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INDIGENOUS KNOWLEDGE OF PLANTS PRACTICED BY TRIBAL COMMUNITIES OF JHARGRAM DISTRICT, WEST BENGAL

¹Tulsi Hembram, ²Sujit Kumar Mandal, ³Paramita Pati, ⁴Sudeshna Mukherjee

^{1,3} Student, ²Assistant Professor, ⁴Research Scholar

Taxonomy of Angiosperms and Biosystematics Laboratory, Department of Botany, Sidho-Kanho-Birsha-University, Purulia, West Bengal, India Corresponding Author: Sujit Kumar Mandal, Mail: smondal.bot@gmail.com

Abstract: A total of 65 species of angiosperms belonging to 62 genera under 36 families were identified and were commonly used by the indigenous people to cure more than 40 different ailments. For the preparation of medicine, the leaves from those enlisted plants were mostly used followed by root, whole plant, fruit, seed, bark and flower by the indigenous people. Decoction was the highest occurrence which was followed by extract, paste, powder and chewing. Therefore, the present work was an attempt for documentation of indigenous knowledge on medicinal plants which includes the collection, preservation, and mode of application against different ailments.

Key words: Indigenous knowledge, Tribals, Jhargram, District.

I. INTRODUCTION

The indigenous knowledge is a local knowledge that is unique to particular community. It is also known as traditional knowledge or folk-knowledge practices within particular community in particular area and transmitted generation after generation. India is popular for its traditional medicinal system– Ayurveda, Siddha,Unani and "Rigveda" was found to be the earliest record of medicinal plants. After that " Charaka Samhita" and "Susruta Samhita" were the most authentic and significant Ayurvedic treasure of ancient India as these give valuable information not only about medicinal science but also about geographical, social as well as economic condition of India. According to the World Health Organisation (WHO), more than 75 % of the tribals people and 70 % of all over Indian population depend on traditional medicine for their primary/basic healthcare

needs. Being 9th mega biodiverse country in the world, India possess over 6000-15000 herbal plant species that have great role as herbal drug by medical practitioners. Thousands of plants have potent medicinal value in all over the Jhargram district. But only a few percentage of them has been identified and employed for medicinal purpose by human (Wendimu et al., 2024). Most of the people lacking interest to use herbal drug in the era of modern medicinal science. But local tribal people are stick to their belief that the herbal medicine will be more beneficial to health as it more ethnic, more magical and less scientific (Uchechukwu and Utoh-Nedosa, 2022).

Nowadays herbal drugs are extensively used worldwide. In most of the rural areas, local traditional healers are the only reliable source for people. The researchers from the Kew Gardens found 104 species used for managing diabetes in Central America, in which seven were identified in at least three different studies (Giovannini, 2017; Giovannini et al., 2016).

According to aboriginal people of study area synthetic medicines are very expensive and had many side effects on health. According to the informants, traditional medicines are affordable, effective and secure as compare to allopathic system of medicines. They also believe that, the traditional medicines derived from medicinal plants are time taking to cure the disease but, can eliminate the disease from root (Karmakar and Rahaman, 2022). Therefore, most people of this area generally prefer to use herbal medicines. The connection between human and natural drugs is as old as mankind itself. Awareness of medicinal plants usage is a result of the efforts of human to discover drugs in bark, seed, fruitbodies, and other parts of the plants. Many plants have an important role in the process of wound healing. Plants are more potent healers because they have capacity of repairing wounds in natural way. Thus in this context, the current study explored the indigenous practices and documentation of medicinal plants in Jhargram district.

II. MATERIAL AND METHODS

An extensive field survey was conducted from February, 2024 to June 2024 for collection of ethnobotanical data from knowledgeable local informants in Jhargram District, West Bengal. A few field trips have been conducted in Borunsol, Asti, Nuniyachatri villages of Lalbandh Gram Panchayat in Jamboni block and Sahari village of Belpahari Gram Panchayat in Binpur II block and Enyata village of Dharsa Gram Panchayat in Jamboni block. The ethnobotanical data were acquired from herbalists, senior women, Knowledgeable persons by semi- structured interviews.

2.1. Study Area:

Jhargram District lies between 22.45°N latitude and 86.98°E longitude. Total area of the district is about 3037.64 Sq. km. The soil is red in colour. The average annual rainfall is about 1400 mm. The important rivers of the district are the <u>Kangsabati</u>, the <u>Subarnarekha</u>, and the Dulung. There are many tribal communities in the district such as Santal, Munda, Lodha, Bhumij, Kudhmali etc which follows usually this knowledge about traditional uses of the plants.

