

## **Exploration of the otherwise-neglected weeds of Nadia district-the treasure trove of medicines**

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**ABSTRACT:** A field survey was done during the kharif season of 2010-2012 on 53 weed species collected from different areas of Nadia district of West Bengal, India. Various economic uses were noted along with the phenological study done previously by the authors. This paper deals with the weeds having medicinal uses only. Weeds with varied medicinal uses may help dealers in crude drugs, manufacturers of plant products or persons interested in the beneficial aspects of plants. The dominant families to which maximum plants belong are Solanaceae, Scophulariaceae, Amaranthaceae and Gramineae. Further works in the future on biochemical studies would be helpful to make the study more interesting and specific to document the field data.

**KEYWORDS** – Neglected weeds, medicinal value, Nadia district, traditional uses

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### **I. INTRODUCTION**

Weeds are neglected everywhere. But, in true sense, not a single creation in nature is avoidable or unimportant in our living world. It is the limitation of the cultivation of our knowledge that we have yet to identify and find out the proper application and uses of the plants created in nature. The study area includes the gangetic alluvial zone of Nadia district and its allied areas and is located at 23°24'N latitude and 88°31' E longitude with an altitude of 9.75 meters above mean sea level. In the developed countries, 80% of the world's population is dependent on traditional medicine which can be obtained from various diverse plant types both in plains and in hilly areas. Most of us are aware of the observation of Food and Agricultural Organization (FAO) of the United Nations - "Conservation agriculture is a concept for resource-saving agricultural crop production that strives to achieve acceptable profits together with high and sustained production levels while concurrently conserving the environment." (FAO, 2007). The aspects of conservation that we normally deal are the management of soil, water, crop diversity, animals, storage of produce (seed, fertilizer, etc.), and maintenance of tools, implements, machinery, etc. So, keeping this in view, the present study was done to find out the medicinal uses of the weeds, to conserve them, and to locate their area of existence along with the documentation which will be helpful to researchers and scientists for future uses in various health strategies of the nation.

### **II. MATERIALS AND METHODS**

In a comprehensive survey of different areas of both cultivated and uncultivated areas of Nadia district, the authors collected, identified and preserved the weeds which have the traditional medicinal uses in different remote, tribal, and so-called poor illiterate village areas. Regular survey was made from 2010 to 2012. During kharif season (i.e., from July to October) and also during the post kharif season, the authors met the native of the local area. People were asked about the local uses of these weeds during the outbreak of various diseases and on various occasional rituals. The information regarding the local names of the weeds at different localities was taken from the local people after personal interviews and a prolong discussion with them. The collected materials were identified following the guidelines of flora of the different authors.

### **III. RESULTS AND DISCUSSION**

The study of the phenology of some kharif weeds was done by the authors previously (Chakravorty and Ghosh, 2012). Efforts have been made especially on the weeds which are used against snakebite. Besides, plants used in diarrhoea and fever are more prevalent in these areas of this district. Often, the author visited and made an interview with astrologers who, in spite of their negligence of the actual biochemical constituents of the plant parts, can at least prescribe them to the poor villagers as medicines in the name of God. The various plant parts are used as various types of remedial measurements. Among 53 weed species collected, 26 families were found to be distributed at the sites of the upper plain, the slope and of the field. Most of the plants belong to the families such as, Euphorbiaceae, Solanaceae, Amaranthaceae and Scophulariaceae. With the increasing demand of herbal drugs as an alternative of chemical drugs like, steroids, people are now more aware of the matter. In many tribal areas of the north east India and in the different tribal local areas where there is a lack of proper health services, people depend on traditional medicines. So, now it is a high time to feel this requirement and also to document the usage of the plants which are otherwise neglected still today in our country like India who herself is a repository of biodiversity and a treasure-trove of many beneficial plants.

