

Ethnomedicobotanical Study in the Coalfield Areas of Raniganj in Burdwan District, West Bengal

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Abstract

Herbal medicines have regained in the recent times an international acceptance in restoration of human health. Development of herbal medicines is an outcome of scientific researches undertaken on the medicinal plants used in folkmedicine. In view of this, a preliminary study was undertaken on a few angiospermic plants which are used extensively by the local people of the coalfield areas of Raniganj in Burdwan district, West Bengal. After conducting field surveys in 12 villages under six Gram Panchayats of coal field areas of Raniganj, Burdwan district from November 2009 to February 2010, the authors came across 30 plant species viz., *Musa paradisiaca*, *Kalanchoe pinnata*, *Achyranthus aspera*, *Nelumbo nucifera* and *Cynodon dactylon* which are used by the ethnic people in their primary health care. An account of each of these medicinal plants has been prepared giving its local names, habit, botanical description, parts used and use-process.

Key words : Ethnobotany, Ethnomedicine, Coalfield areas of Raniganj.

To tide over unfavorable conditions plants produce different types of secondary metabolites which have been providing fertile areas for chemical, pharmacological and therapeutic investigation and validation of herbal folk medicines to promote development of new patient friendly medicines of herbal origin. The traditional knowledge about medicinal uses of plants which since time immemorial is in pos-

session of indigenous communities in India needs to be documented. As such the present work was undertaken among the tribal populace of Raniganj coal field area. Medicinal plants, in spite of their richness in resources, have not yet been fruitfully utilized for development of drugs. It has been observed that medicinal and aromatic plants are now on decline because of deforestation, lack of scientific cultivation

Table 1. Ethnomedicinal uses of plants occurring in the coalfield areas of Raniganj in Burdwan district, West Bengal.

Local name	Scientific name	Family	Habit & description	Parts used	Medicinal use
Babla	<i>Acacia nilotica</i>	Fabaceae	Shrubs or small trees, leaves compound, fruits pods	Bark, gum	Gum used in treating gynecological diseases and in toothache. As aphrodisiac
Chirchire, apang	<i>Achyranthus aspera</i>	Amaranthaceae	Annual herbs, flowers greenish white, in terminal spikes	Whole plant	In leucorrhoea, in stomach pain, roots used in dysentery and arthritis
Basak	<i>Adhatoda vasica</i> (Fig. 7)	Acanthaceae	Shrub, leaves lanceolate, flowers in spikes, white, with copious bracts and bracteoles, fruits capsules	Leaves	In chronic cough, cold and asthma
Bael	<i>Aegel marmelos</i>	Rutaceae	Trees, leaves 3-foliolate, fruits woody outside, leaves globose (amphisarca)	Fruits, roots,	Fruit as laxative, its soft drink prevents sun stroke, used in stomach troubles, dysentery

Table 1. Continued.

Local name	Scientific name	Family	Habit & description	Parts used	Medicinal use
Dudhe khoya	<i>Aerva aspera</i> (Fig. 3)	Amaranthaceae	Herb, leaves spatulate, tomentose above & white cottony beneath	Whole plant	In mouth sore of children, as vermicide
Maan kachu	<i>Alocasia indica</i> (Fig. 9)	Areceae	Stout herbs, leaves sagittately cordate, bright green, undulate, with long petioles, flowers minute, unisexual, in spadix	Leaves, rhizome	Leaves roasted, tide in arthritis, boiled rhizome in stomach troubles
Hitkori, gritokumari	<i>Aloe vera</i>	Liliaceae	Herbs, leaves succulent, flower red	Succulent leaves	In skin rashes, as hair tonic, laxative, as coolant applied on forehead
Kalmegh	<i>Andrographis paniculata</i>	Acanthaceae	Erect herb, stem quadrangle, nodes swollen. Flowers racemose panicles, fruit capsule	Whole plants	Antipyretic, cough cold, blood purifier, in stomach troubles
Neem	<i>Azadirachta indica</i>	Meliaceae	Tree, leaves compound, flowers white, fruit drupe	Leaves fruits	Leaves as astringent, blood purifier, skin diseases boils, sores
Palash	<i>Butea monosperma</i>	Fabaceae	Medium sized tree, leaves 3-foliolate, flowers orange red, fruit pods	Gum, seeds, leaves, bark, flowers	Seeds as wormicide, in skin disease, ring worm; bark as appetizer, in diarrhea, dysentery
Arhar	<i>Cajanus cajan</i>	Fabaceae	Shrubs, leaves compound, flowers yellow, fruits pods	Leaves, seeds	Juice of the leaves in jaundice, in oral ulcers
Tela kachu	<i>Cephalandra indica</i>	Cucurbitaceae	Climbing herb, have extra-axillary tendrils, leaves palmately 5-lobed, pepo fusiform-ellipsoid.	Leaves	In diabetes and blood pressure
Alok pui, swarnalata	<i>Cuscutta reflexa</i> (Fig. 2)	Convolvulaceae	Slender, total stem parasite, leafless, branched, intertwining, fruit capsular	Whole plant	In stomach troubles, against hair fall
Durba ghas	<i>Cynodon dactylon</i> (Fig. 5)	Poaceae	Creeping, highly branched, perennial herb, rooted at every node, flowers in spikelets in spikes.	Whole plant	To stop bleeding, in leucorrhoea, stomach troubles, diarrhea and dysentery
Dhutra	<i>Datura metel</i> (Fig. 8)	Solanaceae	Shrub, succulent, flower large, white, fruits capsule	Whole plant	As a narcotic, in asthma, cough, fever; roots in dog bites
Sisoo	<i>Dalbergia sisoo</i>	Fabaceae	Tree, leaves compound, flowers pale yellow, fruits pods	Root, leaves, bark, heart wood	Roots in enhancing breast milk, in gynecological disorders
Kesuth	<i>Eclipta alba</i>	Asteraceae	Herb, leaves sub-sessile, inflorescence capitulum, white, fruits achene	Whole plant	In controlling hair fall, blackening of hair, as digestive, carminative
Bot	<i>Ficus benghalensis</i>	Moraceae	Tree, leaves coriaceous, prop root present, fruit achene	Root, prop root	In gynecological diseases; prop root for dysentery
Jor	<i>Ficus religiosa</i>	Moraceae	Tree, coriaceous, acuminata	Root	For gynecological troubles