Jhargram district has 8 Blocks, and 8 Panchayat Samitis. Lalbandh Gram Panchayat is composed of Borunsol, Asti, Nuniyachatri, Gaida, Balibandh, Rangamatia etc. villages under Jamboni Block. Belpahari Gram Panchayat is composed of Belpahari, Parihati , Ergoda, Sahari etc. villages under Binpur II Block. Hembram, Beshra, Murmu, Mandi, Tudu, Saren, Baskey etc are inhabiting as tribal communities in adjoining villages of Belpahari Gram Panchayat and Lalbandh Gram Panchayat who has practiced their indigenous knowledge generation after generation.

2.2 Sample collection method and identification:

Plant specimens were collected for present investigation for the present new generation from indigenous peoples by field survey methods and oral interview during February 2024 to June, 2024. In each tribal communities visited, informations were gathered on the aliments from particular medicinal plant species were used to treat. Santal names or vernacular names, which parts of the plant were given as medicine, and their habits were also recorded. Ethnobotanical data from homesteads and knowledgeable womens were also investigated for each of the tribal communities. For identification of collected plant specimens standard taxonomic literatures were consulted (Mandal and Mukherjee, 2008, 2014, 2016; Demir, 2020; Mandal et al., 2020; Rafiqul et al., 2020; Assefa et al., 2021;Chandra and Uniyal, 2021; Drishya et al., 2021; Eisah et al., 2021; Mandal, 2021; Kaci et al., 2022; Mownika et al., 2022; Naskar et al., 2022; Sharma et al., 2022; Singh, 2022; Singh, 2022; Apuu.and Igho-Osagie, 2023; Meena, 2023; Meena, 2023; Mandal and Mukherjee, 2023;Modi et al., 2023; Ndhlovu et al., 2023; Warrier et al., 2023; Kumari et al., 2024; Sahoo et al., 2024). Accepted names of the plant species have been verified by POWO and WFO. Collected plants were carefully pressed on newspaper, after drying specimens were transferred to herbarium sheets for preservation in the Department's herbarium, S.K.B.U. Purulia.



III. RESULTS AND DISCUSSION

3.1 Medicinal plants recorded and their distribution into families:

A total of **65 species** of medicinal plants belongs to **62 genera** under **36** different families were recorded from study site (**Table 1**).

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Table L.	An enumeration of ernnö	noranical knowledge	practiced by Eribals in	inargram District
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SL. NO.	SCIENTIFIC NAMES OF THE PLANT	FAMILY	SANTAL / VERNACULA R NAME	HABIT	PART(S) USED	AILMENTS	MODE OF APPLICATION
1	Abutilon indicum (L.)Sweet	Malvaceae	Miru(S)	Sh	Leaves	Piles, Wounds	Local application of paste of leaves.
					Leaves	Kidney stone	Extract of leaves are eaten.
2	Acmella paniculata (Wall. ex DC.)R. K.	Asteraceae	Nakful, Nakchana(S)	ful,HFlowerchana(S)	Flower	Toothache	Fresh or dried flower are chewed.
	Jansen				Leaves	Malaria and other fevers	Decoction of leaves are eaten.
3	Achyranthes aspera Amaranthaceae L.	Amaranthaceae	Apang, Buridatram	Н	Root, leaves	Leucorrhoea	Powder with black pepper are taken orally
		(3)		Leaves	Insect bite, Boils, Ringworm	Paste of leaves.	
					Leaves	Piles, Dysentery	Leaves juice are eaten.

