



Full Length Research Paper

Medicinal Uses of Grasses by the Tribal People in West Bengal - An Overview

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Abstract

Survey in different parts of West Bengal provided information on medicinal uses of grasses by the residing tribal people for the treatment of various ailments in their daily life as well as some serious diseases and minor accidents such as wounds, burns, sting of insects, etc. which are dealt with in this paper.

Key words: Grasses, sedges, medicinal uses, tribal people, West Bengal.

Introduction

The grass family – Gramineae or Poaceae provides the staple food of mankind and perhaps is the most important group among the plants. Besides, they provide shelter, shade, fibre, molasses, drinks (sugarcane juice), and particularly the bamboos which are inseparable from our daily life. These apart, the medicinal importance of the grasses is also remarkable due to their various uses in rural areas of India even today.

Materials and Methods

In this paper medicinal uses of grasses by the tribal people in West Bengal are recorded based on field survey and literature (Rai Chaudhuri & Pal 1975, 1978; Rai Chaudhuri & Tribedi 1976; Rai Chaudhuri *et al.* 1982a, b; Molla & Roy 1985, 1996; Pal & Mudgal 1986; Aditya & Ghosh 1988; Pal & Jain 1989, 1999; Jain 1995, 1997; Basu & Mukherjee 1997; Ghosh & Sen Sarma 1997; Bharadwaj & Gakhar 2005; Mitra & Mukherjee 2005; Chakraborty & Bhattacharjee 2006; Sur *et al.* 2008; Binu 2009; Dutta Choudhury *et al.* 2010; Mallick & Mallick 2012; Mallick *et al.* 2012). Data about the uses of different grasses were collected through frequent visits to different tribal pockets of the study area in last three years (2010-2013). During the visit tribal herbalists were motivated to disclose the medicinal uses of grasses. Such grasses were then explored in the nearby locality and were brought to the laboratory for identification and preservation in the herbarium. The vernacular names of the relevant plant species are also provided here.

Abbreviations used

Vern.- Vernacular name; (As) - Asur; (B) – Bengali; (E) - English; (H) – Hindi; (Lep) - Lepcha; (Lo) - Lodha; (Mu) -Munda; (Nep) - Nepali; (Or) - Oraon; (Po) - Polia; (Ra) - Rabha; (Sa) - Santal.

Enumeration

Apluda mutica L.

Vern.: Tati (Lo); Dhudhia - gauri (Mu); Chofki (Sa).

Uses: Young plant (ca. 10 gm) made into paste, applied on the mouth to cure fungus infection by the Santals. Whole plant washed clearly and about 20 gm of such plant made into paste, used as balm on the paralytic part of the patient to get back its sensation by the Lodhas. Fresh root (ca. 15-20 gm) made into paste, applied on the mouth sores of the cattle by the Mundas.

Aristida setacea Retz.

Vern.: Horse tail (E); Ghor-benjii (Lo); Kharan-ghas (Sa).

Uses: Dried seeds (ca. 10 gm) are crushed to form powder, made into paste by mixing adequate 'reri oil' (castor oil, *Ricinus communis*), and applied on the mouth and foot sores of the cattle's by the Santals. Inflorescences are tied in a bunch, placed in front of cattle shade to keep the evil spirits away from the cattle by the Lodhas.

Arundo donax L.

Vern.: Great reed (E); Nal-ghana (Lo); Bina (Mu).

Uses: Aqueous decoction of fresh root (ca. 10 ml) with 7 long pepper (*Piper longum*) paste is given to women at early morning in empty stomach to cure menolipsis. The drug is given for successive 3 days just after completion of menstrual cycle by the Lodhas. Aqueous decoction of fresh root with adequate salt is given to cattle to cure dysentery by the Mundas.

Bothriochloa pertusa L.

Vern.: Begi - Ghash (Lo); Bagi (Mu).

Uses: Aqueous decoction of fresh inflorescence (ca. 20 ml) mixed with the aqueous decoction of long pepper (*Piper longum*) (in 3: 1 ratio) is given to children to cure cold and cough by the Lodhas. Ripe grains are crushed to powder; about 5 gm of such powder is mixed with black pepper (*Piper nigrum*) powder is given with a glass of lukewarm water for the treatment of breast tumour of women by the Mundas. The drug is continued for 15 days and during continuation of the drug, medicine-men advice the patient not to consume alcoholic drinks.

