

An Ethnobotanical Study on Tajpur Village of Bankura District

Paper Submission: 10/06/2020, Date of Acceptance: 19/06/2020, Date of Publication: 15/07/2020

Abstract

survey on medicinal plants was carried out in Tajpur village of Bankura district of West Bengal, India along with their uses by the residing tribal people for the treatment of various ailments in their daily life as well as for some serious diseases. The present work revealed that out of 53 plant species 36 have medicinal uses, 12 are used as food and 5 others are used for miscellaneous purposes for several common diseases like bronchitis, leprosy, diarrhoea, cough, skin disease etc. and are used to make various necessary instruments. Documentation of such knowledge is important to evaluate culture and protection exerts on local biodiversity. Phenological characters like flowering, fruiting etc. also were noted during the study period. Phenological record revealed that maximum species exhibited flowering during March – May and fruiting activities during May – June.

Keywords: Ethnobotany, Tribal, Population, Documentation, Biodiversity.

Introduction

Ethnobotany deals with the studies among the tribal and rural people for recording their unique knowledge about plant wealth and search of the new resources of herbal drugs, edible plants and other aspects of plants. The use of plants to cure specific ailments is an age-old practice in our country. The science of ethnobotany has recently received much attention in certain parts of the world, particularly in the underdeveloped and developing countries where small or large portion of population still depend on the nature resources in particularly indigenous condition and the impact of modern system of medicine has not reached them. But during the last century, there has been a rapid extension of allopathic medicinal treatment in India and presently, it has become one of the most prevalent system of medicine in the modern society. Although phonological information with respect to some forest regions of India as well as West Bengal have been done [1-7] but no such works have been done in Tajpur village of Bankura district. The village Tajpur is situated in the eastern part of Bankura district. The village is away about 12 km from Kotulpur. This village is under the Deshra-Koalpara Gram Panchayat. The climate is tropical with 3 seasons namely, summer (March-June), Rainy (July-October), and winter (November-February). Temperature varies from nearly 12-38°C. Relative humidity ranges from 28%-85% of which 80% falls during Rainy Season. Out of 50 million tribal people of different ethnic groups in India only Santals, Mundas, Domes are mainly inhabited in my study area. They have changed their culture and social life like diseases, food habit and medicine. They have associated them with modern system of life.

Methodology

The proposed work has been carried out in different areas of the village Tajpur. Regular field visits were undertaken to study the area twice a month during March 2016 to June 2017. Local people and old villagers were the main sources of information. Almost all the types of people were interviewed to make effective communication. The correct Botanical name with its family, local name, their uses and the plant specimens were collected at the time of the study for the preparation of their herbarium sheets that will be deposited in the Herbarium of Botany Department, Ramananda College, Bishnupur under the University of Burdwan.

Enumeration

The various plants are used by the tribal are summarized in alphabetical order with their scientific names together with respective families, vernacular or local names. These followed by a brief note on uses as revealed by informants during field study. Out of 53 plant species 36



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have medicinal uses, 12 are used as food and others are used for miscellaneous purposes.

***Abutilon indicum* (L.) Sweet**

Family : Malvaceae

Local Name : Potary

Description : An under shrub, 30-150cm height; laeves cordate, 2-9cm long; flowers orange-yellow; fruits 1-2cm diameter.

Flowering and Fruiting : July-March.

Uses : 1. The leaf-paste is applied to burst boils.

2. Seeds are used in spermatorrhoea.

***Acacia nilotica* (L.) Willd. Ex Del.**

Family : Mimosaceae

Local Name : Babla

Description : A small branched tree; flowers yellow, numerous in globose head.

Flowering : July-November.

Fruiting : January-April.

Uses : 1. The leaf juice is used to cure mouth sore.

2. Stem juice is used in tooth troubles.

3. Pasted bark and gum is applied in skin disease.

4. Bark is used to cure gastric problems.

5. Gum is used in the treatment of dysentery.

***Acalypha indica* L.**

Family : Euphorbiaceae

Local Name : Muktajhuri

Description : Erect annual herb; leaves ovate; flowers axillary spikes; fruits capsule.

Flowering and Fruiting : Rainy and cold seasons.

Uses : 1. Leaf juice is used to cure all types of wounds.

2. Root and leaf (1:2) juice is used to the Cattle along with food to kill intestinal worms.

***Achyranthes aspera* L.**

Family : Amaranthaceae

Local Name : Apang

Description : A small common herb with spinescent Bracts And bracteoles; small flowers in elongated spikes.