					Root	Contraceptive	Decoction of root are eaten.
4	Alangium salviifolium	Cornaceae	Dhela	Т	Bark	Snake bite, Rheumatism	Decoction of bark are eaten.
	(L.f.)Wangerin				Leaves, Fruit	Eye disorder	Extract of leaves and fruit are eaten.
5	<i>Albizia lebbeck</i> (L.) Benth.	Fabaceae	Shirish	Т	Bark	Cold & cough	Decoction is used as gargle.
						Asthma	Smoke of bark is inhaled.
6	<i>Aloe vera</i> (L.) Burm. f.	Asphodelaceae	Ghritakumar i	Н	Leaves	Sun burn	Local application of jelly of leaves.
					Leaves	Constipation	Jelly of leaves are eaten.
7	Alternanthera philoxeroides (Mart.) Griseb.	Amaranthaceae	Malancha shak, Hemcha(S)	Н	Whole plant	Diabetes, Diarrhoea	Crushing of whole plant are eaten in empty stomach.
					Leaves	Scabies	Local application of paste of leaves.
8	Anacardium occidentale L.	Anacardiaceae	Kaju	Sh	Fruit, Seed	High cholesterol, Heart disease	Daily consumed before breakfast to balance cholesterol level and
9	Ananas comosus	Bromeliaceae	Anaros	Н	Leaves	Worm	heart rate. Extract of leaves are
10	Andrographis	Acanthaceae	Kalmegh(S)	Н	Whole	Diabetes,	Extract of whole plant
	<i>paniculata</i> (Burm. f.) Wall. ex Nees				plant	Blood sugar, Liver problem	are taken daily with or without food.
11	Anthoshorea roxburghii (G.Don) P.S.Ashton&J.Heck	Dipterocarpacea e	Sarjome(S)	Т	Bark	Reduces swelling and pain	Local application of crushing of bark.
12	Argemone mexicana L.	Papaveraceae	Seyalkanta	Н	Leaves, Seed	Tumor, Skin disease, jaundice	Decoction of leaves and seeds are eaten.
13	Azadirachta indica A. Juss.	Meliaceae	Neem	Т	Leaves	Liver problem	Juice of leaves with honey are consumed.
					Leaves	Skin infection	Paste of leaves are used along with turmeric. Decoction of fresh
					Voung	Cincivitie	cool during bath.
	N I I I				branch		
14	Barleria lupulina Lindl.	Acanthaceae	Katabisolla, Bisollakoron	Sh	Leaves	Rheumatism, Toothache	Juice of the fresh leaves are eaten.
			1(S)			Insect & snake bite	Local application of paste of leaves.
15	Boerhavia diffusa L.	Nyctaginaceae	Khapra arah (S)	Н	Leaves , Root	Blood purify	Consumed as a vegetable.
					Whole plant,	Urinary infection,	Decoction of whole plant or extract of
16	Cajanus cajan(L)	Fabaceae	Raher	Sh	Leaves	Kidney stone	leaves are consumed.
10	Huth	Tabaccac	Raherdare (S)	511	Leaves	worm, Toothache	chewed.
					Leaves	Migraine	Leaves are taken along with leaves of <i>Cynodon</i> <i>dactylon</i> .
17	<i>Calotropis</i> gigantea (L.) W.T. Aiton	Apocynaceae	Akana(S)	Sh	Stem, Bark	Sinus fistula, Toothache, Migraine	Smoke from the bark is inhaled.
					Leaves	Snake bite, burn injury	Paste of leaves are applied on the lesion.
					Fibres,	Asthma	Seeds and fibres are

	-	-					
							asthma of children.
18	Cardiospermum	Sapindaceae	Baloon vine	C	Whole	Rheumatism,	Decoction of whole
	halicacabum L.				plant,	joint pain	plant are consumed.
					Seed		One teaspoon of
							seed powder are mixed
							with a cup of water and
							are eaten after break
							fast.
					Whole	Dandruff	Plant along with
					plant		coconut oil are boiled,
							later after cooling the
							mixture can be used
10			NT /		D (D1 1	and stored.
19	Catharanthus	Apocynaceae	Nayantara,	н	Root	Blood	Decoction of root are
	roseus(L.)G. Don		Chirobasanti		Terte	dysentery	eaten.
			(3)		Latex	Boil, Scables	Local application of
					T. correct	C a ma	latex.
					Leaves	Sole	Juice of leaves are
20	Contella asiatica	Aniaceae	Chotolutur	Ĥ	Leaver	Cold and	Fresh leaves are
20	(L) Urb	Aplaceae	(S)		Leaves	Cough Urinary	chewed
	(L.) 010.		(3)			infection	chewed.
21	Citrus aurantiifolia	Rutaceae	Kagginehu	Т	Leaves	Nausea	Smell of leaves are
	(Christm.)Swingle	Rutuccuc	Ruggineou		Fruit	Traubou	inhaled.
	(children in the standard in t				Fruit	Weight	Juice of fruit are eaten
						loss	along with warm water.
22	Clerodendrum	Lamiaceae	Bonjui.	Sh	Leaves	Cramps	Dried leaves are rolled
	infortunatum L.		Haraubaha				and smoke to relief
	5		(S)				cramps.
						Ulcer, Sore	Local application of
							paste of leaves.
23	<i>Clitoria ternatea</i> L.	Fabaceae	Aparajita	С	Flower	blood sugar,	Decoction of flower are
						Skin and hair	taken along with
						health	honey.
					Root	Cough and	Smoke of root are
						cold, Migraine	inhaled.
24	Coldenia	Boraginaceae	Tripunkhi	Н	Whole	Rheumatic	Extract of whole plant
	procumbens L.				plant	swelling,	are eaten.
						Leucorrhoea,	
					Whole	Boil	Local application of
					plant		paste of whole plant
25	Coleus amboinicus	Lamiaceae	Hatroshni	Н	Leaves	Cold and	Extract of leaves are
	Lour.		(S)			cough,	eaten.
						Whooping	
		.				cough	
26	Croton bonplan	Euphorbiaceae	Patamjaher	Н	Latex	Wound,	Local application of
07	atanus Baill.	C al an a su s	(S)	CL	En 24	Scables, Boll	latex.
27	Datura stramonium	Solanaceae	Dnuturah(S)	Sn	Fruit,	Dandruff,	Juice of fruit and seed
	L.				Seed	Hair fall	is applied to the scalp.
					Seed	Earache	Local application of
							seed and mustard oil
L							after boiling.
28	Ecbolium viride	Acanthaceae	Udu-jati	Sh	Leaves,	Menorrhagia,	Extract of dried
	(Forssk.)Alston				Root	Premenstrual	root/leaves of the plant
							are used for menorrha
							gia.
29	Ficus racemosa L.	Moraceae	Loah(S)	Т	Latex	Piles,	Local application of
						Boil	latex with salt.
						Dysentery,	Infusion of fruits are
L					Fruit	Anemia	eaten.
30	Grangea	Asteraceae	Namuti	Н	Leaves	Wounds,	Powder of leaves are
	maderaspatana					Ulcer	applied.
	(L.)Poir.					Earache	Juice of the fresh
L				L			leaves is used.
31	Heliotropium	Boraginaceae	Hatisur	H	Leaves	Scorpions and	Paste of leaves is

