



**INTERNATIONAL JOURNAL OF
PHARMACEUTICAL SCIENCES**
[ISSN: 0975-4725; CODEN(USA):IJPS00]
Journal Homepage: <https://www.ijpsjournal.com>



Research Article

Flora of Healing: Exploring Ethnobotanical Wisdom in Nadia, West Bengal, India

Ankush Biswas*¹, Kushal Saha²

¹Assistant Professor of Pharmacology Department of Pharmacology, Global College of Pharmaceutical Technology, Krishnagar, Nadia, India-741102.

²Global College of Pharmaceutical Technology, Krishnagar, Nadia, India-741102

ARTICLE INFO

Received: 03 Feb 2024
Accepted: 05 Feb 2024
Published: 06 Feb 2024

Keywords:

Ethnobotanical study, Medicinal plants, Nadia, West Bengal, India, Ethnomedicine, Ethnoveterinary, Ethnoreligious uses, Food and fodder, Traditional knowledge, Fidelity, Use value, Informant consensus factor, Human health, Animal health, Sustainable use, Conservation, Traditional remedies, Cultural practices, Integrative healthcare, Global studies, Plant significance.

DOI:

10.5281/zenodo.10625038

ABSTRACT

This research delves into the indispensable role of plants in sustaining human and animal life, particularly focusing on the utilization of traditional medicinal herbs in Nadia, West Bengal, India. Investigating the multifaceted relationships between humans and plants, the study encompasses diverse aspects such as ethnomedicine, ethnoveterinary practices, ethnoreligious uses, as well as the broader applications in food and fodder. The methodology involves quantifying the significance of medicinal plants through metrics like fidelity, use value, and informant consensus factor. These metrics provide a comprehensive assessment of the plants' importance in the local community, shedding light on the depth of traditional knowledge and practices. In rural areas, where access to modern healthcare may be limited, natural remedies derived from plants serve as the primary source of healthcare for both humans and animals. The residents of Nadia, West Bengal, have preserved and passed down a rich repository of traditional medicinal herbs, offering a holistic approach to addressing various ailments. The study not only highlights the diverse applications of plants in the region but also underscores the need for the conservation and sustainable use of these botanical resources. As global interest in traditional medicine grows, the findings from Nadia contribute valuable insights into the ethnomedicinal landscape, providing a foundation for further research and the integration of traditional practices into contemporary healthcare systems.

INTRODUCTION

Plants, either as indigenous treatment or isolated active ingredients, have been a popular source of

*Corresponding Author: Ankush Biswas

Address: Assistant Professor of Pharmacology Department of Pharmacology, Global College of Pharmaceutical Technology, Krishnagar, Nadia, India-741102

Email ✉: ankushbiswas.ab94@gmail.com

Relevant conflicts of interest/financial disclosures: The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.



medicine(1),(2),(3). Plants have been used in ancient and contemporary medicine to ease human suffering(4). Indigenous ethnopharmacology is significant for drug development. Herbal medicine is used worldwide to help alleviate several medical issues(5). Medicinal herbalism is popular due to its low adverse effects and usefulness against many ailments. Indigenous botanical usage is vital to human and livestock healthcare worldwide, especially in poorer nations(6). Regions name plants differently. Each tribal community's ethnobotanical research relies on plant names. The sole scientific plant nomenclature is binomial; however, local names are used. Local plant names are based on size, form, habitat, taste, colour, significance, scent, and function. Local names represent plant morphology, pharmacognosy, usage, and environment. Plant identification requires local names. This state's residents utilize many plants as veggies and medicine(7). Local plant names are essential for ethnobotanical studies of tribal groups. Local names are popular, but binomial nomenclature is the only plant scientific system. The local name of a plant depends on its external things, flavour, colour, importance, aroma, and function. These names describe the anatomy, pharmacognosy, use, and surroundings of plants. These known named plants are used for identification. Nadia's flower is famous globally.

MATERIALS AND METHODS

The present investigation was done in Nadia district, between 22 and 40 N latitudes and 88 and 88 °E longitudes. It covers 3927.45 km. The normal rainfall in a year is 1582 mm, the mean maximum temperature in summer is about °C, and the mean lowest temperature in winter is around 10 °C (8). The district lies in the Bhagirathi sub-basin. Therefore, the north-south slope is typical. Local healers and peasants provided ethnomedicinal data. Nadia, West Bengal, was the research location. Data on local plant names, plant

components utilized, preparation techniques, and the approximate dose was collected using a standard questionnaire. In other communities, respondents showed plant species in their native habitats or gathered samples to verify plant species usage. For example, the results were valid if five informants reported identical medicinal plant applications. Each item was photographed, tagged, numbered, and noted with date and location. The critical analysis identified the specimen.

Study Area:

140,700 tribal people live in Nadia district, 3% of West Bengal's ST population. Chakdaha block, with a 5.33% ST population, is second to the district's tribal population among the 17 Community Development blocks (9). Tribal caste people live in several other places in Nadia. Despite no survey, the district's indigenous people use ethnomedicinal plants. Santal, Munda, Oraon, and Lodha tribes dominate the community.



Fig: 1. Position of Nadia district in West Bengal Map

Wetlands plants really have essential role in medicine preparation. These are also used in the rural areas by the tribal caste peoples in several types of disease treatment. This project evaluated 60 wetlands in 17 Blocks from January 2004 to June 2006 (77)(78). Using relevant literature, several plant species' morphological traits were determined using conventional taxonomic procedures for identification and systematic position(79)(80).

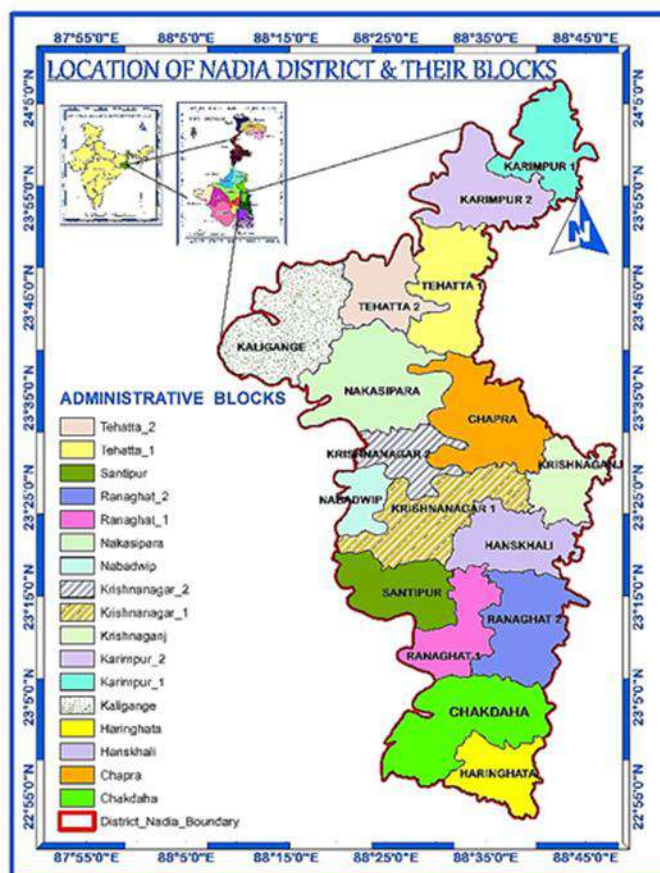


Fig. 2. Nadia district blocks

TABLE 1: Ethno-Medicinal plant documentation in Nadia, West Bengal.