Brachiaria mutica (Forssk.) Stapf.

Vern.: Mota-gundii (Lo).

Uses: Fresh stem is crushed. The juice thus obtained is diluted by mixing water in equal amount and the whole mixture thus obtained is applied as eye drop to cure watering of eyes of cattle by the Lodhas.

Chrysopogon aciculatus (Retz.) Trin.

Vern.: Chorkanta (Sa).

Uses: Fresh rhizome-paste mixed with black pepper (*Piper nigrum*) seeds (ca. 9 seeds) paste is given at early morning in empty stomach to cure stomach-ache and gastric disorder by the Santals.

Coix lacryma-jobi L.

Vern.: Sada-Kunch (Sa); Bakshi-horens (Or).

Uses: Seeds are used as necklaces by the Santals. Aqueous decoction of seeds (ca. 10 ml) is given at early morning in empty stomach to cure dysentery of children by the Santals. Dried seed powder with a glass of lukewarm water is given at bed time as a galactogauge by the Oraons.

Coix lacryma-jobi L. var. *macguen* (Romanet) Stapf.

Vern.: Bakshi - horeng (Sa), (Mu).

Uses: Aqueous decoction of seeds is given to the children to cure stomach-ache by the Santals. Dried seed powder with a glass of lukewarm goat milk and a few drops of honey is given at bedtime to pregnant women as galactogauge by the Mundas.

Cymbopogon martini (Roxb.) Wat.

Vern.: Khere (Toto); Gandhi-ghas (Sa).

Uses: Leaf oil is taken internally to cure biliousness by the Totos. The medicine-men had advised not to take pork and country liquor during uses of this drug. Leaf extract is used as nasal drops to cure head-ache by the Santals. The whole plant is used for thatching.

Cymbopogon flexuosus (Nees ex Steud.) Nats. var. *sikkimensis* Bor.

Vern.: Gandhini (Lep).

Uses: The leaves of the grasses are kept in the boxes as insect repellent. The leaf extract is used as balm to cure head-ache of the children. The whole plant is used for thatching of poultry and it is said that the poultry birds remain healthy in this shade.

Cymbopogon hookeri (Munro ex Hack.) Stapf. ex Bor.

Vern.: Sirona-ghas (Lep).

Uses: The leaf extract is used as a washing material to clear the maggot infested wounds of the cattle. The whole plant is used as a pot grass.

Cynodon arcuatus J. S. Presl. ex C.B. Presl.

Vern.: Durba (Lep); Dubbo (Or).

Uses: Fresh root (ca. 20 gm) decoction is applied for checking bleeding from piles by the Lepchas. Fresh roots (ca. 20 gm) are crushed to paste, which is mixed with a little curd and applied in chronic gleet by the Lepchas. Juice of the fresh plants (ca. 10 ml) with a pinch of table salt is given at early morning in empty stomach as astringent by the Oraons. Fresh root juice (ca. 15 ml) mixed with black pepper powder (ca. 1 gm) and a few drops of honey is given for the treatment of epilepsy by the Oraons.

Cynodon barbari Rang et Tad. forma *barbari*

Vern.: Baradubbo (Po).

Uses: Whole plant made into a paste with few black pepper (*Piper nigrum*) and is given at early morning in empty stomach to cure chronic dysentery and diarrhoea by the Polias.

Cynodon dactylon (L.) Pers.

Vern.: Duba (Toto); Baradulua (Nep); Dubba (Mu).

Uses: Fresh plants are crushed; the juice is applied on the fresh cut to check bleeding by the Totos. Whole plant (ca. 15 gm) is made into a paste with seeds of 'Dhatura' (*Datura stramonium*) and *Boehmeria nevia* along with *Pteridium aquilinum* to reduce the chance of hydrophobia after biting of dog by the Nepalese. Fresh leaf extract (ca. 10 ml) is applied on the external portion of the eyelid to cure redness and irritation of the eye due to summer heat by the Mundas.