	indicum L.					insect bite,	applied on the lesions.
32	Hemidesmus indicus(L)R Br	Apocynaceae	Dudhilata	С	Root	Leucorrhoea,	Decoction of root are
33	Holarrhena pubescens Wall. ex G. Don	Apocynaceae	Hat baha(S) Hart(S)	Т	Bark, Seed	Jaundice, Colic of infant, Blood dysentery	Powder of bark or paste of seeds is given along with water.
34	Hygrophila auriculata (Schumach.)Heine	Acanthaceae	Kuylakhada	Н	Whole plant	Anemia, Diabetes, Wound	Decoction of whole plant.
35	latropha curcas I	Funhorbiaceae	Pundvereda	Sh	Leaves	Sleep disorder	Extract of leaves are eaten.
55	suropha curcus E.	Euphorotaceae	(S)	511	Leaves		ghee and then eaten.
36	Jatropha gossypiifolia L.	Euphorbiaceae	Vendra(S)	Н	Latex	Wound, Insect bite Blood dysentery	Local application of latex. Latex are eaten along with batasba
37	Justicia adhatoda	Acanthaceae	Basak	Sh	Leaves	Cough and	Decoction of leaves
38	Justicia gendarussa Burm. f.	Acanthaceae	Jagat-madan	Sh	Leaves	Inflammatory disorders, Asthma	Decoction of the raw or dried leaves is taken orally
39	<i>Kalanchoe pinnata</i> (Lam.) Pers.	Crassulaceae	Patharkuchi	Н	Leaves	Kidney stone, Urinary insufficieny	Fresh leaves are chewed.
40	<i>Litsea glutinosa</i> (Lour.) C.B.Rob.	Lauraceae	Kukurchita, Leda(S)	Т	Bark	Headache	Decoction of bark are eaten.
41	Ludwigia perennis L.	Onagraceae	Jol /bon labanga	Н	Whole plant	Diarrhoea, fever	Decoction of whole plant.
42	<i>Madhuca longifolia</i> (L.) J. F. Macbr.	Sapotaceae	Matkom(S)	Т	Fruit	Cough and cold	Decoction of fruit are used to wash throat.
43	Mecardonia procumbens (Mill.) Small	Plantaginaceae		Н	Whole plant	Wounds	Decoction of whole plant is eaten.
44	Mentha spicata L.	Lamiaceae	Pudna(S)	Н	Leaves	Liver problem , Indigestion	Extract of leaves is eaten.
1.5					plant	Cold & cough	plant are eaten
45	Mimosa pudica L.	Fabaceae	Lajjabati	н	Root	Diarrhoea,	Decoction of root are
						Constipation, Contraceptive	eaten.
1					Whole	Contraceptive Dysentery	eaten. Decoction of whole plant are eaten.
46	Mimusops elengi L.	Sapotaceae	Bakul	Т	Whole plant Bark	Constipation, Contraceptive Dysentery Anthelmintic	eaten. Decoction of whole plant are eaten. Decoction of bark is used
46	Mimusops elengi L.	Sapotaceae	Bakul	Т	Whole plant Bark Bark	Constipation, Contraceptive Dysentery Anthelmintic Gingivitis	eaten. Decoction of whole plant are eaten. Decoction of bark is used Powder of bark is used by gargling.
46	Mimusops elengi L. Mitracarpus hirtus (L.)DC.	Sapotaceae Rubiaceae	Bakul Laokeshari (S)	T H	Whole plant Bark Bark Leaves	Constipation, Contraceptive Dysentery Anthelmintic Gingivitis Ringworm, Boil	eaten. Decoction of whole plant are eaten. Decoction of bark is used Powder of bark is used by gargling. Local application of paste of leaves.
46	Mimusops elengi L. Mitracarpus hirtus (L.)DC.	Sapotaceae Rubiaceae	Bakul Laokeshari (S)	T	Whole plant Bark Bark Leaves Leaves	Constipation, Contraceptive Dysentery Anthelmintic Gingivitis Ringworm, Boil Tongue infection	eaten. Decoction of whole plant are eaten. Decoction of bark is used Powder of bark is used by gargling. Local application of paste of leaves. Extract of leaves are eaten.
46 47 48	Mimusops elengi L. Mitracarpus hirtus (L.)DC. Nyctanthes arbor- tristis L.	Sapotaceae Rubiaceae Oleaceae	Bakul Laokeshari (S) Siuli	T H T	Whole plant Bark Bark Leaves Leaves Leaves	Constipation, Contraceptive Dysentery Anthelmintic Gingivitis Ringworm, Boil Tongue infection Antifertility of female	eaten. Decoction of whole plant are eaten. Decoction of bark is used Powder of bark is used by gargling. Local application of paste of leaves. Extract of leaves are eaten. Decoction of leaves of Nyctanthes arbor- tristis and leaves of Ocimum sanctum is given along with jaggery as an antifertility agent in female.
46 47 48	Mimusops elengi L. Mitracarpus hirtus (L.)DC. Nyctanthes arbor- tristis L.	Sapotaceae Rubiaceae Oleaceae	Bakul Laokeshari (S) Siuli	T H T	Whole plant Bark Bark Leaves Leaves Leaves Bark Leaves	Constipation, Contraceptive Dysentery Anthelmintic Gingivitis Ringworm, Boil Tongue infection Antifertility of female Malaria and other fevers Cough and	eaten. Decoction of whole plant are eaten. Decoction of bark is used Powder of bark is used by gargling. Local application of paste of leaves. Extract of leaves are eaten. Decoction of leaves of <i>Nyctanthes arbor-</i> <i>tristis</i> and leaves of <i>Ocimum sanctum</i> is given along with jaggery as an antifertility agent in female. Decoction of bark are taken. Fresh leaves are
46 47 48 48	Mimusops elengi L. Mitracarpus hirtus (L.)DC. Nyctanthes arbor- tristis L.	Sapotaceae Rubiaceae Oleaceae	Bakul Laokeshari (S) Siuli	T H T	Whole plant Bark Bark Leaves Leaves Leaves Bark Leaves	Constipation, Contraceptive Dysentery Anthelmintic Gingivitis Ringworm, Boil Tongue infection Antifertility of female Malaria and other fevers Cough and cold Anemia	eaten. Decoction of whole plant are eaten. Decoction of bark is used Powder of bark is used by gargling. Local application of paste of leaves. Extract of leaves are eaten. Decoction of leaves of <i>Nyctanthes arbor-</i> <i>tristis</i> and leaves of <i>Ocimum sanctum</i> is given along with jaggery as an antifertility agent in female. Decoction of bark are taken. Fresh leaves are chewed. Decoction of rhizeme

