabaceae	Mar-Aug, S	Cure fever, sores, bad cough, breathing difficulty, chest pain, to induce abortion in the first trimester of pregnancy.
41	<i>Calotropis procera</i> (Ait.) Ait. F Apocynaceae	May- Jul, S	Useful in rheumatism, emetic, expectorant, digestive, emetic, useful in spleen problems, epilepsy, dyspepsia, asthma, rheumatism.
42	<i>Capparis spinosa</i> L. Capparidaceae	Mar- April, T	Astringent, in dropsy, gouty, rheumatic affections, stimulating.
43	<i>Canna indica</i> L. Cannaceae	Feb- March, T	Demulcent, diaphoretic, diuretic, antipyretic, in gastrointestinal disorders, i acute jaundice, cancer, convulsion, delirium, hematuria, pimples, syphilis etc.
44	<i>Carica papaya</i> L. Caricaceae	Feb-July, S	In high blood pressure, digestive problems, intestinal worms, in warts, corns, sinuses, and chronic forms of scaly eczema, cutaneous tubercles, and other hardness of the skin.
45	<i>Cassia fistula</i> L. Fabaceae	Jun-Aug, T	Laxative, purgative, malaria, gout, dysentery, rheumatism, diuretic.
46	<i>Senna sophora</i> (Linn.) Roxb Fabaceae	June-Nov, H	Febrifuge, diuretic, purgative, in acute bronchitis, diabetes.
47	<i>Senna alata</i> (L.) Roxb. Fabaceae	Jan-May, S	Antiseptic , laxative, in edema, hepatitis , dermatomycosis, tineaimbricata, ringworm, scabies
48	<i>Senna tora</i> (L.) Roxb. Fabaceae	Whole year, T	Laxative, antiperiodic, liver tonic, ophthalmic, cardio tonic,expectorant , ringworm, bronchitis, cardiac disorders.
49	<i>Cassyntha filiformis</i> L. Lauraceae	Apr-July, Creeper	Tonic, alternative, bilious, affections, dysentery, insecticide.
50	<i>Catharanthus roseus</i> (L.) G.Don	Apr-May, T	Anticancer, anti-diabetic, hypotensive.

	Apocynaceae		
51	<i>Centella asiatica</i> (L.) Urb Apiaceae	Mar –July, T	Skin diseases, nervous problems, and tonic.
52	<i>Chenopodium album</i> Chenopodiaceae	June-Sept, H	Anthelmintic, anti -rheumatic, mildly laxative useful in rheumatism, freckles, sun burn etc.
53	<i>Cleome viscosa</i> L. Capparaceae	Sep-Dec, S	Antihelmintic, carminative, diaphoretic, rubefacient, wounds and ulcers.
54	<i>Clerodendrum inerme</i> (L.) Gaertn. Verbenaceae	Nov-Jan, S	Rheumatism, Alterative, rheumatism, febrifuge.
55	<i>Clerodendrum indicum</i> (L.) Ktze. Verbenaceae	Whole year, S	Useful in rheumatism, asthma, cough, rheumatism, applied to herpetic eruptions.
56	<i>Clerodendrum viscosum</i> Vent. Verbenaceae	Feb-July, S	Tonic, vermifuge, antiperiodic, in malaria
57	<i>Coccinia grandis</i> (L.) Voigt Cucurbitaceae	Whole year (Aug-Nov), H	Ant- diabetic, skin diseases
58	<i>Colocasia esculenta</i> (L.) Schott Araceae	May - Sep, H	Stimulant, rubefacient, stop bleeding on insect bites .
59	<i>Commelina benghalensis</i> L. Commelinaceae	July – Jan, H	In treatment of leprosy, and nervous system related disorders, emollient, demulcent, laxative.
60	<i>Corchorus olitorius</i> Malvaceae	Mar-July, H	Demulcent, diuretic, febrifuge, tonic used in treatment of chronic cystitis, gonorrhoea and dysuria.
61	<i>Cheilocostus speciosus</i> (J.Konig) C.Specht Costaceae	June – Dec, H	Astringent, cooling, aphrodisiac, purgative, anthelmintic, depurative, febrifuge, expectorant tonic, constipation, leprosy, skin diseases, asthma, bronchitis, and anaemia.
62	<i>Crinum asiaticum</i> L. Amaryllidaceae	Oct- Feb, S	Useful to treat inflamed joints and sprains, for earache, in rheumatism, emetic.