Sr. No.	Scientific Name	Common Name	Family	Parts of plants Used	Use
1	<i>Achyranthes aspera</i>	Apang	Amaranthaceae	Whole plant	Stimulant of the heart and circulation, Asthma and snake bites are treated with leaf juice(10)
2	<i>Acorus calamus</i> Linn.	Bach	Araceae	Rhizome	Cough, bronchitis, flatulence, stomach, etc. The Indian traditional medical system makes use of this herb for the treatment of a wide range of diseases, including those affecting the neurological and digestive systems.(11)
3	<i>Justicia adhatoda</i>	Vasaka	Acanthaceae	Leaves, flowers, fruits, roots	Expectorants. It is efficacious against headaches, colds, and coughs(12)
4	<i>Aegle marmelos</i>	Bael	Rutaceae	Leaves, fruits	Antidiabetic, laxative. Fruit used in stomach disease.(13)
5	<i>Allium cepa</i> Linn.	Peyaj	Liliaceae	Bulbs	Insect stings and conjunctivitis. Onion juice has healing

					properties and may be used to treat wounds, burns, and bug bites.(14)
6	Allium sativum Linn.	Rasun	Liliaceae	Bulbs	Antirheumatic, Anti-inflammatory, hypocholesterolemic, hypotensive, antidiabetic.(15)
7	Andrographis paniculata	Kalmegh	Acanthaceae	Whole plant	Antipyretic, skin diseases, liver complaints. The leaf helps to treat skin diseases and diabetes.(16)
8	Asparagus racemosus	Shatamuli	Liliaceae	Root, Leave	To treat acidity, peptic ulcer(17)
9	Azadirachta indica	Neem	Meliaceae	Leaves, Bark, seeds, oil	Leaf juice treats diabetes and joint pain.(18)
10	Bacopa monnieri Linn.	Brahmi shak	Scrophulariaceae	Leaves	Improvement of intelligence and memory. The leaf is used in memory improvement.(19)
11	Bauhinia variegata Linn.	Kanchan	Caesalpiniaceae	Roots, leaves, bark, seeds	Dysentery, diarrhea, piles, worms.(20)
12	Boerhaavia diffusa Linn.	Gadapushpa	Nyctaginaceae	Whole plant	The root is used in jaundice.(21)
13	Butea monosperma (Lam.) Taub.	Palash	Papilionaceae	Bark, leaves, seeds, flower	Bark and seed help to treat insect bites and skin diseases.(22)
14	Calotropis gigantea (Linn.) R. Br.	Akanda	Asclepiadaceae	Whole plant	As expectorant.(23)
15	Piper nigrum	Pepe	Caricaceae	Fruits, latex	Treat symptoms related to dengue fever. (24)
16	Catharanthus roseus.	Nayantara	Apocynaceae	Roots, leaves	Leaf extract is used to treat diabetes(25)
17	Centella asiatica	Thankuni	Apiaceae	Whole plant	Plants are used as blood purifiers.(26)
18	Camphora officinarum	Karpoor	Lauraceae	Oil	Resuscitation, heat clearance, and pain relief.(27)
19	Cleome viscosa Linn.	Hulhuria	Capparidaceae	Whole plant	Antifungal, anthelmintic, carminative. Cure wounds and ulcers, ease rheumatism, and treat herpes infections by acting as an anti-irritant.(28)
20	Clerodendrum infortunatum	Ghentu	Verbenaceae	Leaves	Helpful in inflammation treatment.(29)
21	Coriandrum sativum	Dhone	Apiaceae	Fruit	Fruits are used as a digestive stimulant.(30)
22	Cheilocostus speciosus	Keu	Zingiberaceae	Rhizomes	Prevents fertility(31)
23	Curcuma amada Roxb.	Amada	Zingiberaceae	Rhizomes	To treat high uric acid (32)

24	Curcuma longa	Halud	Zingiberaceae	Rhizomes	Inflammation and other skin conditions may be alleviated with the rhizome paste. (33)
25	Hedychium spicatum Ham	Sati	Zingiberaceae	Rhizomes	Used in Ayurveda with other folk medicines.(34)
26	Cynodon dactylon	Durba Ghas	Poaceae	Whole plant	The plant helps to stop bleeding and skin diseases.(35)
27	Datura metel Linn.	Dhutura	Solanaceae	Whole plant	Used to treat allergy.(36)
28	Eclipta prostrata	Kesutthe	Asteraceae	Whole plant	Good for treating blood related diseases.(37)
29	Emblica officinalis Gaertn.	Amlaki	Euphorbiaceae	Fruits, leaves, tender shoots,	Carminative, stomachic, anti anemic, bronchitis.(38)
30	Euphorbia hirta Linn.	Dhudhi	Euphorbiaceae	Leaves	Diuretic, aphrodisiac. Used traditionally for female disorders and respiratory ailments.(39)
31	Gloriosa superba	Bishalanguli	Liliaceae	Roots, rhizomes	Helps in inflammation reduction.(40)
32	Saraca asoca	Ashshoura	Rutaceae	Whole plant	Anti-inflammatory, anti-anemic, antirheumatic.(41)
33	Gymnema sylvestre	Gurmar	Asclepiadaceae	Leaves, Roots	Helps in treating snake bitten wounds(42)
34	Hibiscus rosasinensis	Jaba	Malvaceae	Roots, leaves, Flower	The leaves juices cure inflammation, weakness, and other skin disorders.(43)
35	Holarrhena pubescens	Kurchi	Apocynaceae	Bark, leaves	Can be used as expectorant.(44)
36	Hygrophila auriculata	Kule khara	Acanthaceae	Roots, leaves, seeds	It is used in anemia and diabetes(45)
37	Hygrophila auriculata	Putus	Verbenaceae	Whole plant	Used in skin diseases and ulcers (46)
38	Mimosa pudica Linn.	Lajjwabati	Mimosaceae	Roots, leaves	Carminative, aphrodisiac. It is used to treat a burning sensation (47)
39	Mimusops elengi Linn.	Bakul	Sapotaceae	Unripe fruit	masticatory to tighten a slack bite. Toothache may be alleviated by boiling tree bark.(48)
40	Momordica charantia	Karala	Cucurbitaceae	Fruits	Anti-inflammation, antiviral, and cholesterol-lowering effects (49)
41	Moringa oleifera	Sajna	Moringaceae	Root, bark, leaves, seed	Abortifacient.(50)
42	Murraya koenigii	Curry pata	Rutaceae	Bark, root, leaves	Brings additional tastes(51)
43	Nyctanthes arbor-tristis Linn.	Shiuli	Oleaceae	Leaves	Anti-inflammatory(52)