Flowering : September-November.

Fruiting : November-January.

Uses : 1. All parts are used to cure diarrhoea, dysentery, and piles.

2. The whole plant paste is applied on fore-head to cure headache due to cold.

3. Young plants are taken as vegetable.

***Adhatoda vasica* Nees.**

Family : Acanthaceae

Local Name : Basak

Description : A shrub; stem quadrangular, branches opposite; flowers on spikes, white.

Flowering : January-March.

Fruiting : March-May.

Uses : 1. Roots, leaves and barks are used in chronic bronchitis, cough, asthma, chest diseases and tuberculosis.

***Aerva lanata* (L.) Juss. Ex Schult.**

Family : Amaranthaceae

Local Name : Chaldhoa

Description : Herbs or under shrubs; bracches from a stout woody rootstock; flower very small, greenish white.

Flowering and Fruiting : November-January.

Uses : 1. Root extract is given orally to stop abnormal bleeding in menstruation.

2. Fresh and young leaves paste is applied on fresh cuts or burns.

3. Young shoots cooked as vegetable.

***Aloe barbadensis* Mill.**

Family : Liliaceae

Local Name : Ghritakumari

Description : Nearly a quite acaulescent, the rosette arising from the ground or stem; flowers in racemes, dull red.

Flowering and Fruiting : December-February.

Uses : 1. The leaf decoction is applied on the head to cure lunatic patients.

2. It cures asthma to some extent.

3. The leaf mucilage is given orally to cure Jaundice.

***Alstonia scholaris* (L.) R. Br.**

Family : Apocynaceae

Local Name : Chatim

Description : A large tree with branches and leaves in whorls; scented flowers; fruit long.

Flowering : November-January.

Fruiting : January-April.

Uses : 1. The decoction of bark is used in the treatment of dysentery, abdominal disorder in Malarial fever.

2. Milky juice of leaves is applied to cure Ulcers.

3. Leaves are made into paste and given with salt to cows in gastric disorders and for good health.

***Amaranthus viridis* L.**

Family : Amaranthaceae

Local Name : Notey

Description : A slender unarmed annual herb; flower minute, pale green colour.

Flowering and Fruiting : March-May.

Parts Used : Root, Stem, Leaves.

Uses : 1. Roots used to cure Leucorrhoea.

2. The plant paste and juice of the plant (half cup) is given as antidote to venom to the victim of snake bite.

3. Leaves are used as vegetable.

***Andrographis paniculata* (Burm.f) Wall. Ex Nees**

Family : Acanthaceae

Local Name : Kalmegh

Description : An erect herb; flowers white.

Flowering : September-March.

Fruiting : October-April.

Parts Used : Leaves, Stem.

Uses : 1. The plant decoction is taken to purify blood.

2. The plant juice is used to cure fever.

3. Leaves juice is used to cure skin Disease and in Malaria.

***Bambusa arundinaceae* (Retz.) Willd.**

Family : Poaceae

Local Name : Bansh

Description : A very tall, large bamboo with stout rootstock, internodes 30-45 cm long, leaves linear lanceolate.

Flowering : Very rarely found.

Parts Used : Stem, Leaves.

Uses : 1. Stem is used to prepare many necessary materials like basket etc.

2. Leaves used in Gonorrhoea, constipation in children and pregnant women.

3. Fresh leaves fed to cow in Diarrhea.

***Boerhavia diffusa* L.**

Family : Nyctaginaceae

Local Name : Punarnava

Description : A diffuse herb with ascending branches; flowers bright purple.

Flowering and Fruiting : Throughout the year.

Parts Used : Root, Stem, Leaves.

Uses : 1. Root extract is given for Jaundice and stomach trouble.

2. The plant decoction with sugar is used to cure stomach pain.

***Calotropis gigantea* (L.) R. Br.**

Family : Asclepiadaceae

Local Name : Akanda

Description : Shrub or small tree; flowers purple-white.

Flowering : March-November.

Fruiting : July-February.

Parts Used : Latex, Leaves, Fruits.

Uses : 1. Latex is used for massage to cure rheumatism.

2. Decoction of leaves is used cure toothache.

3. Leaves are used to cure chest pain and cold and cough.

***Carica papaya* L.**

Family : Caricaceae

Local Name : Pepe

Description : Small tree, stem with leaf-scars; leaves with long petioles; fruit berries.

Flowering and Fruiting : Throughout the year.

Parts Used : Leaves, Latex, Seed.