Dactyloctenium aegyptium (L.) P. Beauv.

Vern.: Durban (E); Makerghas (Lo); Matshyam (Sa)/(As).

Uses: Grains of the plant are made into a paste with (ca. 10 ml) limewater to cure stomach-ache of children by the Lodhas. Fresh grains are made into paste with 'Handia' (country liquor) is given to cure kidney stones by the Santals. Plant paste is used as fish stupifier by the Asurs. Grains are used for preparation of country liquor by most of the tribals of Purulia district of West Bengal.

Desmostachya bipinnata (L.) Stapf.

Vern.: Kust-ghash (Lo); Sarai (Sa).

Uses: Root paste (ca. 20 gm) of this plant is mixed with the root paste of 'Pan' (*Piper betel*) and decoction of 'Banda' (*Dendrophthoe falcata*) grows on 'Nishinda' (*Vitex negundo*) plant at a ratio of 3:2:1 is given to the women as contraceptive by the Lodhas. Root juice with decoction of 9 long peppers (*Piper longum*) for the treatment of jaundice by the Santals. Aqueous decoction of the fresh root (ca. 10 ml) is given with black pepper (*Piper nigrum*) paste for the treatment of constitutional disorders by the Santals.

Echinochloa colonum (L.) Link.

Vern.: Cockspur (E); Shyama-ghas (Lo); Khondmala (Sa).

Uses: Fresh plant juice (ca. 10 ml) is given with a pinch of common salt to cure indigestion by the Lodhas. Fresh root paste is applied for the treatment of acute burning pain on the sole by the Santals.

Echinochloa crus-gali (L.) P. Beauv

Vern.: Barnyard-millet (E); Jal-Shayama-ghash (Lo); Chama-tasad (Mu); Sama (Or).

Uses: Fresh plant juice (ca. 10 ml) mixed with dry turmeric powder (*Curcuma longa*) is given for the treatment of internal haemorrhage by the Lodhas. Fresh plant decoction is applied on the carbuncle by the Mundas. Grains are used as a substitute of rice by most of the tribes of the state.

Eleusine coracana (L.) Gaertn.

Vern.: Finger millet (E); Mandia (Lo); Marua (Sa); Murha (Mu).

Uses: Grains flour (ca. 25 gm) is made into paste, mixed with dried root bark (ca. 10 gm) of 'Rakta-Chita-daru' (*Plumbago indica*) and adequate amount of water. The paste is applied for the treatment of cancerous wounds by the Santals. Grains (ca. 20 gm) are boiled with the root decoction of 'Petula' (*Croton roxburghii*) and are given for stomach ulcer by the Lodhas. It is said that this drug is given for 3-successive days. Grains (ca. 10 gm) crushed to powder, mixed with 'Halud' (rhizome of *Curcuma longa*) (ca. 5 gm), Chandan dust (*Santalum album*) (ca. 5 gm) and adequate amount of water is pounded to form a paste, which is applied on the measles by the Mundas. Tribal people use the seeds as a raw material for the preparation of country liquor.

Eleusine indica Gaertn.

Vern.: Malkantari (Or); Chamghas (Rab).

Uses: Fresh root paste (ca. 15 gm) mixed with rhizome paste of 'Ada' (*Zingiber officinale*) and 9 black pepper (*Piper nigrum*) seeds are given as an antidote of snake bite by the Oraons. Fresh root paste (ca. 10 gm) is given for easy delivery by the Rabhas.

Eulaliopsis binata (Retz.) Hubb.

Vern.: Sabai-grass (E); Sabai (Lo); Sabai (Sa); Babu (Or).

Uses: Root decoction (ca. 10 ml) with long pepper made into paste is given in fever by the Lodhas. Whole plant paste (ca. 5 gm) mixed with 2-teaspoonfuls of honey and leaf juice (ca. 15 gm) of 'Basak' (*Adhatoda zeylanica*) is given 3-times a day to cure bronchitis by the Santals. Aqueous decoction of root (ca. 10 ml) mixed with black pepper (*Piper nigrum*) seed powder (ca. 5 gm) is given to reduce the body temperature due to summer heat by the Oraons.