63	<i>Curcuma longa</i> Linn. Zingiberaceae	July- Oct, H	Gastrointestinal upset ,arthritic pain, anti-inflammatory, osteoarthritis, atherosclerosis, cancer, liver problems and for the treatment of skin diseases and wound healing, reduce inflammation and fight certain infections.
64	<i>Cynodon dactylon</i> (L.) Pers. Poaceae	Sept-Oct, US	Alterative, anabolic, antiseptic, astringent, demulcent, depurative, diuretic, emollient, sudorific, diuretic in the treatment of dropsy and secondary syphilis.
65	<i>Cyperus rotandus</i> L. Cyperaceae	Whole year, H	Analgesic, antibacterial, anti -biotic, aromatic, antispasmodic, astringent, carminative, contraceptive, diaphoretic, diuretic, sedative, stimulant, stomachic.
66	<i>Datura metel</i> L. Solanaceae	Aug-Nov, US	Ear pain, diarrhoea, dysentery, check sweating, early graying of hair, dandruff, hair falling, rheumatic swelling.
67	<i>Dentella repens</i> (L.) Forst Rubiaceae	Whole plant	Antiscorbutic, in sores.
68	<i>Desmodium gangeticum</i> (L.) DC. Fabaceae	Aug-Dec, H	Tonic, diuretic, astrigent, chronic fever, cough.

69	<i>Diospyros malabarica</i> (Desr.)Kostel Ebanaceae	Mar-May, S	Astringent, diarrhea, intermittent fever.
70	<i>Eclipta prostrate</i> (L.)L. Asteraceae	July-Sep, G	Tonic, deobstruent, emetic, purgative, antiseptic, hair vitalizer, in hepatic and spleen enlargements.
71	<i>Phyllanthus emblica</i> L. Phyllanthaceae	Apr-Jul, T	Carminative, diuretic, aphrodisiac, laxative, in anaemia, jaundice, haemorrhage, diabetes, asthma and bronchitis, cures insomnia, hair tonic.
72	<i>Eleusine indica</i> (L.) Gaertn. Poaceae	Throughout the year, H	Depurative, diuretic, febrifuge, laxative and sudorific, used in the treatment of liver complaints.
73	<i>Elephantopus scaber</i> L. Asteraceae	July-Aug, S	Cardiac tonic, febrifuge, dysentery, swelling or pain in stomach, vomiting, ulcer, eczema.
74	<i>Enydra fluctuans</i> Lour. Asteraceae	Nov-Dec, H	Laxative, antibilious, demulcent, in skin and nervous affections.
74	<i>Eupatorium purpureum</i> L. Asteraceae	July-Sept, S	Stimulant, tonic diaphoretic, haemostatic, jaundice.
75	<i>Eucalyptus globulus</i> Myrtaceae	Jan-Aug, T	Antiseptic, slightly anesthetic, anti-bacterial, useful in burns, sores, ulcers, scrapes, boils, and wounds rheumatism.
76	<i>Euphorbia hirta</i> L. Euphorbiaceae	Through out the year, H	In bowel complaint, stimulant, laxative, bronchial affections.
77	<i>Evolvulus nummularius</i> (L.) L. Convolvulaceae	Oct-Jan, H	Cough and cold, venereal diseases, anti-amnesic, anti stress antimicrobial and gastro protective .
78	<i>Flacourtia indica</i> (Burm. f.) Merr. Salicaceae	Sep-Dec, T	Astringent, diuretic, in jaundice, rheumatism, eczema, enlarged spleen.
79	<i>Grewia asiatica</i> L. Malvaceae	March-June, H	Used as astringent, stomachic, cooling agent, fruits used in thirst, burning, inflammations, heart, blood disorders, fever, diarrhoea, throat trouble, rheumatism.
80	<i>Heliotropium indicum</i> L. Boraginaceae	July-Dec, US	Diuretic, sores, ulcers, fevers, skin complaints, Cayman head lice, insect bites.
81	<i>Hemidesmus indicus</i> (L.) Aiton Asclepiadaceae	Oct-Dec, Twining US	Alternative, diaphoretic, diuretic, blood purifier, appetizer, leucorrhoea, syphilis.
82	<i>Hemigraphis hirta</i> Acanthaceae	H	
83	<i>Hibiscus rosa-sinensis</i> L. Malvaceae	Throughout the year, S	Emollient, demulcent, hair- vitalizer, in cough, fever.
84	<i>Holarrhena pubescens</i> (Bu ch.- Ham.) Apocynaceae	Feb-Jul, T	Astringent, anthelmintic, stomachic, tonic, febrifuge, in dropsy, dysentery, diarrhoea.