Uses : 1. Leaf-paste is used as plaster for healing bone fracture.

2. Fresh latex and dried seed powder is given for abortion in the early stage.

3. Fruits are edible.

***Catharanthus roseus* (L.) G. Don**

Family : Apocynaceae

Local Name : Nayantara

Description : A small herb; flowers pinkish-white; fruits follicle.

Flowering : May-October.

Fruiting : August-December.

Parts Used : Root, Stem, Leaves.

Uses : 1. Plant used for the treatment of Cancer and Diabetes.

2. The root is used to cure toothache.

***Centella asiatica* (L.) Urban**

Family : Apiaceae

Local Name : Thankuni

Description : A perennial herb with long creeping stolons; kidney shaped leaves.

Flowering and Fruiting : April-May.

Parts Used : The whole plant.

Uses : 1. Leaf extract is used in the treatment of liver complaints and gastric troubles.

2. Leaves are chewed in the morning to check gastric acidity.

3. The whole plant is used as vegetable.

***Cynodon dactylon* (L.) Pers.**

Family : Poaceae

Local Name : Durba

Description : A perennial herb with slender creeping rhizome, leaves linear, acuminate.

Flowering and Fruiting : Throughout the year.

Parts Used : Leaves, Rhizome.

Uses : 1. Plant used to check bleeding from wounds.

2. Plant juice is used to cure the irritation of the eye due to Summer heat.

3. Rhizome extract is applied on the cut to check bleeding and to prevent infection.

***Dalbergia sissoo* Roxb.**

Family : Fabaceae

Local Name : Sisu

Description : Tree; flowers small, yellow to yellowish-white in colour.

Flowering and Fruiting : March-May.

Parts Used : 1. Leaves, Stem.

Uses : 1. Decoction of leaves is used in Gonorrhoea.

2. Wood is used for making furniture.

***Datura metel* L.**

Family : Solanaceae

Local Name : Dhutura

Description : Annual herb or undershrub; flowers Purple-white; fruits capsule; seeds numerous.

Flowering : August-September.

Fruiting : December-May.

Parts Used : Root, Leaves, Flowers.

Uses : 1. The root juice is mixed with 'Halud' and rubbed over the affected area to cure rheumatism.

2. Pasted leaves and flowers applied externally on forehead or mixed with goat milk to cure cough and cold.

***Eclipta alba* (L.) Hassk.**

Family : Asteraceae

Local Name : Kesut

Description : Creeping or ascending herb with white flower heads.

Flowering and Fruiting : March-June.

Parts Used : Root, Stem, Leaves.

Uses : 1. Plant is used in the treatment of hepatic disease.

2. Roots are used in wounds and ulcers.

3. The leaf-decoction is used to cure dysentery.

4. Root paste is given to cure Diarrhoea.

5. Plant juice is given in respiratory trouble.

***Eichhornia crassipes* (Mart.) Solms.**

Family : Pontederiaceae

Local Name : Kochuripana

Description : A small floating herb; flowers violet-blue.

Flowering and Fruiting : March-September.

Parts Used : Flower.

Uses : 1. Flower paste is used in skin diseases for horses.

***Evolvulus nummularius* (L.) L.**

Family : Convolvulaceae

Local Name : Bhuinankra

Description : A small prostrate perennial herb; flowers one or two from the axils, corolla white, fruit capsule.

Flowering and Fruiting : Throughout the year.

Parts Used : The whole plant.

Uses : 1. The plant paste is applied on the affected tooth to cure toothache.

2. The juice of the plant is given 1-2 teaspoonful twice daily to cure fever.

***Ficus benghalensis* L.**

Family : Moraceae

Local Name : Bat

Description : A large tree sending down numerous aerial roots from the branches; leaves ovate oblong or elliptic, young ones pubescent.

Flowering and Fruiting : November-February.

Parts Used : Aerial roots, Leaves, Buds, Fruits, Latex, Bark.

Uses : 1. The latex is applied to cure cracked hill.

2. The bark, bud and the aerial root is used to cure bleeding in nose.

3. It is used in the treatment of leprosy and piles.

***Heliotropium indicum* L.**

Family : Boraginaceae

Local Name : Hatisur

Description : An annual herb; flowers small, purplish-white, funnel-shaped.

Flowering and Fruiting : April-January.

Parts Used : Leaves, Root.

Uses : 1. The root extraction is used in cough.

2. Leaf juice is used to cure skin and eye diseases.

3. The decoction of leaf is used in fever.

***Hibiscus rosa-sinensis* L.**

Family : Malvaceae.