44	Ocimum tenuiflorum	Tulsi	Lamiaceae	Leaves, root, seed	The stings of bees and other insects may be soothed by using a seed paste.(53)
45	Phyllanthus amarus Schum. & Thonn.	Bhui amla	Euphorbiaceae	Whole plant	Antihepatotoxic(54)
46	Piper longum Linn.	Piplamul	Piperaceae	Root, fruit, dried spikes	Bronchitis, cough. Used in the treatment of cold (55)
47	Psidium guajava Linn.	Peyara	Myrtaceae	Leaves	Haemostatic, antiemetic, dentalgia(56)
48	Raphanus sativus Linn.	Mula	Brassicaceae	Root, leaves	Appetizing, antifatulent, digestive. Treat constipation, chronic tracheitis, and hypertension(57)
49	Rauwolfia serpentina Benth. ex Kurz.	Sarpagandha	Apocynaceae	Root	Antihypertensive. To treat high blood pressure(58)
50	Ricinus communis Linn.	Bherenda	Euphorbiaceae	Leaves, oil	Seed oil is used as a painkiller(59)
51	Santalum album Linn.	Swetchandan	Santalaceae	Heartwood	Useful for treating skin issues(60)
52	Saraca asoca	Ashok	Caesalpiniaceae	Bark, Leaves	Used to treat acidity(61)
53	Sida cordifolia	Berela	Malvaceae	Root, seed	Aphrodisiac(62)
54	Solanum nigrum Linn.	Kakmachi	Solanaceae	Whole plant	To treat pneumonia, aching teeth, stomach ache (63)
55	Solanum aethiopicum	Titbaigan.	Solanaceae	Fruits	Used in treating spasms.(64)
56	Solanum virginianum	Kantakari	Solanaceae	whole plant	Used for treating high temperature.(65)
57	Syzygium cumini (Linn.) Skeels	Jam	Myrtaceae	Seed powder leaves	Throat infections, asthma, bile disorders, diarrhoea, and ulcers are all treatable.(66)
58	Tabernaemontana divaricate (Linn.) Roem. & Schult.	Kolke	Apocynaceae	Latex, flower	Antiinflammatory, antidiarrhoeal. Roots treat hypertension, headaches, scabies, and toothaches. (67)
59	Terminalia arjuna Wight & Arn.	Arjun	Combretaceae	Bark	Cirrhosis of the lever, anemia, hypertension(68)
60	Terminalia bellirica	Bahera	Combretaceae	Fruit, bark	Anaemia, bronchitis, bile stimulation.(69)
61	Terminalia chebula Retz.	Haritaki	Combretaceae	Fruit, bark	Fruit is used against stomach disorders (70)
62	Tinospora cordifolia (Willd.) Hook. f. & Thom.	Gulanacha	Menispermaceae	Stem, leaves, root	Taken for rheumatism.(71)
63	Trigonella foenumgraecum Linn.	Methi	Papilionaceae	Leaves, seed	Used to treat diabetes(72)

64	Tylophora indica (Burm. f.) Merr.	Antamul	Asclepiadaceae	Root, leaves,	People take Tylophora by mouth for allergies, asthma, and cancer (73)
65	Vitex negundo Linn.	Nisindha	Verbenaceae	Leaves	Used to treat inflammation(74)
66	Withania somnifera (Linn.) Dunal	Ashwagandha	Solanaceae	Root, leaves,	Ease pain and treat insomnia(75)
67	Zingiber officinale Rosc.	Ada	Zingiberaceae	Rhizome	Treating headaches, indigestion, nausea, vomiting, and cancer (76)

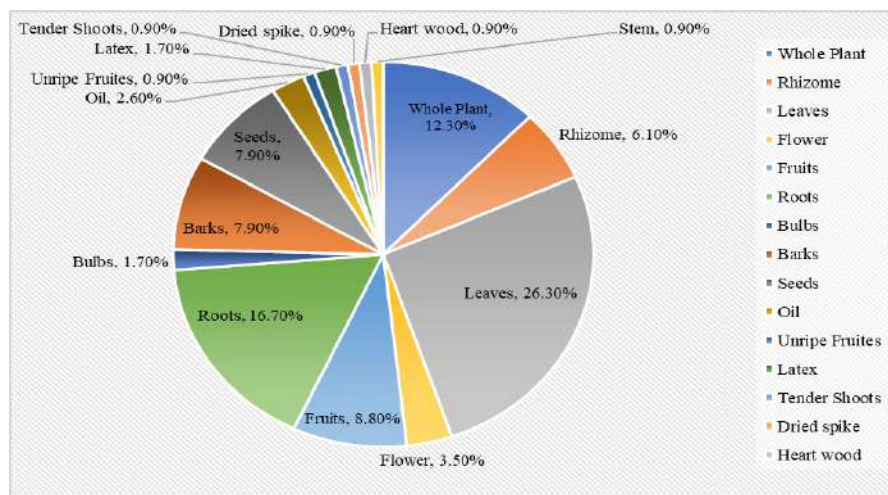


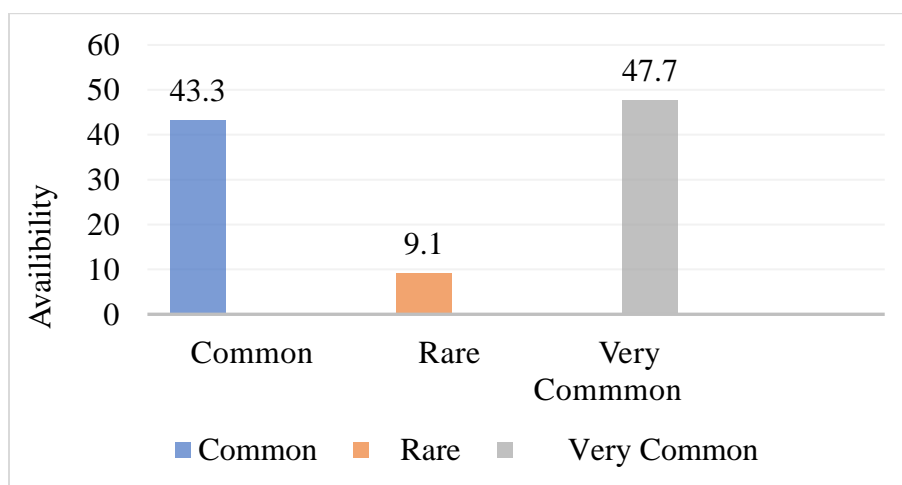
Fig. 3. Plant parts used (in percentage)

TABLE 2: Wetlands plant documentation in Nadia, West Bengal.

Sr No.	Scientific Name	Common Name	Availability	Uses
1	Alternanthera sessilis (L) DC.	Chanchi	Very common	Cures indigestion. to treat hepatitis and tight chest (81)
2	Aponogeton natans (L.) Engleret Krause.	-	Common	Tuberous rootstocks are edible. This asana is helpful in hypothermia, anemia, diabetes, and the impurity of blood. (82)
3	Azolla pinnata R. Br.	Kutipana	Very common	A substrate to cultivate edible mushrooms.(83)
4	Centella asiatica (L.) Urb.	Thankuni	Common	Plants are used as blood purifiers(84)
5	Ceratophyllum demersum L.	Jhanji, Sheoyala	Very common	Plays part in scorpion sting and biliousness.(85)
6	Commelina bengalensis L.	Kanchira	Very common	Helps to treat leprosy(86)
7	Commelina paludosa Bl.	Jata Kanclira	Common	Used as vegetable.(87)
8	Cynodon dactylon (L.) Pers.	Durba	Common	The plant is used in bleeding and skin diseases (88)
9	Cyperus articulatus L.	-	Rare	Tubers are used as tonic and stimulants and in perfumery.(89)