					1		
	(L.)Kuntze		baha(S)			Jaundice, Tuberculosis	is eaten.
50	Ocimum basilicum	Lamiaceae	Birtursi(S)	Н	Leaves	Headache	Decoction of leaves are
50	L	Lunnuccuc	Dirtuisi(b)	11	Leaves	Cough Worm	eaten along with
	L.					cough, worm.	honey
51	paramollugo	Molluginaceae	_	Н	Whole	Jaundice.	Extract of whole plant.
51	nudicaulis (Lam.)	Monuginaceae		11	plant	Whooping	Extract of whole plant.
	Thulin				Plant	cough	
52	Phyllanthus amarus	Phyllanthaceae	Vuin amla	Н	Leaves	Iaundice	Fresh leaves are
52	Schumach & Thonn.	1 ilynanthaeede	v uni uniu		Leuves	Diabetes.	chewed.
						Kidney stone.	One teaspoon of
						Liver diseases	powder of leaves are
							mixed with a cup of
							water and then eaten.
53	Pogostemon	Lamiacae	Jui lata	Sh	Root.	Relieving	Powder of leaves and
	benghalensis				Leaves	body aches.	root are used to cure
	(Burm. f.) Kuntze					Headache	aches.
54	Psidium guaiava L.	Mvrtaceae	Pivori(S)	Т	Leaves.	Stomach-	Fresh leaves are
-	0	J	J = ()		Fruit	aches,	chewed.
						Dysentery	
					Fruit	Gingivitis	Fresh fruit are chewed
						5	regularly.
55	Ricinus communis	Euphorbiaceae	Jadah(S)	Sh	Seed oil	Hair fall,	Oil is extracted from
	L.					Rheumatism	seed and then used.
					Leaves	Muscle aches	Leaves are coated with
							mustard oil, warmed
							and then used.
56	Rotala rotundifolia	Lythraceae	-	Н	Whole	Cold and	Extract of whole plant
	(BuchHam. ex				plant	cough,	are eaten.
	Roxb.)Koehne					Stomach	
						disorder	
57	Ruellia prostrata	Acanthaceae	Jal phatka	H	Fruit,	Anti-cancer,	Powder of fruit and
	Poir.				Leaves	Gonorrhea	leaves are mixed with a
							cup of water and then
							eaten.
58	Ruellia tuberosa L.	Acanthaceae	J <mark>al phatka</mark>	Н	Root,	Diuretic	Decoction of root and
					Stem		stem are eaten.
59	Semecarnus	Anacardiaceae	Sosho(S)	Т	Fruit	Improving	Fruit are eaten
57	anacardium L f	7 macar anaceae	Bosho(B)		Tran	sexual power	Truit die euten.
					Seed oil	Tumor	Local application of
					Seed off	Ringworm	seed oil.
60	Senna occidentalis	Fabaceae	Jhunihuni.	Sh	Seed	Typhoid fever.	Powder of seed are
	(L.) Link		kalkasunda			Malaria. Liver	mixed with a cup of
						disorder	water and then eaten.
					Root	Asthma	Decoction of root are
							eaten.
					Fruit	Dysentery	Raw fruit is chewed
61	Sesamum indicum	Pedaliaceae	Khoshla	Н	Seed	Reduce	Oil of seed are eaten as
	L.					cholesterol	cooking oil.
62	Swietenia	Meliaceae	Mehogany	Т	Seed	Boost fertility,	Powder of seed are
	macrophylla King					Increase	mixed with warm water
L						appetite	and then eaten.
63	Terminalia	Combretaceae	Bohera,	Т	Fruit	Blood	Powder of fruit are
	bellirica(Gaertn.)		Lopong(S)			dysentery,	taken with water.
	Roxb.					Diarrhoea,	
						Worm	
					Bark	Swelling, Joint	Paste of bark is applied
						pain	on local area.
					Seed	Vitiligo	Extract of seed oil is
			ļ				applied on local area.
64	Tridax procumbens	Asteraceae	Dahikongda	Н	Leaves	Scabies	Local application of
	L.						paste of leaves.
65	Vitex negundo L.	Lamiaceae	Begna(S)	Т	Leaves	Earache	Extract of leaves with
							mustard oil.
						Gingivitis,	Decoction of leaves are
1						Tonsilitis	used as a gargle.