TABLE 1. MEDICINAL USES OF THE NEGLECTED WEEDS OF THE NADIA DISTRICT

Sl. No.	Name of the species	Local Name	Family	Used as
1	<i>Achyranthus aspara</i>	Apang	Amaranthaceae	In insect bites , useful in renal dropsy
2	<i>Alternanthera sessalis</i> (L.) DC.	Chanci	Amaranthaceae	A febrifuge, a wash for the eyes,a cure for snake bite
3	<i>Amaranthus gracilis</i> Desf.	Not known	Amaranthaceae	Emollient in scorpion sting and useful in snake bite
4	<i>Ammania baccifera</i> L.	Dadmari	Lythraceae	As a rubifacient in skin diseases/in case of spleen enlargement
5	<i>Argemone Mexicana</i> L.	Bara sheal-kanta	Papaveraceae	In skin diseases, effective against scorpion sting.
6	<i>Bacopa monnieri</i> (L.) Pennell	Brahmni	Scophulariaceae	A nerve tonic (hysteria), insanity and epilepsy, used in snake bite
7	<i>C. tripeps</i> Rottb.	Not Known	Cyperaceae	In diabetes and to relieve thirst in fevers
8	<i>Celosia argentea</i> L.	Sweet moragphul	Amaranthaceae	Diorrhoea, blood diseases, mouth sores and eye troubles
9	<i>Centaurium roxburghii</i> (don) Druce	Charayatak	Gentianaceae	Substitute for Chiretta (Swertia chirta) in fever
10	<i>Centella asiatica</i> (L.) Urban	Thankuni	Umbellifereae	Alernative of diuretic and tonic, cure madness, antidote of cholera
11	<i>Chorchorus aestuans</i> L.	Titapat	Tiliaceae	As a stomachic, seeds are used in pneumonia
12	<i>Commelona diffusa</i> burm.f.	Not known	Commeloneae	Applied for boils, burns and itches
13	<i>Croton bonplandianum</i> Baill.	Kukurshuka	Euphorbiaceae	Rich in nitrogen and potash, good for composting
14	<i>Cyanodon dactylon</i> (L.) Pers.	Durba	Gramineae	Astringent is used in hysteria, insanity, epilepsy, diarrhoea, dysentery, cuts and wounds
15	<i>Cyanotis axillaris</i> Roem. & Schult	Not known	Commeloneae	Remedy for tympanites
16	<i>Cyperus rotundus</i> L.	Motha	Cyperaceae	In stomach disorders
17	<i>Dactyloctenium aegyptium</i> (L.) Beauv.	Makra	Cyperaceae	Seed is used to relieve kidney pains
18	<i>Desmodium triflorum</i> (L.) DC.	Kuddalia	Liguminosae	A galactagogue and for diarrhoea, abscesses and wounds
19	<i>E. parviflora</i> L.	Not known	Euphorbiaceae	In diarrhoea, dysentery, and in leucorrhoea
20	<i>E. thymifolia</i> Burm.	Sweet-kerui	Euphorbiaceae	A cure for ring worm
21	<i>Echornia crassipes</i> (Mart.) Solms	Kachuripana	Pontederiaceae	Source of gases, protein and potash
22	<i>Eclipta prostrate</i> (L.) L.	Kesut	Compositae	Tonic and deobstruent, in skin diseases, remedy for scorpion sting, relief of urine scadling
23	<i>Euphorbia hirta</i> L.	Bera-kerui	Euphorbiaceae	As a vermifuge and in genitor-urinary diseases
24	<i>Evolvulus nummularius</i> L.	Not known	Convolvulaceae	Antiseptic, diaphoretic
25	<i>Grangea maderaspatana</i> Poir.	Namuti	Compositae	In treatment of earache and irregular menses
26	<i>Heliotropium indicum</i> L.	Hatisura	Boraginaceae	Used locally in ulcers, wounds, fever and cough
27	<i>Hydrolea zeylanica</i> (L.) Vahl	Kasschra	Hydrophyllaceae	Applied in poultices on calluses and neglected ulcers
28	<i>Hygrophila auriculata</i> (schum.) Heine	kuliakhara	Acanthaceae	As diuretic, used for anasarca, dropsy, rheumatism, jaundice and genito-urinary diseases
29	<i>Ipomoea aquatica</i> Forsk.	Kalmisak	Convolvulaceae	As wholesome for women suffering from nervous and general debility
30	<i>L. crustacea</i> (L.) F. Muell.	Not Known	Scophulariaceae	Used for dysentery and bilious affections
31	<i>L. perennis</i> L.	Not known	Onagraceae	Externally applied to reduce fever
32	<i>Leucas cephalotes</i> Spreng.	Dhurpi sag	Labiatae	As antiseptic, diaphoretic, insecticidal, used for coughs and colds
33	<i>Limmophila indica</i> (L.) Druce	Karpur	Scophulariaceae	Have antiseptic properties, used in elephantiasis
34	<i>Lindernia cordifolia</i> (Colsm.) Merr.	Not Known	Scophulariaceae	Remedy for gonorrhoea