10	Pedaliium murex	Bada	Common	Stems are good for preapring mats.(90)
11	Cyperus iria	Bara chucha	Very common	Used in mats preparation.(91)
12	Cyperus rotundus L.	Mutha	Very common	Used in perfumes preparation.(92)
13	Desmodium gangeticum (L.) DC.	Salpani	Common	Used to treat snake bitten wounds(93)
14	Echinochloa colona (L.) Link.	Shama	Common	Quickly grown food.(94)
15	Echinochloa crus-galli (L.) P.Beauv.	Bara shama	Common	Diseases of the spleen may be treated with plants, and so can bleeding. Diseases of the spleen are treated with the plant extract.(95)
16	Eclipta alba (L.) Hassk.	Kesuti	Very common	Juice is used along with hair oil as a hair vitaliser. Commonly for the treatment of gastrointestinal disorders(96)
17	Eichhornia crassipes (Mart.)Solms	Kachuripana	Very common	An environmental cleanup agent that may store toxic metals.(97)
18	Enhydra fluctuans	Helencha	Very common	Used in blood clotting (98)
19	Cucumis melo	Kaschra, Jhanji	Common	Fish food and oxygen supplier.(99)
20	Hygrophila auriculata	Kanta kalia, Kulekhara	Very common	Mainly used in treating anemia.(100)
21	Ipomoea sp.	Kalmi-lata	Very common	Young shoots as vegetables.(101)
22	Ipomoea carnea Jacq. ssp. fistulosa (Mart. ex choisy) D. Austin	Dhol karma	Very common	The leaf juice has insecticidal properties.(102)
23	Fistulosa (L.)	Karpur	Common	Leaves eaten as vegetable.(103)
24	Limnophila indica L.	Sushni sak	Very common	Leaves are eaten as vegetables.(104)
25	Marsilea minuta (Burm. f) Hallier.	Shusni shak	Very common	Used for its diuretic properties and to treat rheumatism.(105)
26	Merremia emarginata (L.) Solms	Nilotpal	Very common	Used in different tonic preparation(106)
27	Monochoria vaginalis Presl.	Nanka	Common	Stomach and liver problems may be alleviated with the root-juice remedy.(107)
28	Nelumbo nucifera	Padma	Common	Flowers are part of religious activities.(108)
29	Saussurea obvallata	Rakto kamal	Common	The seeds may be eaten and the leaves can be used as placemats. Flowers play an important role in religious ceremonies.(109)

30	<i>Nymphaea pubescens</i> Willd	Shaluk	Common	Rootstock helps in treating dyspepsia, diarrhea, piles, and urinary ailments (110)
31	<i>Nymphoides indica</i>	Panchuli, Chandmalla	Very common	Good for jaundice treatment.(111)
32	<i>Ottelia alismoides</i>	Parmikalla	Very common	As a rubefacient, the herb is put to good use.(112)
33	<i>Pistia stratiotes</i> L.	Khudipana	Very common	The leaves are used topically to treat skin conditions including eczema, leprosy, and ulcers.(113)
34	<i>Polygonum barbatum</i> L.	Bekh-juba	Very common	Pile, jaundice, weakness, and constipation are all treated using rootstocks.(114)
35	<i>Polygonum hydropiper</i> L.	Pakurmul, Panimaricha	Common	Plant produces a yellow colour as well as a fish toxin.(115)
36	<i>Polygonum orientale</i> L.	Bara panimirich	Very common	Can be used in tonic preparation.(116)
37	<i>Polygonum plebeian</i> R. Br	(Chemti sag, dubia sag)	Very common	They are used in bowel disorders and pneumonia. To cure liver disorders like jaundice and hepatitis. (117)
38	<i>Potamogeton crispus</i> L.	-	Rare	Used as material for sugarcane breeding (118)
39	<i>Ranunculus scleratus</i> L.	Korobi	Common	In cases of rheumatism, dysuria, asthma, and pneumonia, plant juice is prescribed. Seeds for treating kidney issues.(119)
40	<i>Sagittaria guyanensis</i> Kunth ssp. <i>Lappula</i> (D. Don) Bogin.	-	Rare	Used as vegetables.(120)
41	<i>Sagittaria sagittifolia</i> L.	Muyamuya, Chotokut	Rare	The plant also has medicinal properties as an antiscorbutic; diuretic (121)
42	<i>Spirodela polyrrhiza</i> (L.) Schleiden	Shonapana	Common	Useful for composting. One of the most important primary producers in aquatic systems.(122)
43	<i>Trapa bispinosa</i> Roxb.	Paniphal	Common	Consumable fruit. The kernels are processed into flour and utilised in the same way.(123)
44	<i>Typha domingensis</i> Pers.	Hogla	Common	Diuretics and astringents may be made from rootstock. Shelters and fences are thatched with leaves.(124)



DISCUSSION

After talking to Traditional healers, the author recorded botanical usage and informed people. Plants are usually surrounded by many potential enemies as bacteria, viruses, insects, etc. (125). Natural materials give better chances to identify antimicrobial medicines or lead compounds in drug discovery. (126) One species utilizes insecticide and piscicide. *Nelumbo nucifera* and *Nymphaea nouchali* flowers are utilized in devotion and festivities. One species produces color and essential oils. Water hyacinth biomass produces biogas. Lotus leaves make plates, and Hogla (Cat grass) thatches homes and fences. Hence, wetlands macrophytes in Nadia district have promising economic prospects. *Eichhornia crassipes*, *Ceratophyllum demersum*, and other hydrophytes are hyperaccumulators of heavy metals, demonstrating their ecological importance. Consequently, sustainable usage must safeguard all species included in this paper.

REFERENCES

1. Traditional medicinal plants used in different districts of West Bengal by the tribal communities. *Journal of Pharmacognosy and Phytochemistry* 2022;104–110. <https://doi.org/10.22271/phyto.2022.v11.i5b.14479>.
2. Ghosh C. Ethnobotanical survey in the Bamangola Block of Malda District, West Bengal (India): II. Medicinal and Aromatic plants. *Pleione* 2017;11:249. <https://doi.org/10.26679/pleione.11.2.2017.249-267>.
3. Fabricant DS, Farnsworth NR. The value of plants used in traditional medicine for drug discovery. *Environmental Health Perspectives* 2001;109:69–75. <https://doi.org/10.1289/ehp.01109s169>.
4. Kumar SR, Mohd Ramli ES, Abdul Nasir NA, Mohd Ismail N, Mohd Fahami NA. Methanolic Extract of *Piper sarmentosum* Attenuates Obesity and Hyperlipidemia in Fructose-Induced Metabolic Syndrome Rats. *Molecules* 2021;26:3985. <https://doi.org/10.3390/molecules26133985>.
5. Cox PA. Ethnopharmacology and the Search for New Drugs. *Ciba Foundation Symposium* 154 - Bioactive Compounds from Plants 2007:40–55. <https://doi.org/10.1002/9780470514009.ch4>.
6. Fabricant DS, Farnsworth NR. The value of plants used in traditional medicine for drug discovery. *Environmental Health Perspectives* 2001;109:69–75. <https://doi.org/10.1289/ehp.01109s169>.
7. And Subrata Mondal Pb. 11. Ethnobotanical Investigation of Wild Edible Plants of Arambagh Sub-Division of Hooghly District, West Bengal, India by Pradyut Biswas and Subrata Mondal2 | *Life Sciences Leaflets*. 11ethnobotanical Investigation of Wild Edible



