

**BANKURA, WEST BENGAL**

**Arpita Banerjee\* and Manoranjan Chakraborty**

Department of Botany, Bankura Christian College, Bankura, West Bengal, India.

Corresponding Author Address: Department of Botany, Bankura Christian College, Bankura-  
722101, West Bengal, India.

\* Corresponding author, E. mail- arpitanerjeebcc@rediffmail.com

**ABSTRACT:**

Plants continue to be a major source of medicines, as they have been throughout human history. Ethno medicinal practices are the mother of all other traditional systems of medicine. Herbal medicine plays a vital role for the poor people as substitute for conventional medicine. Interest on herbal products has been increasing since last few decades not only in underdeveloped and developing countries, but also in the developed countries. As people became conscious with the increased potency and harmful side effects of various synthetic compounds so gradually increase the interest in the alternative system of medicines and medicinal plants. It is very well known that plants do not have any side effects and many diseases can be cured by natural herbs. Various plants having medicinal value perform as major component in different traditional medicine. Asthma has emerged as a major public health problem worldwide. It continues to be a significant cause of morbidity and mortality. Traditional medicinal plants played a central role in treating such type of diseases. Present paper documented some plants that are used by tribal people in southern Bankura as for the treatment of asthma.

**KEY WORDS:** Aboriginal people, Asthma, Medicinal Plants, Southern Bankura

During last three decades have shown a revival of interest in plant based drugs and aroma chemicals in the world. So plants continue to be a major source of medicines, as they have been throughout human history. There is an increasing interest for using different medicinal plants due to consciousness about the harmful side effects of different synthetic compounds [1]. It is very well known that herbs do not have any side effects and many diseases can be cured by natural herbs. There is a wide variety of naturally derived drugs which still serve as important therapies in medicine today. For a long time man has exploited particularly the plant kingdom, which has proved to be very useful for treating most of our ailments. During the course of history, experimentation has succeeded in distinguishing those plants which have beneficial effects from those that are toxic. In present day, asthma has emerged as a major health burden worldwide. In different developing countries various plants having great medicinal importance can play a vital role for preparation of different natural drugs. So different herbal plants used traditionally by indigenous healers to for curing this disease. The global estimate indicates that over 5 billion world population mostly from Asia and Africa cannot afford the products of the Western pharmaceutical industries and have to rely upon the use of traditional medicines. Bronchial asthma is a chronic respiratory disorder affecting a large proportion of population throughout the World [2]. Traditional medicine has played a central role in treating disease including asthma and it will still widely used in modern medical practice throughout the World. A lot of works have been carried out regarding medicinal value of different plants among tribal population [3-6]. But present paper depicts the different plants present in the southern part of Bankura district that are used as traditional remedies for asthma and allergy.

**Description of the study areas:**

Bankura is located in the western part of the state, situated between 22°38' and 23°38' North latitude and between 86°36' and 87°46' East latitude, it is the fourth largest district of West Bengal. Bardhaman district is surrounded on the north and north east part of this district from which it is separated by the Damodar river. This district is economically poor and industrially backward. Most of the people from this region are farmer. But the indigenous system of medicines in Bankura District is very resourceful since the district is very rich in Scheduled tribe population. Here maximum area get adjacent to the forest. Our study area is the different villages in the southern part of Bankura where maximum tribal community resides. Traditional medicine covers health practices and approaches incorporating plant based medicines for health care. Various tribal groups like Santal, Lohar, Lodha, Mahali, Sabar, Munda and Oroan dwell in different villages adjoining to the forest.

**Documentation of Medicinal Plants**

Periodic field surveys for ethonobotanical exploration were undertaken during July, 2017 to July 2019 in the southern part of Bankura District. During the course of the study, five field trips were carried out in local tribal villages of Simlapal and Khatra Subdivision. Information was collected from traditional herbal healers, local people having rich folk knowledge of age 50 and above was interviewed with prepared questionnaires. Randomly people of different community and different villages were selected of which 82 men 60 women. Plant specimen were collected by the help of them. The standard methods as suggested by Jain and Rao [7]. were adopted for herbarium preparation. All plant species are collected and properly identified by using fresh and herbarium materials with taxonomic keys with the help of different books present in the library of our college [8-10].

The present study has documented 30 angiospermic plants belongs to 20 families along with their scientific name, habit, family, vernacular name and different parts of plants (**Table.1**). The uses of various plants are in common practice in the traditional system of health care for different respiratory disorder in southern part of Bankura District. All the plants mentioned in this study are very popular among the tribal communities of this district. Among the 30 investigated plant species 17 are herbs, 3 are climbers 3 are shrubs and 6 are trees and 1 is epiphyte (**Fig-1**). Present study depict that leaves are most frequently used as anti asthmatic agent followed by whole plants, flowers, fruits and seeds. Stem bark, gum are used in some plants (**Fig.2**). The uses of different plants may vary according to different tribal community to community as well as place. It means that one particular plant can be used by different community as well as different village for curing different disease. Sometimes apply a mixture of different plants as healing agent but complicated mixture of several different species were prescribed only occasionally.