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Maximum number of plants of the family Acanthaceae(8) were used in traditional remedies followed by Lamiaceae (6), Fabaceae(5 species), Apocynaceae and Euphorbiaceae (4 species each), Asteraceae (3), Amaranthaceae, Meliaceae, Anacardia ceae, Boraginaceae, Sapotaceae(2 species each) etc. Treatment of about more than 40 major and minor ailments were done with these medicinal formulations.

The analysis of total life form present in the Jhargram District revealed that herbs were dominating with 32 sp, (50 %) followed by Trees with 16 sp.(25 %), shrubs with 14 sp.(20 %) and climber with 03 sp.(5 %). During interview, detailed information about traditional knowledge, diseases, parts used, mode of application etc. have been collected from herbal healers.



3.2 Plant parts used, preparation of medicine and mode of application:

Most of the plant species used by tribal people were cultivated, but traditional healers mainly collected the wild herbs for the preparation of medicinal formulations. The mode of preparation of these medicines were in decoction, paste, powder and extract/tea form. Natives commonly used these herbal remedies to cure the small ailments like fever, cough, cold, wounds etc. The most common mode of administration was oral and it may be taken in the form of powder or decoction, chewed etc.

A few plants were used for the therapeutic purposes of women diseases such as decoction of flower of *Clitoria ternatea*, fruit and seed of *Datura stramonium* were useful for skin disease and hair fall. Extract of whole plant of *Coldenia procumbens* and decoction of root of *Hemidesmus indicus* were noteworthy in case of leucorrhoea. Root or leaves of *Ecolium viride* was benefitted for the treatment of menorrhagia and premenstrual. Contraceptive pills were prepared from the root of *Mimosa pudica*. Seed of *Swietenia macrophylla* was noteworthy for improving fertility.



Figure 3: Graphical presentation of mode of application of different plant parts



Figure 4: Proportion of plant parts used for curing health ailments



3.3 Novelty of the present study:

Maximum ethnobotanical data reported by the present authors have not been reported by the previous workers from study site (Ghosh, 2012; Hota and Chatterjee, 2016; Paul and Dey, 2022; Das et al., 2022). Except *Anthoshorea roxburghii* for swelling^{[12],} *Azadirachta indica* for skin disease^{[12],} *Hygrophila auriculata* for Anemia^{[27],} *Jatropha gossypiifolia* for wound^[12], *Justicia adhatoda* for cough^[27] and *Vitex negundo* for ear pain^[27] have been reported. So, the present investigation may be the novel report by the present authors from Jhargram District.