85	<i>Hyptis suaveolens</i> (L.) Poit Lamiaceae	Oct-Jan, H	Antibacterial, antifungal, carminative, stimulant, infusion is used in catarrhal condition, diabetes, cancer.
87	<i>Ipomoea aquatica</i> Forssk. Convolvulaceae	Oct-Feb,	Emetic, purgative, antidote to opium.
88	<i>Jatropha gossypifolia</i> L. Euphorbiaceae	H, Aug- Feb	Piles, emetic, boils, carbuncles, eczema, herpes, fistula and ulcers.

89	<i>Kyllinga triceps</i> Cyperaceae	Throughout year, H	Decoction useful in diabetes, liver disorder.
90	<i>Lagerstroemia speciosa</i> (L.) Pers. Lythraceae	June-sep, T	Purgative, astringent, stimulant, febrifuge, in aphthae of mouth.
91	<i>Lantana camara</i> L. Verbenaceae	Throughout year, H	Diaphoretic, tonic, carminative, antispasmodic, rheumatism, malaria, gonorrhoea, measles, chicken pox.
92	<i>Leucas aspera</i> Lamiaceae	Jul-Mar, S	Antipyretic, insecticide, psoriasis, scabies.
93	<i>Leucus cephalotes</i> Lamiaceae	Jul-Sep, S	Antiperiodic, styptic, malarial fever, urinary complaints, nosebleeding, Snake bite.
94	<i>Lawsonia inermis</i> Lythraceae	Throughout year, S	Skin boils and burns, rheumatism, inflammatory swellings, bruises and leprosy, leucorrhea, liver disorders.
95	<i>Lindenbergia indica</i> Scrophulariaceae	H, Sept to January	Juice useful in chronic bronchitis, skin eruptions
96	<i>Madhuca longifolia</i> (Koenig.) Sapotaceae	Feb-Apr, T	Tonic, appetizer, demulcent, stimulant, galactagogue, in coughs, piles, rheumatism
97	<i>Malvastrum coromandelianum</i> (L.) Garke. Malvaceae	Throughout year, H	Emollient, resolvent, diaphoretic, in sores, wounds.
98	<i>Mangifera indica</i> L. Anacardiaceae	Nov-Mar, T	Diuretic, astringent, in rheumatism, scabies, dysentery, scalds and burns, in asthma and cough, asthma, bleeding piles.
99	<i>Martynia annua</i> L. Martyniaceae	Aug-Nov, H	Epilepsy, sore throat, alexiteric.
100	<i>Melia azedarach</i> L. Meliaceae	Mar-Dec, T	Deobstruent, antilithic, diuretic, rheumatism.
101	<i>Mimosa pudica</i> L. Fabaceae	Sep-Nov, S	Antesaptic, alternative, blood-purifier, carminative, piles, fistula.
102	<i>Moringa oleifera</i> Lamk. Fabaceae	Jan-Jun, T	Antitumor, antipyretic, antiepileptic, anti-inflammatory, antiulcer, antispasmodic, antihypertensive, cholesterol lowering, antioxidant, antidiabetic, diuretic.
103	<i>Murraya koenigii</i> (L.) Speng. Rutaceae	Feb-May, S	Tonic, stomachic, stimulant, antidiarrhoeal, febrifuge.
104	<i>Nelumbo nucifera</i> Gaertn. Nelumbonaceae	May-Nov, Aquatic H	Cardiotonic, febrifuge, hypotensive.
105	<i>Nerium indicum</i> Mill. Apocynaceae	Apr-Jun, S	Oil prepared from root bark is used in skin diseases and leprosy
106	<i>Nicotiana tabacum</i> L. Solanaceae	H, March – November	Antispasmodic, diuretic, emetic, expectorant, sedative, sialagogue, treatment of rheumatic swelling, skin diseases and stings.
107	<i>Nyctanthes arbor-tristis</i> L. Nyctanthaceae	Aug-Nov, T	Cholagogue, rheumatism, obstinate sciatica, fever.
108	<i>Nymphaea pubescens</i> Willd. Nymphaeaceae	July-October, aquatic	Demulscent, astringent, cardiotonic, piles.

109	<i>Ochna obtuse</i> DC Ochnaceae	Feb –Jul, S	Digestive tonic, menstrual disorders, asthma, emollient, cataplastm.
110	<i>Ocimum americanum</i> L. Lamiaceae	July-Dec, S	Parasitical skin diseases.