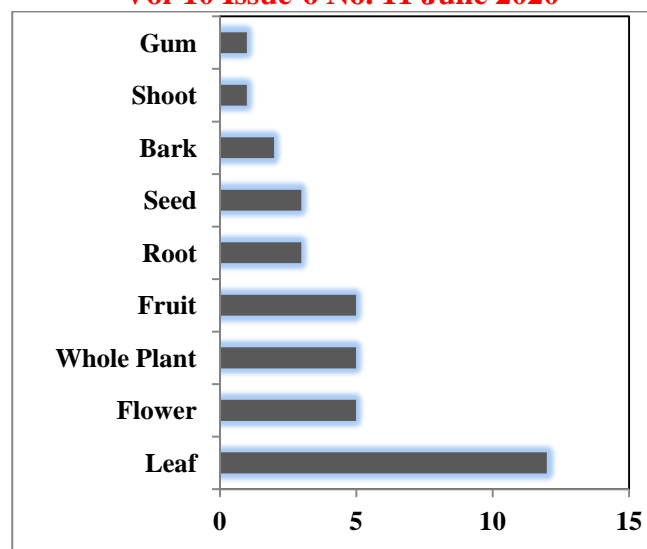
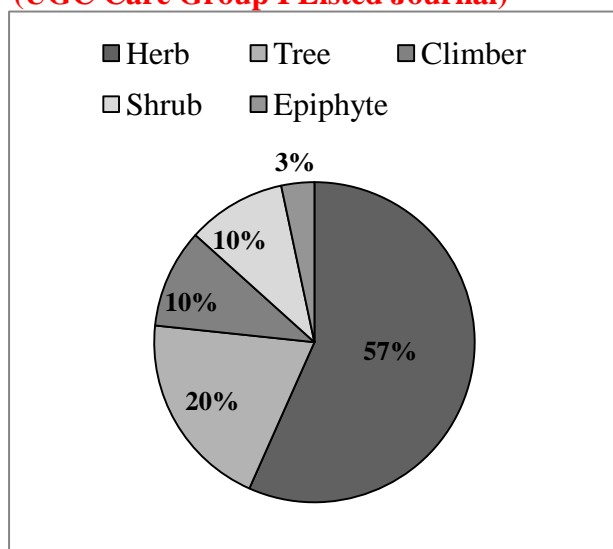
**Table.1 Enumeration of different medicinal plants.**

Sl. No.	Scientific Name	Plant habit	Family	Local name	Medicinal uses
1	<i>Acacia catechu</i> (L.f.) Willd.	Tree	Fabaceae	Khair	Flowering top, barks, fruits and extract of gum are used in asthma, cough and bronchitis.
2	<i>Aerva lanata</i> (L.) Juss.ex Schult.	Herb	Amaranthaceae	Apang	Fruits and leaves are used in asthma.
3	<i>Ageratum conyzoides</i> L.	Herb	Asteraceae	Uchunti	Leaf juice have anti asthmatic and

					antispasmodic effect.
4	<i>Argemone mexicana</i> L.	Herb	Papaveraceae	Shialkanta	Seed oil is used for asthma.
5	<i>Bacopa monnieri</i> L.	Herb	Scrophulariaceae	Brahmi	Whole plant extracts is used to relieve respiratory problems like asthma, bronchitis
6	<i>Barleria prionitis</i> L.	Herb	Acanthaceae	Kanta-Jati	Dried stem bark is used for prolonged whooping cough and ash of the whole plant with honey is used for bronchial asthma.
6	<i>Clerodendrum indicum</i> (L.) Kuntze	Shrub	Verbenaceae	Bamunhatee	Root extract are used in cough and asthmatic conditions. dried leaves are smoked like cigarettes to relieve asthma,
7	<i>Coleus aromaticus</i> Benth.	Herb	Lamiaceae	Patharchur	The decoction of leaf used in chronic asthma. juice
8	<i>Curcuma longa</i> L.	Herb	Zingiberaceae	Halud	Dried rhizome in powder form is effective for chronic asthma.
9	<i>Cyperus rotundus</i> L. Subsp.	Herb	Cyperaceae	Mutha	Leaf extract is used for relief from prolonged whopping cough.
10	<i>Datura Stramonium</i> L.	Shrub	Solanaceae	Swet-Dhutura	Small amount of dried seeds in powdery form is used in asthma.