Hemarthria binata (L.f.) R. Br.

Vern.: Pansheru (Lo); Sheria-ghas (Sa).

Uses: Fresh plant decoction mixed with a glass of lukewarm water and a pinch of table salt is given at early morning in empty stomach to improve appetite of children's by the Lodhas. Fresh internodes of the culms (not in blooming condition) (ca. 15 gm) are crushed to produce juice. It is used as eye drop for the treatment of eye irritation and to reduce redness of the eye by the Santals. Fresh root paste (ca. 5 gm) with a pinch of table salt is given in dyspepsia by the Santals.

Hygrorhiza aristata (Retz.) Nees ex Wt. & Arn.

Vern.: Awned-Water-rice (E); Jamglo-dha (Lo); Dolddi (Mu); Dadlo (Or).

Uses: Dried grains powder (ca. 5 g) mixed with a glass of lukewarm cow milk is given as astringent by the Lodhas. Plant decoction mixed with the leaf juice of 'Tulsi' (*Ocimum tenuiflorum*), honey and ginger (*Zingiber officinale*) paste (in 3:2:1 ratio) is given 3-4 times a day to cure prolonged fever by the Oraons. Fresh plant is given to oxen as fodder to make the oxen stronger by the Mundas. The fresh plant paste is given to the cattle as galactogauge by the Mundas.

Imperata cylindrica (L.) P. Beauv

Vern.: Cotton-grass (E); Chero-taste (Lep); Sursuria (Lo).

Uses: Fresh root stocks are chopped to small pieces and are mixed with marcha (a substance is used for the preparation of country liquor by the Lodhas. Fresh root (ca. 5 gm) made into a paste; this paste mixed with rice beer ("Pachai") is given to the children to cure enlarged spleen and liver problem by the Mundas. The rhizomes are burn to ash, applied to cure piles by the Santals. Root paste is applied for the treatment of Leprotic wounds by the Lepchas.

Ischaemum rugosum Salisb.

Vern.: Mararo (Lo/Sa).

Uses: Freshly prepared plant juice (ca. 35 ml) mixed with 'Ada' (rhizome of *Zingiber officinale*) paste (ca. 15 gm) is given to cattle to cure diarrhoea by the Lodhas.

Lolium temulentum L.

Vern.: Bisha-ghas (Lo).

Uses: Grains are often used to poison the cattle by the Lodhas.

Ochthochloa coracana Edgew.

Vern.: Marua (Toto).

Uses: The grains and rhizomatous parts are used as the raw materials for the preparation of country liquor by the Totos.

Oplismenus burmannii (Retz.) R. Beauv

Vern.: Cherua (As).

Uses: Whole plant chopped into small pieces, mixed with molasses is given to the cattle as galactogauge by the Asurs.

Oryza nivara Sharma & Shastry

Vern.: Jhara dhan (Mu, Sa).

Uses: Root paste is applied to cure gum swelling by the Mundas. Root paste is applied to reset the teeth by the Santals.

Oryza rufipogon Griff.

Vern.: Junglee rice (E); Basu dhan (Lo); Jhari dhan (Sa).

Uses: The aqueous extract of the fresh internodes is filtered. The filtrate is used as eye drop to cure irritation of the eye due to conjunctivitis infection by the Lodhas. Fresh root paste mixed with the 'Adarak' paste (rhizome of *Zingiber officinale*) is applied to cure orchitis by the Santals. Seed powder mixed with black pepper (*Piper nigrum*) paste is given as a diaphoretic agent by the Santals. Grains are edible, used as a substitute of rice.

Oryza sativa L.

Vern.: Rice (E); Dhan (B, Sa, Lo).

Uses: Fresh root paste (ca. 15 gm) mixed with long pepper (*Piper longum*) paste (ca. 5 gm) is given for the treatment of measles by the Lodhas. Grain powder (ca. 10 gm) mixed with sugar (ca. 5 gm) is given as the antidote to "Kuchila" (*Strychnos nux-vomica*) poisoning by the Santals. Water obtained by washing the rice is given with a pinch of common salt to cure dyspepsia by the Santals. Straw-ash mixed with curd is given to induce abortion of 2-3 months pregnancy by the Lodhas.