Table 1. Continued.

Local name	Scientific name	Family	Habit & description	Parts used	Medicinal use
Jaba	<i>Hibiscus rosa sinensis</i>	Malvaceae	Woody shrub, leaves ovoid, serrated, flowers solitary red	Flower, buds, leaves	For reducing hair fall, blackening of hair, regularize menstrual cycle
Kule khara	<i>Hygrophilla spinosa</i>	Acanthaceae	Erect herb, leaves lanceolate, flowers in whorl, purple, capsule	Whole plant	In anemia, blood purifier
Pathar kuchi	<i>Kalanchoe pinnata</i> (Fig. 4)	Crassulaceae	Succulent herbs, leaves simple or compound, flowers paniced cymes, red	Leaves	To stop bleeding, in jaundice and disorders of kidney and stomach, in removing gall bladder stone
Sajne	<i>Moringa oleifera</i> (Fig. 10)	Moringaceae	Small tree, leaves 3-pinnate, flowers yellowish white, fruits long pods	Flowers, leaves	Leaves in Stomach troubles, vomiting, and flowers in diabetes
Kela	<i>Musa paradisiaca</i>	Musaceae	Shrub, leaves oblong, spikes, fruits berry	Fruit, root, leaf base	Fruit as laxative, root in gynecological disorders. Unripe fruit in stomach troubles
Padma	<i>Nelumbo nucifera</i>	Nymphaeaceae	Aquatic herb, leaves orbicular, glaucous, flowers pink or white	Fruit, stem	White part near root is used for gynocological disorders, fruits and seeds are used for memorrhagia, Leucorrhoea
Karabi	<i>Nerium indica</i>	Apocynaceae	Shrub, leaves linear, entire, flowers deep red	Leaves, root	In cardiac disease and as diuretic
Tulsi	<i>Ocimum sanctum</i>	Lamiaceae	Herb, quadrangular stem, flowers verticillasters	Leaves	In cough and cold, in skin disease, fever, insect bites
Amrul	<i>Oxalis corniculata</i> (Fig. 6)	Oxalidaceae	Creeping herb, leaves palmately 3 foliate, umbelliform inflorescence, fruit capsule	Leaves, root	As appetizer, in stomach troubles, diarrhea, dysentery
Ashok	<i>Saraca ashoka</i>	Fabaceae	Tree, flowers red	Flowers, bark	In gynecological disorders, Regularise menstrual cycle
Nisindha	<i>Vitex negundo</i>	Verbanaceae	Small trees, leaves 3—5 foliate, flowers in cymose panicles, purple, fruit drupe	Leaves, root	Germicidal, smoke is used as insect repellent, to kill intestinal worm

and conservation. On the contrary, a large segment of population of India reliefs mostly on herbal medicines for primary health care.

Study Site

The villages under Raniganj Block which consists of six Gram Panchayats, viz. Amrasota, Egara,

Jemeri, Ratibati, Ballavpur and Tirat. Its geographical ordinates are 23°37' 0'' North, 87° 8' 0'' were surveyed for documenting ethnomedicinal practices. A map of the working area (Fig.1) is given for ready reference.