- Plants of Arambagh Sub-Division of Hooghly District, West Bengal, India By Pradyut Biswas And Subrata Mondal2 | Life Sciences Leaflets 2012. <https://petsd.org/ojs/index.php/lifesciencesleaflets/article/view/427>.
8. Anonymous, (District planning map service, Nadia district) Survey of India, 1994
 9. DIRECTORATE OF CENSUS OPERATIONS WEST BENGAL, 2013
 10. Srivastav S, et al. *Achyranthes aspera*-An important medicinal plant: A review. 2011;1(1):1-14.
 11. Sharma V, Sharma R, Gautam D, Kuca K, Nepovimova E, Martins N. Role of Vacha (*Acorus calamus* Linn.) in Neurological and Metabolic Disorders: Evidence from Ethnopharmacology, Phytochemistry, Pharmacology, and Clinical Study. *Journal of Clinical Medicine* 2020;9:1176. <https://doi.org/10.3390/jcm9041176>.
 12. Shamsuddin T, Alam MS, Junaid Md, Akter R, Hosen SMZ, Ferdousy S, et al. *Adhatoda vasica* (Nees.): A Review on its Botany, Traditional uses, Phytochemistry, Pharmacological Activities and Toxicity. *Mini-Reviews in Medicinal Chemistry* 2021;21:1925–64. <https://doi.org/10.2174/1389557521666210226152238>.
 13. Baliga MS, Thilakchand KR, Rai MP, et al. *Aegle marmelos* (L.) Correa (Bael) and its phytochemicals in the treatment and prevention of cancer. *Integr. Cancer Ther.* 2013;12:187-196
 14. Patra A, Mondal AK, et al. Traditional phytotherapeutic uses in Purba Medinipur, West Bengal, India. 2017;8(9):3904-3910.
 15. Tesfaye A. Revealing the Therapeutic Uses of Garlic (*Allium sativum*) and Its Potential for Drug Discovery. *The Scientific World Journal* 2021;2021:1–7. <https://doi.org/10.1155/2021/8817288>.
 16. Battu GR, Marra M, et al. Phytochemical and Pharmacological Studies on *Andrographis paniculata*. 2018;6(6):2814-19.
 17. Goyal RK, Singh J, Lal H. *Asparagus racemosus*-an update. *Indian Journal of medical sciences.* 2003 Sep 1;57(9):408-14.
 18. Poddar S, et al. Indian traditional medicinal plants: A concise review. 2020;5(5):174-190.
 19. Amritha MS, Chandrasenan S, et al. Phytochemical and Pharmacological profiling of Aghori (*Flacourtia indica* (Burm. f.) Merrill –An exploration of the evidence of a potent folklore medicine. 2021;16(1):1-8.
 20. Mali RG, Mahajan SG, Mehta AA. *Phcog Rev.:* Plant review Rakta Kanchan (*Bauhinia variegata*): Chemistry traditional and medicinal uses—A review. *Pharmacogn. Rev.* 2007 Jul;1:314-9.
 21. Mahesh AR, Kumar H, et al. Detail Study on *Boerhaavia diffusa* Plant for its Medicinal Importance- A Review. 2021;1(11):28-36.
 22. Kunjam S, Chauhan SS, et al. Addition of *Butea monosperma* var. *Lutea* (Fabaceae) in the flora of district Rajnandgaon, Chhattisgarh, India. 2021;6(3):394-397.
 23. Al Sulaibi MA, Thiemann C, Thiemann T. Chemical constituents and uses of *Calotropis procera* and *Calotropis gigantea*—a review (Part I—the plants as material and energy resources). *Open Chemistry Journal.* 2020 Apr 17;7(1).
 24. Kong YR, Jong YX, Balakrishnan M, Bok ZK, Weng JKK, Tay KC, et al. Beneficial Role of *Carica papaya* Extracts and Phytochemicals on Oxidative Stress and Related Diseases: A Mini Review. *Biology* 2021;10:287. <https://doi.org/10.3390/biology10040287>.
 25. Daagama AA, Orafa PN, Igbua FZ. Nutritional potentials and uses of pawpaw (*Carica papaya*): A review. *Eur. J. Nutr. Food Saf.* 2020:52-66.

26. Minh, Phuoc N, et al. Investigation of Herbal Tea Production from *Centella asiatica* Leaf. 2019;11(3):755- 758.
27. Lee S-H, Kim D-S, Park S-H, Park H. Phytochemistry and Applications of *Cinnamomum camphora* Essential Oils. *Molecules* 2022;27:2695. <https://doi.org/10.3390/molecules27092695>.
28. Upadhyay A, Chattopadhyay P, Goyary D, Mazumder PM, Veer V. Topical Application of *Cleome viscosa* Increases the Expression of Basic Fibroblast Growth Factor and Type III Collagen in Rat Cutaneous Wound. *BioMed Research International* 2014;2014:1–7. <https://doi.org/10.1155/2014/680879>.
29. Nandi S, Mawkhlieng Lyndem L. *Clerodendrum viscosum*: traditional uses, pharmacological activities, and phytochemical constituents. *Natural product research*. 2016 Mar 3;30(5):497-506.
30. Momin AH, Acharya SS, et al. *Coriandrum sativum* review of advances in phytopharmacology. 2012;3(5):1233-1239.
31. Pawar VA, Pawar PR. *Costus speciosus*: an important medicinal plant. *International journal of science and Research*. 2014 Jul;3(7):28-33.
32. Policegoudra RS, Aradhya SM, Singh L. Mango ginger (*Curcuma amada* Roxb.) – A promising spice for phytochemicals and biological activities. *Journal of Biosciences* 2011;36:739–48. <https://doi.org/10.1007/s12038-011-9106-1>.
33. Araujo CC, Leon LL. Biological activities of *Curcuma longa* L. 2001;96(5):723-728.
34. Lobo R, Prabhu KS, Shirwaikar A, Shirwaikar A. *Curcuma zedoaria* Rosc. (white turmeric): a review of its chemical, pharmacological and ethnomedicinal properties. *Journal of Pharmacy and Pharmacology* 2009;61:13–21. <https://doi.org/10.1211/jpp/61.01.0003>.
35. Patra A, Mondal AK, et al. Traditional phytotherapeutic uses in Purba Medinipur, West Bengal, India. 2017;8(9):3904-3910.
36. Sharma M, Dhaliwal I, et al. Phytochemistry, Pharmacology, and Toxicology of *Datura* Species-A Review. 2021;10(8):5-12.
37. Timalsina D, Devkota HP. *Eclipta prostrata* (L.) L. (Asteraceae): Ethnomedicinal Uses, Chemical Constituents, and Biological Activities. *Biomolecules* 2021;11:1738. <https://doi.org/10.3390/biom11111738>.
38. Variya BC, Bakrania AK, Patel SS. *Embolica officinalis* (Amla): A review of its phytochemistry, ethnomedicinal uses, and medicinal potentials concerning molecular mechanisms. *Pharmacological Research* 2016;111:180–200. <https://doi.org/10.1016/j.phrs.2016.06.013>.
39. Kumar S, Malhotra R, Kumar D. *Euphorbia hirta*: Its chemistry, traditional and medicinal uses, and pharmacological activities. *Pharmacognosy Reviews* 2010;4:58. <https://doi.org/10.4103/0973-7847.65327>.
40. Ade R, RAIMK. Current advances in *Gloriosa superba* L. *Biodiversitas Journal of Biological Diversity*. 2009 Jul 7;10(4).
41. Khandokar L, Bari MdS, Seidel V, Haque MdA. Ethnomedicinal uses, phytochemistry, pharmacological activities, and toxicological profile of *Glycosmis pentaphylla* (Retz.) DC.: A review. *Journal of Ethnopharmacology* 2021;278:114313. <https://doi.org/10.1016/j.jep.2021.114313>.
42. Saneja A, Sharma C, Aneja KR, Pahwa R. *Gymnema sylvestre* (Gurmar): A review. *Der Pharmacia Lettre*. 2010;2(1):275-84.
43. Snafi AEA. Chemical constituents, pharmacological effects and therapeutic importance of *Hibiscus rosasinensis*- A review. 2018;8(7):101-119.
44. Zahara K, Panda SK, Swain SS, Luyten W. Metabolic Diversity and Therapeutic Potential