Panicum psilopodium Trin.

Vern.: Witch grass (E); Chikui (As); Bara gondula (Lo).

Uses: Aqueous decoction of fresh root (ca. 10 ml) mixed with (ca. 1 gm) table salt is given to cure stomach-ache by the Lodhas. Root paste (ca. 20 gm) mixed with a little camphor (ca. 2 gm) and "Haldi" paste (paste of *Curcuma longa* rhizome) is applied on skin eruption by the Asur tribe.

Panicum repens L.

Vern.: Torpedo-grass (E); Baran-da (Lo); Adigantia (As).

Uses: Fresh juice prepared by crushing internode portion of the plant is filtered. The filtrate is used as eye drop to cure eye irritation by the Lodhas. Fresh stolon (ca. 20gm) is made into a paste, and mixed with black pepper (*Piper nigrum*) (ca. 5 gm) seeds. The paste is taken to cure piles by the Asurs. The drug is continued for at least 15 days.

Panicum sumatrense Roth. ex Roem. & Schult.

Vern.: Little millet (E); Shyama (Lo); Burla-gurulu (As); Shayama-chaal (Po).

Uses: Fresh juice (ca. 10 ml) with a pinch of common salt is given 3-times a day for 3 days as refrigerant during suffering from smallpox by the Lodhas. Fresh root (ca. 50 gm) is made into a paste with black pepper (*Piper nigrum*) (ca. 5 gm) It is given for the treatment of scalp infection by the Asurs. Root paste (freshly prepared) warmed gently and is applied on the carbuncle to reduce pain by the Polias.

Paspalum orbiculare Forst.

Vern.: Khado-dhan (Lo).

Uses: Freshly prepared root juice mixed with long pepper (*Piper longum*) paste at a ratio of 3:2 is given for the treatment of remittent fever by the Lodhas.

Paspalum scrobiculatum L.

Vern.: Kodo millet (E); Kedu (Rab); Jane (Sa); Kodo (Lo).

Uses: Aqueous decoction of grains (ca. 15 ml) mixed with the freshly prepared root paste of 'Amolsijh' (*Hemidesmus indicus*) (ca. 8 gm) is given as a tonic to women to regain their health after childbirth by the Rabhas. Freshly prepared root decoction (ca. 10 ml) with black pepper (*Piper nigrum*) paste (ca. 5 gm) and a pinch a common salt is given twice a day before lunch and dinner as a tonic during typhoid fever by the Santals. The grains are used as a fermenting agent for preparation of country liquor.

Pennisetum typhoides (Burm. f.) Stapf. & C. E. Hubb.

Vern.: Pearl-millet (E); Gangai (Lo); Bajrai (Mu); Turn (Sa).

Uses: Freshly prepared root decoction (ca. 10 ml) mixed with 'Ada' (rhizome of *Zingiber officinale*) paste (ca. 4 gm) and 'Konjee' (stale rice water) (ca. 1 ml) is given to cure rural dropsy by the Lodhas. Root paste (ca. 5 gm) is given to children as purgative by the Lodhas. Mature roots (ca. 10 gm) are made into paste and are applied to cure body and leg swelling by the Mundas. Grain decoction (ca. 8 ml) mixed with 'Ada' (rhizome of *Zingiber officinale*) paste (ca. 5 gm) and honey (ca. 10-15 drops) is given to promote sexual desire by the Santals.

Rottboellia exaltata L.

Vern.: Itchgrass (E); Bara-swali (Lo).

Use: Root paste is applied on the boils for early suppuration by the Lodhas.

Saccharum bengalense Retz.

Vern.: Ban Kashia (Rab).

Use: The straw of the plants is used as thatching materials for construction of huts by the Rabhas.

Saccharum officinarum L.

Vern.: Sugarcane (E); Akh (Lo, Sa, Mu).