Local Name : Joba

Description : Shrubs; leaves lanceolate; flowers tubularbelow, reddish.

Flowering : Throughout the year.

Parts Used : Leaves, Flowers, Bark.

Uses : 1. Decoction of flower is given as blood purifier.

2. Paste of stem bark is given for causing abortion.

3. Flowers are heated with coconut oil and are applied in hair for blackening.

***Ipomoea aquatica* Forsk.**

Family : Convolvulaceae

Local Name : Kalmisak

Description : Aquatic herb, stem hollow; flowers purple-white.

Flowering : September-November.

Fruiting : October-January.

Parts Used : The whole plant.

Uses : 1. In the treatment of certain nervous condition with sleeplessness and headache.

2. Plants used as vegetable and soup.

***Jatropha gossypifolia* L.**

Family : Euphorbiaceae

Local Name : Lal-Bharenda

Description : Shrub, stem with glandular viscid bristles; leaves 5-7 lobed; flowers deep red.

Flowering : April-July.

Fruiting : July-August.

Parts Used : Leaf, Stem, Latex.

Uses : 1. Leaves are taken in mouth and rubbed to make the gum healthy.

2. Plant paste is applied to cure rheumatism.

3. The latex is applied to cure skin diseases.

***Mangifera indica* L.**

Family : Anacardiaceae

Local Name : Aam

Description : An erect tree; flowers reddish-green or reddish-green.

Flowering : February-March.

Fruiting : April-June.

Parts Used : Leaves, Bark, Fruit.

Uses : 1. Amixture of bark decoction, milk and sugar is taken for spermatorrhoea.

2. 3-4 leaves are boiled and decoction is taken to control vomiting.

3. Fruits are edible parts.

***Marsilea quadrifolia* L.**

Family : Marsiliaceae

Local Name : Sushni-sak.

Description : Aquatic or semi-aquatic herb with rhizome; leaves with long petiole.

Parts Used : Leaves.

Uses : 1. Leaf extract with honey is used in asthma and bronchial problems.

2. Leaf juice is very effective to reduce high blood pressure.

3. Leaves are taken as a good vegetable.

***Mimosa pudica* L.**

Family : Mimosaceae

Local Name : Lajjabati

Description : A weak under shrub or herb; flowers pink on pretty globose heads.

Flowering and Fruiting : Almost throughout the year except May and June.

Parts Used : Root, Leaf.

Uses : 1. Leaf is used to cure ulcer.

2. The decoction of root is used for gargling in gum trouble and toothache.

3. Decoction of root is used in diarrhea and dysentery.

4. Smashed leaves applied on forehead in mental disorder.

***Ocimum sanctum* L.**

Family : Lamiaceae

Local Name : Tulsi

Description : An aromatic perennial herb; leaves elliptic-oblong; flowers purplish-white in a long racemes.

Flowering : September-October.

Fruiting : October-November.

Parts Used : The whole plant.

Uses : 1. Juice of leaves is used in stomach trouble, gastric disorder, bronchitis and common cold.

2. Dried inflorescence, mixed with honey is used to cure migraine.

3. The whole plant paste is used to cure fever.

***Oxalis corniculata* L.**

Family : Oxalidaceae

Local Name : Amrul

Description : An annual herb; leaves palmately trifoliolate; lowers yellow; fruits capsule.

Flowering and Fruiting : May-October.

Parts Used : Leaves.

Uses : 1. Plant juice is used to cure scurvy.

2. Fresh leaf juice is given orally after snake bite.

3. Leaf extract with mustard oil are heated and massage on chest to cure cold and cough.

4. Leaves are taken as vegetable.

***Parthenium hysterophorus* L.**

Family : Asteraceae

Local Name : Bish-gach.

Description : An annual herb; flowers small many, whitish.

Flowering and Fruiting : Throughout the year.

Parts Used : Root.

Uses : 1. Ten grams of extracted root juice is taken in empty stomach in the early morning for ten days to cure piles.

***Psidium guajava* L.**

Family : Myrtaceae

Local Name : Peyara

Description : A medium-sized tree; leaves elliptic-oblong; flowers white, solitary; fruits globose or ovoid.

Flowering and Fruiting : July-October.

Parts Used : Leaf, Bark, Fruit.

Uses : 1. Stem bark juice is given two Teaspoonfuls daily for 2-3 days to cure dysentery.