35	<i>Ludwigia adscendens</i> (L.) Hara	Kasara-dam	Onagraceae	A paste for skin diseases and ulcers
36	<i>Melochia chorchorifolia</i> L.	Tiki-okra	Sterculiaceae	Leaves and roots are used in dysentery/snake bite
37	<i>Murdannia malabarica</i> (L.) brueckner	Kandule	Commeloneae	Used in the treatment of leprosy
38	<i>Nymphaea stellata</i> Willd.	Nilpadma	Nymphaeaceae	Diuretic and emollient, used in piles, rhizome is used in dyspepsia and diarrhoea
38	<i>Nymphoides cristatum</i> (Roxb.) O. Ktze	Tagarmul	Gentianaceae	Substitute for Chiretta in jaundice and fevers
40	<i>Oldenlandia corymbosa</i> L.	Khet-papra	Rubiaceae	Medicine of fever, jaundice and diseases of liver
41	<i>P. simplex</i> Retz.	Not known	Euphorbiaceae	A cure for children's itch
42	<i>P. urinaria</i> L.	Hazarmani	Euphorbiaceae	Used to treat gonorrhoea and other genito-urinary troubles
43	<i>Phyllanthus fraternus</i> Webster	Not known	Euphorbiaceae	Applied to offensive sores and ulcers
44	<i>Pistia stratiotes</i> L. var. <i>cuneata</i> Engl.	Tokapana	Araceae	In treatment of dysentery, asthma, cough and skin diseases
45	<i>Polygonum plebejum</i> R. Br.	Chikni-sag	Polygonaceae	In pneumonia
46	<i>Rungia pectinata</i> (L.) Nees	Pindi	Acanthaceae	Used in smallpox, applied to relieve pain and diminish swelling
47	<i>S. rhomboidea</i> Roxb.	Lal berela	Malvaceae	As a demulcent and emollient/snake bite
48	<i>Saccharum spontaneum</i> L.	Kash	Malvaceae	Effective in cases of strangury, phthisis, blood diseases, biliousness and painful urinations
49	<i>Scoparia dulcis</i> L.	Madhumeha nashini	Scophulariaceae	Antidiabetic
50	<i>Sesali diffusum</i> (Roxb.ex.Sm)	Bon-jowan	Umbellifereae	Cattle medicine
51	<i>Sesbania cannabina</i> (Retz.) Pers.	Daincha	Liguminaceae	As a Famine food
52	<i>Sida acuta</i> Burm.	Kureta	Malvaceae	(Roots)in urinary and nervous diseases as well as in disorders of bile and blood
53	<i>Xanthium strumarium</i> L.	Ban-okra	Compositae	As demulcent, diaphoretic, sedative and also given in smallpox

#### IV. CONCLUSION

This research work of exploration of the weeds has indicated that the different places including the various cultivated and uncultivated lands of Nadia district, West Bengal are a good source of beneficial weed species. Weeds with such huge traditional medicinal treasures may be useful or may be helpful in Allopathic, Homeopathic and Ayurvedic treatment or to local drug sellers who collect the plants during weeding operations in the cultivated field by farmers along with the non- cultivated areas. Also, a holistic research based on biochemical and molecular point of view is required on this hidden treasure trove so that the gift of nature can be properly identified and utilized to save us from the attack of chemicals, to keep our health well.

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