Uses: Stem juice is given as a cooling agent by the Lodhas. Stem juice mixed with a pinch of table salt and a few drops of 'nimbupani' i.e. citrus juice is given as a health drink to jaundice patient by the Mundas. Stem juice mixed with black pepper (*Piper nigrum*) paste is given for the treatment of constitutional disorders by the Santals.

Saccharum spontaneum L.

Vern.: Kansh (Lo); Puyal (Mu); Kari-ba (Sa); Kush (Po); Hoshi-fung (Ra).

Uses: Root decoction (ca. 20 ml) is filtered and the filtrate is given with a glass of lukewarm goat milk as diuretic by the Lodhas. Root paste mixed with a pinch of camphor is applied on allergic eruption by the Santals. Ash obtained by burning

the inflorescence are applied on the septic wounds of the cattle after mixing with adequate amount of mustard oil for early cure by the Polias. Root decoction is given to cure skin irritation due to consumption of excessive country liquor ('Handia' / 'Pachai') by the Mundas. Stem is used for rough thatching work by most of the tribal communities of the state. Stem is used against pox by the Rabha tribes.

Sacciolepis interrupta (Willd.) Stapf.

Vern.: Cupscale grass (E); Nardual (Lo).

Use: Plant decoction with common salt is given for the treatment of stone in gall-bladder by the Lodhas.

Setaria glauca (L.) P. Beauv

Vern.: Pegion-grass (E); Khukura (Lo/Mu); Khakurus (Po).

Uses: Boiled grains are given as diet instead of rice to the patient suffering from fever by the Lodhas. The grains are used for the preparation of low grade country liquor by the Polias. Whole plant is used as a fodder by the Mundas.

Setaria italica (L.) P. Beauv

Vern.: Italian millet (E); Kungu-Koro (Lo); Khukura (Sa); Kora-Okra (Or).

Uses: Freshly prepared root decoction (ca. 10 ml) mixed with a pinch of table salt (ca. 2 gm) is given at early morning in empty stomach to cure dyspepsia by the Lodhas. Tender stem is given as fodder to increase lactation of the cattle by the Santals. Fresh root paste (ca. 5 gm) mixed with the root paste of 'Gandhar' (*Paederia scandens*) and 'Sital' (*Sida cordata*) (ca. 3 gm and 2 gm each respectively) is given twice a day to cure blood dysentery by the Oraons.

Setaria pumila (Poir.) Roem & Schult.

Vern.: Gugli-Kungui (Lo).

Uses: Freshly prepared root paste is warmed gently and applied for reducing the rheumatic pain by the Lodhas. Grains are boiled and pounded to paste after mixing with black pepper (*Piper nigrum*) seeds at a ratio of 3:2 and applied on the bull's neck sores by the Lodhas.

Setaria verticillata (L.) P. Beauv.

Vern.: Rough, bristle grass (E); Dora-byara (Lo); Solanja (Mu, Sa).

Uses: Root paste is applied on the septic wounds of the cattle for early cure by the Santals. The mat prepared from the inflorescence portion (without grains) are used as flooring mat in the granary. It is said that this carpet functioned as a rodent repellent by the Santals, Lodhas and Mundas.

Sorghum halepense (L.) Pers.

Vern.: Jhonson-grass (E); Kala-mucha (Lo); Dig-dana (Ra); Digu-ghas (B).

Uses: Root juice (ca. 15 ml) mixed with long pepper (*Piper longum*) paste (ca. 5 gm) is given for the treatment of gonorrhoea by the Lodhas. Root juice mixed with a pinch of table salt is given as a tonic in fever by the Santals. Grains are boiled and given to the patient to cure dysentery by the Rabhas. Most of the tribes of the state mix the root juice with 'Pachai' (Rice beer) to increase its potency.

Sporobolus diander (Retz.) P. Beauv

Vern.: Khui-ghash (Sa).

Uses: Stem is chopped into small pieces and is given to the cattle as a fodder to promote lactation by the Santals. Most of the tribal communities of the state use the plant for broom making.

Thysanolaena maxima (Roxb.) O. Kuntze

Vern.: Tiger-grass (E); Bhuisnis (Sa); Gare-jonor (Mu); Phuljeharu (Lo); Sheng-dar (Lep).