Methods

The present study is the outcome of the five

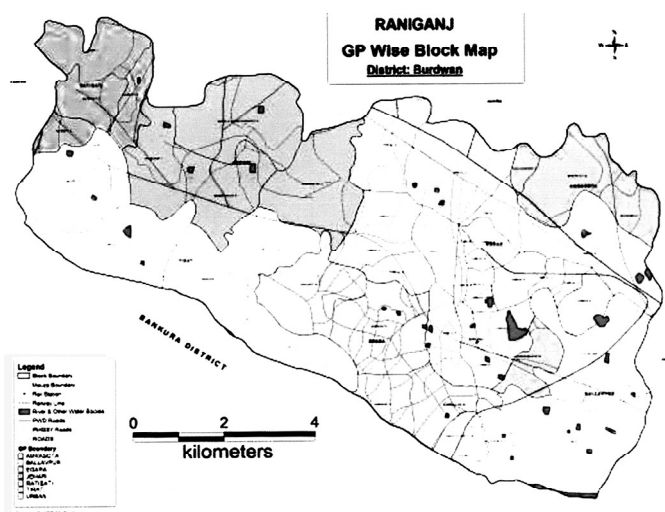
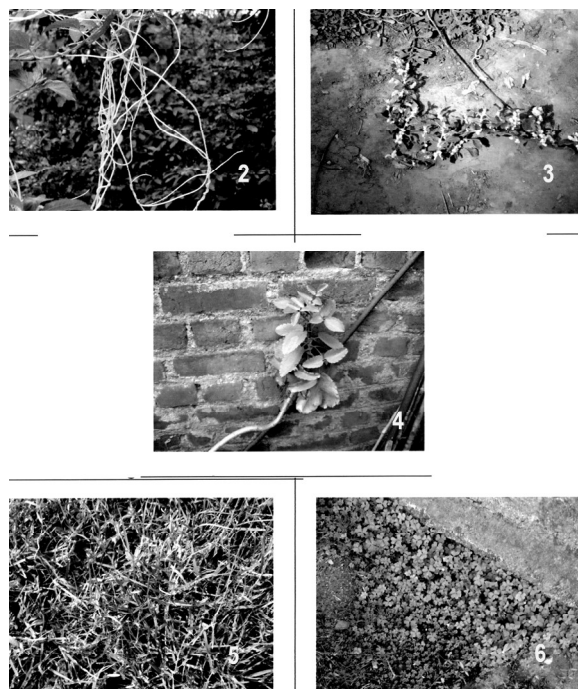


Figure 1. Map of the study site.

months of critical and systematic study of the plants and their usages by the local tribal inhabitants. Standard ethnobotanical methods were followed for docu-

mentation. During collection of the ethnobotanical data emphasis was given on the field-interview of the medicine man and knowledgeable elderly persons,



Figures 2—6. Some important medicinal plants of Raniganj area, (2) *Cuscutta reflexa*, (3) *Aerva aspera*, (4) *Kalanchoe pinnata*, (5) *Cynodon dactylon*, (6) *Oxalis corniculata*.



Figures 7—10. Some important medicinal plants of Raniganj area. (7) *Adhatoda vasica*, (8) *Datura metal*, (9) *Alocasia indica* and (10) *Moringa oleifera*.

especially women of the tribal community. The medicinal uses of the plants, method of preparation of the drugs and the dosage were noted.

Identification and nomenclature of the plant species were done following standard taxonomic procedure and authentic literature (1—4).

Results and Discussion

The findings are tabulated giving scientific names of plants, their synonyms and vernacular names along with respective family name, habit, description, parts used and use (Table 1 and Figs. 2 to 10).

From time immemorial people of India depend on herbal medicines to cure different types of diseases. Over thousand of plants are used as medicine. Whole plant, leaves, roots, flowers, fruits and seeds are used either in intact form or in the form of pill, powder,

paste, fresh juice or extract, decoction. The findings of the present study reveals that the people staying in the villages and engaged mainly in mining activities still use plants as their major source of medicine with which they are satisfied. Many of the uses recorded here are novel and effective. Further therapeutic proving and experimental validation may handover new patient friendly medicines to mankind.

References

1. Bennet S. S. R. 1997. *Name changes in flowering plants of India and adjacent regions*. Triseas Publ., Dehra Dun, India.
2. Cook C. D. K. 1996. *Aquatic and wetland plants of India*. Oxford Univ. Press, London, UK.
3. Guha Bakshi D. N. 1984. *Flora of Mursidabad district. West Bengal*. Scientific Publ., Jodhpur, India.
4. Prain D. 1963. *Bengal plants*. Volumes 1 and 11. rep.ed. BSI, Calcutta, India.