IV. CONCLUSION

The ethnobotanical study of medicinal plants, along with the culture of traditional knowledge of local aboriginal people will enhance the interest of using herbal drug as well as it also add as significant ethnomedicinal database for the Jhargram district. Present investigation, reveals ,65 medicinal plants which are essential for the treatment of many ailments for human beings such as skin diseases, constipation, piles, dysentery, jaundice, asthma, menstrual disorders, snake bite, liver diseases etc. The plants nowadays are going to extinct due to developmental activities, population explosion, impact of tourism, deforestation etc. which need to protect for biodiversity conservation, as well as to save them in their natural habitats. Young generation has little interest in these practices which shows that traditional knowledge of medicinal plants is in severe danger of being lost. Therefore, the use of these medicinal plants should be kept safe in written form, so that this should be helpful in future generation also. In present investigation, some unique plants and traditional formulations have been reported which should be helpful for the development of modern drugs and has improved the existing database of medicinal plants.

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References

[1] Apuu,V.K. and Igho-Osagie, U.P. 2023. Survey of indigenous plants used as anthelmintic in Benue south geopolitical zone of Benue State, Nigeria.International Journal of Scientific Research in Biological Sciences, 10(3):41-46.

[2] Assefa,B., Megersa, M. and Jima,T.T. 2021.Ethnobotanical study of medicinal plants used to treat human disease in Gura Damole District, Bale Zone, Southeast Ethiopia. Asian Journal of Ethnobiology, 4(1): 42-52.

[3] Baro, M.2023.Folk medicine of the Bodos.Journal of Emerging Technologies and Innovative Research, 10(7):723-732.

[4] Chandra,R.and Uniyal,V.P.2021.An ethnobotanical study of wild medicinal plants among the mountain community of Western Himalayas: A case study of Govind wildlife sanctuary and national park. Medicinal Plants, 13(2):251-265.

[5] Das,S.D.,Das,P.K.,Bhakat,R.K.2022. Quantitative ethnomedicinal study of plants used to treat bone fracture in Jhargram District, West Bengal, India. World Journal of Environmental Biosciences, 11(3):57-64.

[6] Demir,I.2020. An ethnobotanical study of medicinal plants used in Hizan District(Bitlis-Turkey).Yuzuncu Yil University Journal of Agricultural Science, 30(4):732-741.

[7] Drishya,N.S.,Joseph,S.,Anusree,N.,Theertha,P.C. and Atheena,K. 2021. Ethnobotanical survey of medicinal plants in Urdhook hills, Kuttiady, Kozhikode District, Kerala. International Journal of Creative Research Thoughts, 9(3): 4029-4040.

[8] Eisah, J.S., Nyumah, F., Johnny, J. and Charles, J.F. 2021. Ethnobotanical study on the use of medicinal plants among forest fringe communities around the Kasewe forest in Moyamba District, Southern Sierra Leone. American Journal of Plant sciences, 12: 1963-1989.

[9] Ghosh, P.2012.Studies on some ethnobotanically important plants of Jhargram block, West Midnapore, West Bengal. Indian Journal of Applied and Pure Biology, 27(2):195-197.

[10] Giovannini, P., Howes, Melanie-Jayne R. and Edwards, S. E. 2016. Medicinal plants used in the traditional management of diabetes and its sequelae in Central America: A review. Journal of Ethnopharmacology. 184: 58–71.

[11] Giovannini, P. 2017. "Managing diabetes with medicinal plants". Kew Gardens.

[12] Hota,S.and Chatterjee,A.2016.Traditional and indigenous uses of plants for treatment of skin diseases by the tribes in Paschim Medinipur District of West Bengal. Journal of Medicinal Plant Studies, 4(5):175-180.

[13] Kaci,Z.,Tirchi,N.,Dahmane,T.,Berrai,H.,Holgado,R.,Boubekeur, S.,Chebli,A.,and Biche,M. 2022. First ethnobotanical study relating to usage of medicinal plants in province of Ain Defla region, South -west of Algeria. Indian Journal of Ecology, 49(3):655-664.

[14] Karmakar, S. and Rahaman, C.H. 2022. Ethnomedicinal practices of the santal tribe living around Biharinath hill in the district of Bankura, West Bengal, India. Research Journal of Agricultural Sciences, 13: 28- 36.

[15] Kumari, M., Puri, S. and Radha. 2024. Ethnobotanical survey of medicinal plants used by native inhabitants of protected area of District Solan, Himachal Pradesh. Indian Journal of Ecology, 51(1):45-52.

[16] Mandal,A.,Adhikary,T.,Chakraborty,D.,Roy,P.,Saha,J.,Barman,A.and Saha, P. 2020. Ethnomedicinal uses of plants by santal tribe of Alipurduar district, West Bengal, India. Indian Journal of Science and Technology,13(20): 2021-2029.