Uses: Fresh flower (ca. 5 gm) made into paste with 'Pachai' (rice beer, ca. 10 ml), long pepper (*Piper longum*) seeds (ca. 2 gm), and honey 10-20 drops. The paste so obtained is given to women at early morning in empty stomach for 3-successive days just after the completion of one menstrual cycle as oral contraceptive by the Mundas. Root decoction with common salt is used as mouth freshener and to cure mouth sores by the Lodhas. Twigs with 3-leaves are kept on the main entrance of the house by the Lepchas to keep the evil spirits away from their houses. Freshly prepared aqueous decoction of the grains is used as a mouth wash to expel the tooth worms by the Santals.

Triticum aestivum L.

Vern.: Wheat (E); Genhu (Lo, Sa, Or, Mu).

Uses: Root decoction (ca. 10 ml) mixed with long pepper (*Piper longum*) paste (ca. 5 gm) is given to cure dysuria by the Lodhas. Root (ca. 20 gm) is made into paste with long pepper (ca. 10 gm). This paste is applied as a balm to cure skin diseases (ring worm) by the

Oraons. Wheat bran mixed with a few drops of country liquor is given to the girls, at puberty to cure dysmenorrhoea by the Santals. Wheat flour with common salt at a ratio of 5:2 is given as an antidote to food poison by the Mundas. Most of the tribal communities of the state use the chopped stem and leaves as a fodder. It is said that it helps lactation of the cattle.

Vetiveria zizanioides (L.) Nash.

Vern.: Khas-khas (E); Benaba (Lo); Sirom (Or); Siromu (Mu); Bina-Khar (Po).

Uses: Freshly prepared aqueous decoction of the root (ca. 15 ml) is given twice a day before lunch and dinner to cure dyspepsia by the Lodhas. Fresh roots (ca. 10 gm) made into paste, and that is applied on the forehead to cure head-ache by the Mundas. Root ash with a glass of lukewarm water is given to cure acidity by the Mundas. Fresh stem collected from the young plants which are yet to bloom is kept in a glass of water for overnight. This aqueous decoction is given (ca. 20 ml) each time in regular intervals of 3 hours to cure the urinary problems by the Oraons. Fresh root (ca. 25 gm) made into paste with seeds of black pepper (*Piper nigrum*) (ca. 10 gm) is given with a glass of water or milk to retain vitality and overcome the weakness due to excessive sweating by the Polias. Root paste (ca. 10 gm) with honey is given to check vomiting of children by the Mundas. Fresh root decoction is used as a mouth freshener by the Polias. Root paste is given to the children at bed time to stop the habit of passing urine in bed at night by the Polias.

Zea mays L.

Vern.: Com (E); Jonra (Sa).

Uses: Fresh extract of the root is used as a nasal drop to cure epilepsy by the Lodhas. The paste of the male flower with honey is applied to cure skin eruption like warts by the Santals. Root extract is taken with country liquor to increase sexual potentiality by the Polias. Root extract with a little camphor is applied on the mouth sores caused by eating unripe mango by the Mundas.

Conclusion

The family Gramineae/ Poaceae (grasses), so large, occupied third position in *The Flora of British India* (Hooker, 1872-1897) and second position in *Bengal Plants* (Prain, 1903). The traditional knowledge regarding these plants and their uses has to be assessed and put to use in modern medicine by detailed pharmacological studies. The ethno-medicinal research has led to the development of many commercial plant drugs necessary for the welfare of mankind.

Acknowledgement

We are thankful to the Director, Botanical Survey of India for allowing us consult its library in CAL.