2. Leaf paste is applied on the wounds of cattle as an antiseptic agent.

3. Fruits are edible.

***Ruellia tuberosa* L.**

Family : Acanthaceae

Local Name : Chatpati

Description : An erect undershrub; stem quadrangular; flowers purplish-blue; fruits capsule.

Results

Flowering and Fruiting : August-November.

Parts Used : Root

Uses : 1. A paste made of root and few peppers is taken to cure stomach pain.

2. The root paste with water is given to patient in thirst during fever.

***Solanum nigrum* L.**

Family : Solanaceae

Local Name : Kakmachi

Description : An erect, annual herb; flowers small, hite; fruits berry.

Flowering and Fruiting : May-August.

Parts Used : Root, Flower, Fruit.

Uses : 1. The decoction of fruits and flowers is used to cure cough.

2. Root mixed with pepper and ginger is fed to cows to reduce gas formation in the stomach.

3. Ripe fruits are edible.

| SI. No. | Plants Name of the Plants | Uses | | |
|---------|---------------------------------|-----------|---------|---------|
| | | Medicinal | Food | Other |
| 1 | <i>Abutilon indicum</i> | Present | Absent | Absent |
| 2 | <i>Acacia nilotica</i> | Present | Absent | Absent |
| 3 | <i>Acalypha indica</i> | Present | Absent | Absent |
| 4 | <i>Achyranthes aspera</i> | Present | Present | Absent |
| 5 | <i>Adhatodavasic</i> | Present | Absent | Absent |
| 6 | <i>Aerva lanata</i> | Present | Present | Absent |
| 7 | <i>Aloe vera</i> | Present | Absent | Absent |
| 8 | <i>Alstonia scholaris</i> | Present | Absent | Absent |
| 9 | <i>Amaranthus viridis</i> | Present | Present | Absent |
| 10 | <i>Andrographis paniculata</i> | Present | Absent | Absent |
| 11 | <i>Bambusa arundinaceae</i> | Present | Absent | Present |
| 12 | <i>Boerhavia diffusa</i> | Present | Present | Absent |
| 13 | <i>Calotropis gigantea</i> | Present | Absent | Absent |
| 14 | <i>Carica papaya</i> | Present | Present | Absent |
| 15 | <i>Catharanthus roseus</i> | Present | Absent | Absent |
| 16 | <i>Centella asiatica</i> | Present | Present | Absent |
| 17 | <i>Cynodon dactylon</i> | Present | Absent | Absent |
| 18 | <i>Dalbergia sissoo</i> | Present | Absent | Present |
| 19 | <i>Datura metel</i> | Present | Absent | Absent |
| 20 | <i>Eclipta alba</i> | Present | Absent | Absent |
| 21 | <i>Eichornia crassipes</i> | Present | Absent | Absent |
| 22 | <i>Evolvulus numularius</i> | Present | Absent | Absent |
| 23 | <i>Ficus benghalensis</i> | Present | Absent | Present |
| 24 | <i>Heliotropium indicum</i> | Present | Absent | Absent |
| 25 | <i>Hibiscus rosa-sinensis</i> | Present | Absent | Present |
| 26 | <i>Ipomoea aquatica</i> | Present | Present | Absent |
| 27 | <i>Jatropha gossypifolia</i> | Present | Absent | Absent |
| 28 | <i>Mangifera indica</i> | Present | Present | Present |
| 29 | <i>Marsilea quadrifolia</i> | Present | Present | Absent |
| 30 | <i>Mimosa pudica</i> | Present | Absent | Absent |
| 31 | <i>Oscimum sanctum</i> | Present | Absent | Absent |
| 32 | <i>Oxalis corniculata</i> | Present | Present | Absent |
| 33 | <i>Parthenium hysterophorus</i> | Present | Absent | Absent |
| 34 | <i>Psidium guajava</i> | Present | Present | Absent |
| 35 | <i>Ruellia tuberosa</i> | Present | Absent | Absent |
| 36 | <i>Solanum nigrum</i> | Present | Present | Absent |

Conclusion

As a result of survey many interesting and useful information about the plants were collected. Out of 53 plant species grouped into 36 are used as medicine, 12 were food and 5 were others by the rural and tribal people of Tajpur. It includes trees, shrubs, herbs, climbers etc. People who extensively and solely use these plants as medicine, found to be effective without any side effects. The study revealed that, there are only some small portion of population still depend on natural resources and maximum are gradually change with the modern system of life. Phenological record revealed that maximum species exhibited flowering during March – May and fruiting activities during May – June though some of the species showed such activities during rest of the year.

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