11	<i>Eclipta prostrata</i> (L.) Mout.	Herb	Asteraceae	Kesuti	Whole plant extraction used for asthma.
12	<i>Eucalyptus globosus</i> Labill.	Tree	Myrtaceae	Eucalyptus	Leaf juice are used for bronchitis and Asthma
13	<i>Euphorbia hirta</i> L.	Herb	Euphorbiaceae	Bara dhudia	Leaf extract is used for throat spasms and bronchitis.
14	<i>Evolvulus alsinoides</i> (L.) Wall.	Herb	Convolvulaceae	Bichamalia	Leaves are made into cigarettes and smoked in chronic bronchitis and asthma.
15	<i>Hemidesmus indicus</i> (L.) R.Br.	Herb	Asclepiadaceae	Anantamul	Root extract is useful for treatment of asthma.
16	<i>Hyptis suaveolens</i> (L.) Poilt.	Herb	Lamiaceae	Bilatitulsi	Flowering shoot extract used as antispasmodic agent.
17	<i>Nyctanthes arbor-tristis</i> L.	Small tree	Oleaceae	Sheuli	Leaf extract used for asthma.
18	<i>Ocimum basilicum</i> L.	Herb	Lamiaceae	Babui Tulsi	Flower can act as antispasmodic agent.
19	<i>Passiflora foetida</i> L.	Climber	Passifloraceae	Jhumkolata	Decoction of leaves and fruits is used for asthma.
20	<i>Pergularia daemia</i> (Forssk.) Choiv.	Climber	Asclepiadaceae	Chagul bati	Leaf juices are used in asthma.
21	<i>Piper betel</i> L.	Climber	Piperaceae	Pan	Leaf extract is used in cough, cold
22	<i>Solanum surattense</i> Brum. F.	Herb	Solanaceae		Extract of entire plants and fruit are used for bronchial asthma.

23	<i>Tectona grandis</i> L.f.	Tree	Verbenaceae	Segun	Flowers are used in bronchitis.
24	<i>Tephrosia purpurea</i> (L.) Pers.	Herb	Fabaceae	Bono nil	Extraction of aerial part of plants are effective for bronchospasm.
25	<i>Terminalia bellerica</i> (Gaertn.) Roxb.	Tree	Combretaceae	Bahera	Seeds are used to treat respiratory tract infection including cough.
26	<i>Terminalia chebula</i> Retz. C.B. Clerk	Tree	Combretaceae	Haritaki	Fruits in powdery form are used for asthma.
27	<i>Vanda tessellata</i> (Roxb). Hook ex G. Don	Epiphyte	Orchidaceae	Rasna	Root decoction and flower in powdered form are used for curing asthma.
28	<i>Vernonia cinerea</i> Less.	Herb	Asteraceae	Choto kuksima	Decoction of plant extract is helpful for asthma and bronchitis.
29	<i>Vitex negundo</i> L.	Shrub	Verbenaceae	Nisinda	Leaf extraction is useful for bronchitis.



**Fig. 1-** Plant habit in percentage basis.

**Fig. 2-** Different plant parts used by Tribes

Traditional medicine covers health practices and approaches incorporating plant for health care. So, traditional medicine is still not only practiced in most of the developing countries but also attracting much attention in developed countries too. Traditional healing system around the World that utilizes herbal remedies is an important resource for the discovery of modern drugs [11]. Many tribes are scattered in different parts of India including our state also. The traditional botanical knowledge of aboriginal people contains a fund of knowledge about the properties of plants, an oral heritage that has accrued over ages, after generations of observations and experience. More than 400 medicinal plants have been used traditionally to treat for the asthmatic and allergic disorders worldwide [12]. It has been estimated that in maximum fast developing countries like India depends upon various plants as the chief constituent of drug. So in the economic point of view, plants having medicinal value can play a vital role in our countries than to the rest of the World [13]. Unfortunately this traditional knowledge and many of the cultures are becoming fast eroded in most regions. So it is very much essential to rescue the disappearing knowledge and revitalize it to the local communities. To keep it into the mind an extensive survey among tribal and rural area in our



study area are carried out to enlist some plants that are useful for the treatment of various respiratory disorders. Medicines that are prepared synthetically get much more resistant due to course of time for different microorganisms. Therefore it is essential to move toward herbal medicines and their combinations. Herbal medicine has good scope in the field of new drug therapy [14]. These medicinal plants used by traditionally as an antiasthmatic agent are reported to have scientific evidence. To preserve indigenous discoveries and make them accessible, collaboration is necessary between Ethnobotanists, Pharmacognosists, and Pharmacologists. Preserving their cultural tradition and values of native people facilitates the discovery of new compounds as well as information to the modern medicine.

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