- of *Holarrhena pubescens*: An Important Ethnomedicinal Plant. *Biomolecules* 2020;10:1341. <https://doi.org/10.3390/biom10091341>.
45. Modi B, Shah KK, Shrestha J, et al. Morphology, Biological Activity, Chemical Composition, and Medicinal Values of *Tinospora cordifolia* (willd.) Miers. 2021;3(1):36-53.
46. Ved A, Arsi T et al. A review on phytochemistry and pharmacological activity of *Lantana camara* Linn. 2018;9(1):37-43.
47. Tlau L, Lalawmpuii L. Commonly used medicinal plants in N. Mualcheng, Mizoram, India. 2020;20(4):156-161.
48. Kadam PV, Yadav KN, et al. *Mimusopselengi*: A Review on Ethnobotany, Phytochemical, and Pharmacological Profile. 2021;1(3):64-74.
49. Joseph B, Jini D. Antidiabetic effects of *Momordica charantia* (bitter melon) and its medicinal potency. *Asian Pacific Journal of Tropical Disease* 2013;3:93–102. [https://doi.org/10.1016/s2222-1808\(13\)60052-3](https://doi.org/10.1016/s2222-1808(13)60052-3).
50. Santhi K, Sengottuvel R. Qualitative and Quantitative Phytochemical analysis of *Moringa concanensis* Nimmo. 2016;5(1):633-640.
51. Igara CE, Omoboyowa DA, Ahuchaogu AA, Orji NU, Ndukwe MK. Phytochemical and nutritional profile of *Murraya koenigii* (Linn) Spreng leaf. *Journal of Pharmacognosy and Phytochemistry*. 2016;5(5):07-9.
52. Agrawal J, Pal A. *Nyctanthes arbor-tristis* Linn—A critical ethnopharmacological review. *Journal of Ethnopharmacology* 2013;146:645–58. <https://doi.org/10.1016/j.jep.2013.01.024>.
53. Mueen CH, Naz SB, et al. Biological and Pharmacological Properties of the Sweet Basil (*Ocimum basilicum*). 2015;7(5):330-339.
54. Patel JR, Tripathi P, Sharma V, Chauhan NS, Dixit VK. *Phyllanthus amarus*: Ethnomedicinal uses, phytochemistry and pharmacology: A review. *Journal of Ethnopharmacology* 2011;138:286–313. <https://doi.org/10.1016/j.jep.2011.09.040>.
55. Rahmatullah M, Sadeak SMI, et al. Brine Shrimp Toxicity Study of Different Bangladeshi Medicinal Plants. 2010;4(2):163-173.
56. Birdi T, Daswani P, Gholkar M. *Psidium guajava*: A single plant for multiple health problems of the rural Indian population. *Pharmacognosy Reviews* 2017;11:167. https://doi.org/10.4103/phrev.phrev_17_17.
57. Sham T-T, Yuen AC-Y, Ng Y-F, Chan C-O, Mok DK-W, Chan S-W. A Review of the Phytochemistry and Pharmacological Activities of Raphani Semen. *Evidence-Based Complementary and Alternative Medicine* 2013;2013:1–16. <https://doi.org/10.1155/2013/636194>.
58. Kumari R, Rathi B, Rani A, Bhatnagar S. *Rauvolfia serpentina* L. Benth. Ex Kurz.: phytochemical, pharmacological and therapeutic aspects. *Int J Pharm Sci Rev Res*. 2013 Nov;23(2):348-55.
59. Inayor BN, Ibraheem O. Assessing *Ricinus communis* L. (castor) whole plant parts for Phenolics and Saponins constituents for medicinal and pharmaceutical applications. 2014;3(4):815-826.
60. Baylac S, Racine P. Inhibition of 5-lipoxygenase by essential oils and other natural fragrant extracts. *Int J Aromatherapy*. 2003;13(2)(3):138–142
61. Gupta M, Sasmal S, Mukherjee A. Therapeutic Effects of Acetone Extract of *Saraca asoca* Seeds on Rats with Adjuvant-Induced Arthritis via Attenuating Inflammatory Responses. *ISRN Rheumatology* 2014;2014:1–12. <https://doi.org/10.1155/2014/959687>.