111	<i>Ocimum basilicum</i> L. Lamiaceae	Aug-Mar, S	Carminative, diuretic, stimulant, demulcent, diarrhea, dysentery.
112	<i>Ocimum sanctum</i> L. Lamiaceae	Sep-Dec, S	Carminative, diaphoretic ,cough ,tooth ache, convulsions, cramps, fevers and cholera, reduce stress.
113	<i>Oldenlandia corymbosa</i> L. Rubiaceae	June-Oct, T	Nervous depression, jaundice, liver trouble.
114	<i>Opuntia dillenii</i> Cactaceae	May-Jun, S	Plant pacifies vitiated pita over perspiration, burning sensations, asthma, whooping cough, conjunctivitis, boils, ulcers, edema, leucorrhea and menorrhagia.
115	<i>Oxalis corniculata</i> L. Oxalidaceae	Oct-May, H	Scurvey, cooling, antiscorbutic
116	<i>Pouzolzia indica</i> L. Urticaceae	Jul-Sep, H	In syphilis, gonorrhoea.
117	<i>Peperomia pellucida</i> Kunth Piperaceae	June -Aug, H	Flu, diuretic, hypertension, diarrhoea, cough, elder convulsions.
118	<i>Peristrophe bicalyculata</i> Acanthaceae	Nov - April, H	Antidote for snake bite, swelling
119	<i>Phyla nodiflora</i> (L.)Greene Verbenaceae	Aug-Jan, S	Febrifuge, diuretic, in indigestion.
120	<i>Phyllanthus fraternus</i> Webster Euphorbiaceae	Dec-May, S	Diuretic, stomachic, genitor urinary disorders, jaundice, dysentery, oedematous swellings, ulcers.
121	<i>Physalis minima</i> L. Solanaceae	April – Jan, H	Appetizing, tonic, diuretic, laxative, useful in inflammations, enlargement of the spleen and abdominal troubles, the juice of leaf is a remedy against earache.
122	<i>Pisidium guajava</i> L. Myrtaceae	Throughout year, T	Problems of teeth, swelling of gum
123	<i>Pistia stratiotes</i> Araceae	May – October, Aquatic H	
124	<i>Plumbago zeylanica</i> L. Plumbaginaceae	Aug-Nov, H	Rheumatic joints, leprosy, paralytic limbs, piles, diarrhoea, skin disease.
125	<i>Persicaria hydropiper</i> (L.) Delabre Polygonaceae	May –Sep,H	Acrid juice of plant is used in diuretic cases, uterine disorder.
126	<i>Rauwolfia serpentine</i> (L.) Benth. ex Kurtz Apocynaceae	Mar-May, S	Sedative, beneficial in treating insanity, useful in treating hysteria, regulates high blood pressure.
127	<i>Ricinus communis</i> L. Euphorbiaceae	Throughout year, S	Inflammation, fever, bronchitis, elephantiasis, cough , laxative, antidandruff, useful in eczema and dermatitis.
128	<i>Ruellia tuberosa</i> L. Acanthaceae	June-Nov, S	In ear ache, gonorrhoea.
129	<i>Saraca asoca</i> (Roxb.) De Wilde Fabaceae	Nov-April, H	Refrigerant, astringent, demulcent, emollient, anthelmintic, menorrhagia, dysentery.

129	<i>Scoparia dulcis</i> L. Scrophulariaceae	Throughout the year, S	Emetic, anti diabetic.
130	<i>Sesbania sesban</i> (L.) Merr. Fabaceae	Sept-Nov, S	Fever, pulmonary TB, inflammation of the mucous membranes of the eyes, kidney infection, gonorrhoea.
131	<i>Sida acuta</i> Burm. f. Malvaceae	S	Tonic, astringent, cooling, febrifuge, in nervous and urinary diseases
132	<i>Sida cordifolia</i> L. Malvaceae	S	Aphordisiac, febrifuge, in facial paralysis, sciatica, frequent micturition, gonorrhoea, colic, tetanus.
133	<i>Sida rhombifolia</i> L. Malvaceae	Sep-Feb, S	Demulcent, emollient, rheumatism, pulmonary tuberculosis.
134	<i>Solanum nigrum</i> L. Solanaceae	Sep-Feb, H	Diuretic, laxative, bleeding piles, paralysis, insanity, diarrhea, useful in urinary problems, inflammations.