References

- Aditya N.R. and Ghosh R.B. 1988. Useful angiosperms of Coochbehar district, West Bengal, *J. Econ. Tax. Bot.*, 12(2): 273-284.
- Basu R.S. and Mukherjee P.K. 1997. Ethnobotany of the oil extraction process by the Santhals of Banduan in Purulia. *Ethnobotany*, 9 (2): 132-134.
- Bharadwaj S. and Gakhar S.K. 2005. Ethnomedicinal plants used by the tribals of Mizoram to cure cut and wounds. *Indian journal of Tribal Knowledge*, 4(1): 75-80.
- Binu S. 2009. Medicinal plants used for treating diarrhoea and dysentery by the tribals in Pathanamithilla district, Kerala, India. *J. Non-Timber Forest Products*, 16(2): 131-134.
- Chakraborty M.K. and Bhattacharjee A. 2006. Some common ethnobotanical uses for various diseases in Purulia district, West Bengal. *Indian Journal of Traditional Knowledge*, 5 (4): 554-558.
- Dutta Choudhury M., Bawari M. and Singha S. 2010. Some antipyretic ethno-medicinal plants of Manipuri community of Barak Valley, Assam, India. *Ethnobotanical Leaflets* 14: 21-28.
- Ghosh S. and Sen Sarma P. 1997. Ethnomedicine to modern medicine: An observational study in some villages of West Bengal. *Ethnobotany*, 9(1): 80-84.
- Hooker J.D. 1872-1897. *The Flora of British India*. L. Reeve & Co., London.
- Jain S.K. 1995. Ethnobotany – Its scope and various sub disciplines *A Manual of Ethnobotany*, 2nd ed: 1-8, Scientific Publishers, Jodhpur.
- Jain S.K. 1997. *Contributions to Indian Ethnobotany*. 3rd ed, Scientific Publishers, Jodhpur.
- Mallick S.K., Banerjee P. and Saha A. 2012. Medicinal plants used by the tribals of Ratanpur village of Bankura, West Bengal. *International Journal of Life Sciences*, 1(3): 82-86.
- Mallick H. and Mallick S.K. 2012. Medicinal Plants Used By the tribals of Nutangram Village District- Bankura, West Bengal. *International Journal of Basic and Applied Sciences*, 1(2): 131-133.
- Mitra S. and Mukherjee S.K. 2005. Ethnobotanical usages of grasses by the tribals of West Dinajpur district, West Bengal. *Indian Journal of Traditional Knowledge*, 4(4): 396-402.
- Molla H.A. and Roy B. 1985. Traditional uses of some medicinal plants by the Rabha tribes in Jalpaiguri district, West Bengal. *J. Econ. Tax. Bot.*, 7(3): 578-580.
- Molla H.A. and Roy B. 1996. Some ethnobotanical claims from the Jalpaiguri district of West Bengal. *J. Econ. Tax. Bot.*, 12: 322-324.

- Pal D.C. and Mudgal U. 1986. Conservational practices of tribals of Purulia and their relevance in Eco. Development Programmes. *School of Fundamental Research*, 39-42.
- Pal D.C. and Jain S.K. 1989. Notes on Lodha medicine in Medinipur district, West Bengal, India. *Econ. Bot.*, 13(3): 695-698.
- Pal D.C. and Jain S.K. 1999. *Tribal Medicine*. Naya Prakash, Calcutta.
- Prain D. 1903. *Bengal Plants*. Vol. 2. Calcutta.
- Rai Chaudhuri H.N., Molla H.A. and Pal D.C. 1982a. Plants used in traditional medicine by some tribals of Jalpaiguri district, West Bengal. *Bull. Bot. Surv. India.*, 24(4): 87-90.
- Rai Chaudhuri H.N., Saren A.M. and Molla H.A. 1982b. Some less known uses of plants from tribal areas of Bankura district. West Bengal, India. *Indian Museum Bulletin* 14 (2): 71-73.
- Rai Chaudhuri H.N. and Pal D.C. 1975. Notes on magico-religious belief about plants among the Lodhas of Midnapore. *West Bengal Vanyajati*, 13: 210-222.
- Rai Chaudhuri H.N. and Pal D.C. 1978. Less known uses of some grasses of India. *Bull. Bot. Soc. Bengal*, 32: 48-53.
- Rai Chaudhuri H.N. and Tribedi G.N. 1976. On the occurrence of some medicinal plants in 24 Parganas, West Bengal. *Bull. Bot. Surv. India*, 18 (4): 161-1165.
- Sur P.R., Saren A.M. and Haider A.C. 2008. Medicinal uses of some terrestrial exotic weeds. *J. Econ. Taxon. Bot.*, 32: 133-136.