62. Sumanth M, Mustafa S. Antistress, the adaptogenic activity of *Sida cordifolia* roots in mice. *Indian Journal of Pharmaceutical Sciences* 2009;71:323. <https://doi.org/10.4103/0250-474x.56027>.
63. Gabrani R, Jain R, Sharma A, Sarethy I, Dang S, Gupta S. Antiproliferative effect of *Solanum nigrum* on human leukemic cell lines. *Indian Journal of Pharmaceutical Sciences* 2012;74:451. <https://doi.org/10.4103/0250-474x.108421>.
64. Agrawal AD, Bajpei PS, Patil AA, Bavaskar SR. *Solanum torvum* Sw.—a phytopharmacological review. *Der pharmacia lettre*. 2010;2(4):403-7.
65. Parmar S, Gangwal A, et al. *Solanum xanthocarpum* (Yellow Berried Night Shade): A review. 2010;2(4):373- 383.
66. Ayyanar M, Subash-Babu P. *Syzygium cumini* (L.) Skeels: A review of their phytochemical constituents and traditional uses. *Asian Pacific Journal of Tropical Biomedicine* 2012;2:240–6. [https://doi.org/10.1016/s2221-1691\(12\)60050-1](https://doi.org/10.1016/s2221-1691(12)60050-1).
67. Selvakumar S, Kumar A. Antiproliferative efficacy of *Tabernaemontana divaricata* against HEP2 and Vero cell lines. *Pharmacognosy Magazine* 2015;11:46. <https://doi.org/10.4103/0973-1296.157682>.
68. Dwivedi S, Chopra D. Revisiting *Terminalia arjuna* – An Ancient Cardiovascular Drug. *Journal of Traditional and Complementary Medicine* 2014;4:224–31. <https://doi.org/10.4103/2225-4110.139103>.
69. Jayesh K, Helen LR, Vysakh A, Binil E, Latha MS. Protective Role of *Terminalia bellirica* (Gaertn.) Roxb Fruits Against CCl₄ Induced Oxidative Stress and Liver Injury in Rodent Model. *Indian Journal of Clinical Biochemistry* 2018;34:155–63. <https://doi.org/10.1007/s12291-017-0732-8>.
70. Chandragupta P. Biological and pharmacological properties of *Terminalia chebula* retz. (Haritaki)-An overview. 2012;4(3):62-68.
71. Patra A, Mondal AK, et al. Traditional phytotherapeutic uses in Purba Medinipur, West Bengal, India. 2017;8(9):3904-3910.
72. Snehlata HS, Payal DR. Fenugreek (*Trigonella foenum-graecum* L.): an overview. *Int J Curr Pharm Rev Res*. 2012 Jan 1;2(4):169-87.
73. Gupta V, Guleri R, Gupta M, Kaur N, Kaur K, Kumar P, et al. The anti-neuroinflammatory potential of *Tylophora indica* (Burm. f) Merrill and development of an efficient in vitro propagation system for its clinical use. *PLOS ONE* 2020;15:e0230142. <https://doi.org/10.1371/journal.pone.0230142>.
74. [1]Gill BS, Mehra R, Navgeet, Kumar S. *Vitex negundo* and its medicinal value. *Molecular Biology Reports* 2018;45:2925–34. <https://doi.org/10.1007/s11033-018-4421-3>.
75. Umadevi M, Rajeswari R, Rahale CS, Selvavenkadesh S, Pushpa R, Kumar KS, Bhowmik D. Traditional and medicinal uses of *Withania somnifera*. *The pharma innovation*. 2012 Nov 1;1(9, Part A):102.
76. Zhang S, Kou X, Zhao H, Mak K-K, Balijepalli MK, Pichika MR. *Zingiber officinale* var. *rubrum*: Red Ginger's Medicinal Uses. *Molecules* 2022;27:775. <https://doi.org/10.3390/molecules27030775>.
77. Bennet, S.S.R. Name Changes in Flowering Plants of India and Adjacent Regions. Triseas Publ., Dehra Dunn, India, 1997.
78. Radcliffe-Smith A, Bakshi DNG. Flora of Murshidabad District, West Bengal, India. *Kew Bulletin* 1985;40:870. <https://doi.org/10.2307/4109879>.
79. Prain, D. Bengal Plants, Vols. I & II, rep. ed. BSI, Cal., 1963.
80. Cook, C.D.K. Aquatic and Wetland Plants of India. Oxford University Press, 1996.

81. Bhuyan B, Baishya K, Rajak P. Effects of *Alternanthera sessilis* on Liver Function in Carbon Tetra Chloride Induced Hepatotoxicity in Wister Rat Model. *Indian Journal of Clinical Biochemistry* 2017;33:190–5. <https://doi.org/10.1007/s12291-017-0666-1>.
82. Das D, Mondal S, Mandal S. Studies on Some Economically Important Aquatic Plants of Katwa Subdivision of Burdwan District, West Bengal, India. *International Journal of Current Microbiology and Applied Sciences* 2016;5:961–72. <https://doi.org/10.20546/ijcmas.2016.506.103>.
83. JAIN S, VASUDEVAN P, JHA N. *Azolla pinnata* r.br. and *lemna minor* l. for removal of lead and zinc from polluted water. *Water Research* 1990;24:177–83. [https://doi.org/10.1016/0043-1354\(90\)90100-k](https://doi.org/10.1016/0043-1354(90)90100-k).
84. Minh, Phuoc N, et al. Investigation of Herbal Tea Production from *Centella asiatica* Leaf. 2019;11(3):755- 758.
85. Syed I, Fatima H, Mohammed A, Siddiqui MA. *Ceratophyllum demersum* a free-floating aquatic plant: A Review. *Indian Journal of Pharmaceutical and Biological Research*. 2018 Jun 30;6(02):10-7.
86. Kim S-S, Park H-S, Yoon H-J, Lee Y-M, Lee S-K, Nahm D-H. Enhanced Serum Neutrophil Chemotactic Activity was Noted in Both Early and Late Asthmatic Responses During Lysine-Aspirin Bronchoprovocation Test in ASA-Sensitive Asthmatic Patients. *Journal of Korean Medical Science* 2003;18:42. <https://doi.org/10.3346/jkms.2003.18.1.42>.
87. Islam M, Riaz T, Hossain S, Ferdous J, Hossain M, Chae H-J, et al. Antioxidant, antibacterial, antidiarrheal, and antipyretic activities of organic crude fractions of *Commelina paludosa*. *AYU (An International Quarterly Journal of Research in Ayurveda)* 2018;39:101. https://doi.org/10.4103/ayu.ayu_213_17.
88. Patra A, Mondal AK, et al. Traditional phytotherapeutic uses in Purba Medinipur, West Bengal, India. 2017;8(9):3904-3910.
89. Rakotonirina VS, Bum EN, Rakotonirina A, Bopelet M. Sedative properties of the decoction of the rhizome of *Cyperus articulatus*. *Fitoterapia*. 2001 Jan 1;72(1):22-9.
90. Taheri Y, Herrera-Bravo J, Huala L, Salazar LA, Sharifi-Rad J, Akram M, et al. *Cyperus* spp.: A Review on Phytochemical Composition, Biological Activity, and Health-Promoting Effects. *Oxidative Medicine and Cellular Longevity* 2021;2021:1–17. <https://doi.org/10.1155/2021/4014867>.
91. International Rice Research Institute (1983). "Field problems of tropical rice," revised, p. 121. *Int. Rice Res. Inst.* ISBN 971-10-4080-8, ISBN 978-971-10-4080-2
92. Peerzada AM, Ali HH, Naeem M, Latif M, Bukhari AH, Tanveer A. *Cyperus rotundus* L.: Traditional uses, phytochemistry, and pharmacological activities. *Journal of Ethnopharmacology* 2015;174:540–60. <https://doi.org/10.1016/j.jep.2015.08.012>.
93. Rastogi S, Pandey MM, Rawat AK. An ethnomedicinal, phytochemical, and pharmacological profile of *Desmodium gangeticum* (L.) DC. and *Desmodium adscendens* (Sw.) DC. *Journal of ethnopharmacology*. 2011 Jun 22;136(2):283-96.
94. Hilu, Khidir W. (1994). "Evidence from RAPD markers in the evolution of *Echinochloa* millets (Poaceae)." *Plant Systematics and Evolution*. 189 (3): 247–257. doi:10.1007/BF00939730. S2CID 33838562
95. Purugganan MD, Fuller DQ. The nature of selection during plant domestication. *Nature* 2009;457:843–8. <https://doi.org/10.1038/nature07895>.