135	<i>Solanum torvum</i> Sw. Solanaceae	S	Antiperiodic, antiphlogistic, diaphoretic, diuretic, emollient, febrifuge, narcotic, purgative, sedative.
136	<i>Solanum xanthocarpum</i> Solanaceae	H	Expectorant, carminative, diuretic, in cough, asthma, chest – pain, vomiting dropsy, rheumatism.
137	<i>Sphaeranthus indicus</i> L. Asteraceae	Nov-May, S	Anthelmintic, cooling, diuretic, alternative, tonic, deobstruent.
138	<i>Spondias pinnata</i> (L. f.) Kurz Anacardiaceae	Jan-Aug, T	Colds, skin diseases, gum infection, dysentery.
139	<i>Stellaria media</i> (L.) Vill. Caryophyllaceae	May-Oct, US	Astringent, Carminative, depurative; Diuretic, expectorant; Galactagogue, Kidney; Laxative; Ophthalmic; Poultice; Refrigerant; Vulnerary.
140	<i>Tamarindus indica</i> L. Fabaceae	Feb-June, T	Cardiac - and blood-sugar reducing, cathartic, astringent, febrifuge, antiseptic, refrigerant, seed extract possesses anti-snake venom properties.
141	<i>Tecoma stans</i> (L.) Juss. ex Kunth Bignoniaceae	April-Jul, T	Diuretic, vermifuge, tonic, remedy for snake bite, rat bites, scorpion sting etc.
142	<i>Tectona grandis</i> L.F. Verbenaceae	July-Dec, T	Diuretic, stomachic, vermifuge, astringent, swelling, dyspepsia, swollen eyelids, scabies.
143	<i>Tephrosia purpurea</i> (L.) Pers. Fabaceae	Sept-Feb, S	Tonic, laxative, blood purifier, dyspepsia, chronic diarrhoea, Snakebite, Wound, Ulcer, Sexual diseases
144	<i>Thevetia peruviana</i> Apocynaceae	Throughout year, T	Skin diseases, itching, rheumatism
145	<i>Tragia involucrata</i> L. Euphorbiaceae	Throughout year	Diaphoretic, alternative, leg and arm pain, leprosy.
146	<i>Tridax procumbens</i> L. Asteraceae	Throughout year, US	Anti septic, skin diseases.
147	<i>Triumfetta rhomboidea</i> Jacq. Tiliaceae	Sept-Nov, S	Demulcent, astringent, diuretic, in facilitating child birth, diarrhea, dysentery.
148	<i>Vallisneria spiralis</i> L. Hydrocharitaceae	H	Stomachic, used in leucorrhoea, giddiness, morbid thrust, rheumatism.
149	<i>Vernonia cinerea</i> L. Asteraceae	Aquatic herb, October - March	Antibacterial, antitumor, astringent, expectorant, febrifuge, sedative, tonic, vermifuge, useful in gastrointestinal upset, arthritic pain.

150	<i>Verbascum chinensis</i> (L.) Sant. Scrophulariaceae	Mar-Apr, S	Sedative, astringent, in diarrhea, dysentery, skin eruption.
151	<i>Vitex negundo</i> L. Verbenaceae	Throughout year, S	Expectorant, febrifuge, tonic, vermifuge, acute rheumatism, ulcers, scrofulous sores.
152	<i>Wedelia calendulacea</i> Less. Asteraceae	H, Throughout year	Skin diseases, uterine, haemorrhage, menorrhagia, tonic, alternative.
153	<i>Withania somnifera</i> Solanaceae	Jan- Mar, Climber	Useful in inflammation, psoriasis, bronchitis, ulcers, scabies, tones up shattered nerves, sharpens dull memory
154	<i>Xanthium strumarium</i> Asteraceae	Oct-Dec, S	Anodyne, antibacterial, antifungal, antirheumatic, antispasmodic, appetizer, diaphoretic, diuretic, emollient.
155	<i>Ziziphus mauritiana</i> Lamk. Rhamnaceae	Oct-Dec, T	Styptic, blood-purifier, digestive, wounds, ulcers, diarrhoea.
156	<i>Zingiber officinale</i> Roscoe Zingiberaceae	Dec – May, S	Carminative, digestive stimulant

The main object of this investigation was to find out the uses made of the plants by the local inhabitants as medicines for the specific diseases that cures. So, it may be concluded that present investigation may throw some lights on the floristic composition of the locality and may help the inhabitants as well as other scientists or botanists or other interested persons for the general idea about the eco-floristic composition and diversified use of the available medicinally and economically important plants.

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