[17] Mandal, S.K. and Mukherjee, A. 2008. Medicinal uses of plants as revealed from tribal communities in Purulia District, West Bengal.p.295-301.In:Patil,D.A.(Edited),Herbal_Cures:Traditional_Approach,Aavishkar_Publishers,Distributors, Jaipur, India. ISBN :10. 8179102503.

[18] Mandal,S.K. and Mukherjee, A. 2014. Useful plants of wetlands in Puruliya District, West Bengal. Asian Resonance. III(IV): 60-64.

[19] Mandal, S.K. and Mukherjee, A. 2016. Angiosperms diversity and their ethnic uses of Joychandi Hill in Puruliya District, West Bengal. An International Journal Paripex- Indian Journal of Research, 5 (10): 64-67.

[20] Mandal, S.K. 2021. Angiosperms diversity and ethnobotanical knowledge of some medicinal plants from Panchakot hill, Purulia District, West Bengal, p.126-140.In:Das.D.(Edited) Biodiversity and Sustainable Resource Management (Basic to Resear ch); Bharti Publications, New Delhi, India. ISBN: 978-93-91681-28-9

[21] Mandal,S.K. and Mukherjee, S. 2023. Folklore knowledge of plants used as remedies in different joint diseases by aboriginal people of Purulia District, West Bengal. Research Journal of Life Sciences, Bioinformatics, Pharmaceutical and Chemical Sciences. 9(2): 1-10.

[22] Meena, M.K. 2023. Ethnomedicinal and ethno-veterinary plants of Dang area of Dholpur District, Rajasthan, India. Ecology, Environment & Conservation, 29(3):1125-1130.

[23] Modi,G.,Gupta,D.and Babita. 2023. A review on ethnomedicinal plants and their traditional uses in India. European Chemical Bulletin, 12(8):8442-8452.

[24] Mownika,S.,Sharmila,S. and Ramya,E.K. 2022. Integration of ethnobotany and diversity of medicinal plants in Manar beat, Karamadai range of the Western Ghats, India. Indian Journal of Ecology, 49(3): 1171-1196.

[25] Naskar, C.,Mukherjee,S.K.and Datta,M.D.2022. Wild medicinal plants of South 24 Parganas District, West Bengal, India. Universal Journal of Plant Science, 9(1): 1-12.

[26] Ndhlovu, P.T., Asong, J.A., Omotayo, A.O., Otang-Mbeng, W. and Aremu, A.O. 2023. Ethnobotanical survey of medicinal plants used by indigenous knowledge holders to manage healthcare needs in children. Plos One, 18(3):1-26.

[27] Paul, S. and Dey, A. 2022. A survey on ethnomedicinal plants of Nayagram block of Jhargram District, West Bengal, India. The Journal of Phytopharmacology, 11(1): 35-39.

[28] POWO(2024)."Plants of the World Online Facilitated by the Royal Botanic Gardens, Kew Published on the internet; http://www.plantsoftheworldonline.org/Retrived 19th June 2024".

[29] Rafiqul Islam, A.T.M.Hasan, M.,Islam, T., Rahman, A., Mitra, S. and Das, S.K. 2020. Ethnobotany of medicinal plants used by Rakhine indigenous communies in Patuakhali and Barguna District of Southern Bangladesh. Journal of Evidence-Based Integrative Medicine. 25: 1-27.

[30] Sahoo,K.P.,Siddique,G.,Roy,A.,Ghosh,S.andMandal,M. H. 2024. Ethnomedicinal knowledge and utilization of the medicinal plant resources by the tribal people of the Jhargram District, West Bengal, India. Plant Biosystems- An International Journal Dealing with All Aspects of Plant Biology, 1-20.

[31] Sharma, M., Bithel, N. and Sharma, M.2022. Ethnobotanical study of medicinal plants among local tribes of Rajaji tiger reserve Haridwar. Indian Journal of Ecology, 49(3):1197-1202.

[32] Singh,J. 2022. Biodiversity of medicinal plants in Aravalli (Sohna region). Journal of Emerging Technologies and Innovative Research, 9(2): 801-804.

[33] Singh, N.K.2022.The sacred flora of India: A case for biodiversity conservation. Ecology, Environment & Conservation, 28:87-92.

[34] Uchechukwu, A. and Utoh-Nedosa. 2022. Medicinal Plants. Fulton Books, Inc.

[35] Warrier, K.C.S., Warrier, R.R. and Thangavel, V. 2023. Status of sacred groves in India: A review. International Journal of Environment and Climate Change, 13(8):170-181.

[36] Wendimu, A., Tekalign, W., Bojago, E. and Abrham, Y. 2024. Traditional ethnobotanical knowledge and ethnomedicinal use of plants in the Tropical Rift Valley of Ethiopia. Heliyon, 10: 1-19.

[37] WFO:World Flora Online.Published on the Internate;http:// www.worldfloraonline. org.19th June, 2024.