96. Jahan R, Al-Nahain A, Majumder S, Rahmatullah M. Ethnopharmacological Significance of *Eclipta alba* (L.) Hassk. (Asteraceae). *International Scholarly Research Notices* 2014;2014:1–22. <https://doi.org/10.1155/2014/385969>.
97. Ayanda OI, Ajayi T, Asuwaju FP. *Eichhornia crassipes* (Mart.) Solms: Uses, challenges, threats, and prospects. *The Scientific World Journal*. 2020 Jul 7;2020.
98. Saudagar P, Bhalerao P. A mini-review on traditional uses, phytochemistry, and pharmacological activities of *Homonoia riparia*. 2021;3(11):490-494.
99. Pal DK, Nimse SB. Little-known uses of the common aquatic plant, *Hydrilla verticillata* (Linn. f.) Royle.
100. Modi B, Shah KK, Shrestha J, et al. Morphology, Biological Activity, Chemical Composition, and Medicinal Values of *Tinospora cordifolia* (willd.) Miers. 2021;3(1):36-53.
101. Agyare C, Boakye YD, et al. Antimicrobial and AntiInflammatory Properties of *Anchomanes difformis* (Bl.) Engl. and *Colocasia esculenta* (L.) Schott. 2016;5(1):2-5.
102. Meira M, Silva EP, David JM, David JP. Review of the genus *Ipomoea*: traditional uses, chemistry, and biological activities. *Revista Brasileira de Farmacognosia*. 2012;22:682-713.
103. Shanaida M, Hudz N, Jasicka-Misiak I, Wiczorek PP. Polyphenols and Pharmacological Screening of a *Monarda fistulosa* L. dry Extract Based on a Hydrodistilled Residue By-Product. *Frontiers in Pharmacology* 2021;12. <https://doi.org/10.3389/fphar.2021.563436>.
104. Arya AK, Durgapal M, Bachheti A, Deepti, Joshi KK, Gonfa YH, et al. Ethnomedicinal Use, Phytochemistry, and Other Potential Application of Aquatic and Semiaquatic Medicinal Plants. *Evidence-Based Complementary and Alternative Medicine* 2022;2022:1–19. <https://doi.org/10.1155/2022/4931556>.
105. Gopalakrishnan K, Kumar RU. Phytochemical content of leaf and stem of *Marsilea quadrifolia* (L.). 2017;1:026- 037
106. MARTIN RJ. A checklist of common weeds in Cambodia. *Asian Journal of Agricultural and Environmental Safety*. 2021;2:45-50.
107. *Monochoria vaginalis*: Lansdown, R.V. IUCN Red List of Threatened Species 2009. <https://doi.org/10.2305/iucn.uk.2011-1.rlts.t168872a6543959.en>.
108. Tungmunnithum D, Pinthong D, Hano C. Flavonoids from *Nelumbo nucifera* Gaertn., a Medicinal Plant: Uses in Traditional Medicine, Phytochemistry and Pharmacological Activities. *Medicines* 2018;5:127. <https://doi.org/10.3390/medicines5040127>.
109. Raja MM, Sethiya NK, Mishra SH. A comprehensive review on *Nymphaea stellata*: A traditionally used bitter. *Journal of advanced pharmaceutical technology & research*. 2010 Jul;1(3):311.
110. Debnath S, Ghosh S, Hazra B. Inhibitory effect of *Nymphaea pubescens* Willd. flower extract on carrageenan-induced inflammation and CCl4-induced hepatotoxicity in rats. *Food and Chemical Toxicology* 2013;59:485–91. <https://doi.org/10.1016/j.fct.2013.06.036>.
111. Jenks MA, Kane ME, McConnell DB. Shoot organogenesis from petiole explants in the aquatic plant *Nymphoides indica*. *Plant Cell, Tissue, and Organ Culture*. 2000 Oct;63:1-8.
112. Takahashi M. Pollen development in a submerged plant, *Ottelia alismoides* (L.) Pers.(Hydrocharitaceae). *Journal of Plant Research*. 1994 Jun;107:161-4.
113. Gupta R, Tripathi P, Kumar R, Sharma A, Mishra A. *Pistia stratiotes* (Jalkumbhi).

- Pharmacognosy Reviews 2010;4:153. <https://doi.org/10.4103/0973-7847.70909>.
114. Farooq U, Naz S, Shams A, Raza Y, Ahmed A, Rashid U, Sadiq A. Isolation of dihydro benzofuran derivatives from ethnomedicinal species *Polygonum barbatum* as anticancer compounds. *Biological Research*. 2019 Dec;52(1):1-2.
115. Tong X, Li X, Ayaz M, Ullah F, Sadiq A, Ovais M, Shahid M, Khayrullin M, Hazrat A. Neuroprotective studies on *Polygonum hydropiper* L. essential oils using transgenic animal models. *Frontiers in Pharmacology*. 2021 Jan 27;11:580069.
116. Gou K-J, Zeng R, Dong Y, Hu Q-Q, Hu H-W-Y, Maffucci KG, et al. Anti-inflammatory and Analgesic Effects of *Polygonum orientale* L. Extracts. *Frontiers in Pharmacology* 2017;8. <https://doi.org/10.3389/fphar.2017.00562>.
117. Ahsan H, Mushtaq MN, Anjum I, Fiaz MU, Cheema AR, Haider SI, HINTSA G. Preliminary research regarding chemical composition and anti-inflammatory effects of *Polygonum plebeium* R. Br. *FARMACIA*. 2021 Sep 1;69(5):954-9.
118. Yu Q, Wang H-Z, Xu C, Li Y, Ma S-N, Liang X-M, et al. Higher Tolerance of Canopy-Forming *Potamogeton crispus* Than Rosette-Forming *Vallisneria natans* to High Nitrogen Concentration as Evidenced From Experiments in 10 Ponds With Contrasting Nitrogen Levels. *Frontiers in Plant Science* 2018;9. <https://doi.org/10.3389/fpls.2018.01845>.
119. Goo Y-K. Therapeutic Potential of *Ranunculus* Species (*Ranunculaceae*): A Literature Review on Traditional Medicinal Herbs. *Plants* 2022;11:1599. <https://doi.org/10.3390/plants11121599>.
120. Thieret, J. W. 1969. *Sagittaria guayanensis* (*Alismaceae*) in Louisiana: New to the United States. *Sida* 3: 445.
121. *Sagittaria sagittifolia*: Lansdown, R.V. IUCN Red List of Threatened Species 2013. <https://doi.org/10.2305/iucn.uk.2014-1.rlts.t167821a43126944.en>.
122. Bala R, Thukral AK. Phytoremediation of CR(VI) by *Spirodela polyrrhiza* (L.) Schleiden Employing Reducing and Chelating Agents. *International Journal of Phytoremediation* 2011;13:465–91. <https://doi.org/10.1080/15226511003758861>.
123. Adkar P, Dongare A, Ambavade S, Bhaskar VH. *Trapa bispinosa* Roxb.: a review on nutritional and pharmacological aspects. *Advances in pharmacological sciences*. 2014 Feb 10;2014.
124. Lorenzen B, Brix H, Mendelssohn IA, McKee KL, Miao SL. Growth, biomass allocation, and nutrient use efficiency in *Cladium jamaicense* and *Typha domingensis* as affected by phosphorus and oxygen availability. *Aquatic botany*. 2001 Jun 1;70(2):117-33.
125. Van Wyk BE and N Gericke (2000). *People's Plants a Guide to Useful Plants of Southern Africa* (Pretoria, Briza Publications).
126. Wang R, Q Gu L, Yang J, Chen S Li and Y Zheng (2006). Anti-HIV-1 activities of extracts from the medicinal plants *Rhus chinensis*. *Journal of Ethnopharmacology* 105 269–273.

HOW TO CITE: Ankush Biswas, Kushal Saha, Flora of Healing: Exploring Ethnobotanical Wisdom in Nadia, West Bengal, India, Int. J. of Pharm. Sci., 2024, Vol 2, Issue 2, 122-138. <https://doi.org/10.5281/zenodo.10625038>

