

ETHNOBOTANY OF SOUTH CHOTANAGPUR (BIHAR)

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ABSTRACT

Ethnobotanical studies made among the tribals of Ranchi, Gumla, Lohardaga, Palamau districts of Bihar are presented. The paper provides uses of 146 plants for medicines, veterinary medicines, food, fodder, household, house building materials, various social and religious ceremonies. A comparison with the literature reveals that 42 uses of various plants reported in the present paper are new. Besides nine plant species reported to be used by the tribals of Chotanagpur for various purposes have not been mentioned in the earlier literature.

INTRODUCTION

The districts of Ranchi, Gumla, Lohardaga and Palamau of south Chotanagpur division of Bihar is situated between 22°-24° N latitude and 84°-86° E longitude, guarded by West Bengal on east, Madhya Pradesh on west and Orissa on the south. The district of Hazaribagh, Giridih and Dhanbad of north Chotanagpur division is distinct from south Chotanagpur by its soil, climate and vegetation. The districts of south Chotanagpur division have more forest area along with denser tribal population. The scope of ethnobotanical studies is, therefore, high in these districts of south Chotanagpur division of Bihar.

The hilly tracts of south Chotanagpur division lies in an altitude up to 1200 m. Geologically the districts of this division consists of metamorphic and submetamorphic gneiss rock. Pegmatite rock of crystalline granite are available with felspar and quartz. The weathering of gneiss derives sandstones, loamy and red soil. The soil is laterite, usually deficient in lime, nitrogen and organic matter (Meher-Homji-1971). The climate is dry from February to June, a hot wet season from July to September and cold from October to January. The temperature varies with altitude and rainfall. High altitude temperature in cold season lowers upto 2°C. On hot seasons the temperature reaches 40°-42° C. The rainfall is heavy from July to December. The forest is monsoon type of tropical zone, deciduous in dry seasons covering about

50% of the area. The general pattern of flora varies at different altitudes. The agricultural lands lies between the forest enclosure.

The forest of this region is tropical & moist deciduous type. Common trees in the forest are, *Shorea robusta*, *Madhuca longifolia*, *Dalbergia sisoo*, *Butea monosperma*, *Schleichera triguja*, *Terminalia chebula*, *Semecarpus anacardium*, *Syzgium cumini*, *Buchanania latifolia*, *Diospyros exsculpta*, *Adina cordifolia*, *Boswellia serrata*; *Cleistanthus collinus*, *Lagerströmia parviflora*, *Acacia catechu* etc. Common small trees, creepers and herbs available are *Embliza officinalis*, *Bauhinia vahlii*, *Holarhenna antidysenterica*, *Hemidesmus indicus*, *Euphorbia hirta*, *Flemingia chappar*, *Grewia hirsuta*, *Elephantopus scaber*, *Smilax macrophylla*, *Asparagus racemosus*, *Andrographis paniculata*, *Agave vera-cruz*, *Calotropis gigantea*, *Thespesia lampas*, *Atylosia scarabaeoides*, *Curculigo orchoides*, *Xeromphis spinosa*, *Ichnocarpus frutescens*, *Lantana camara*, *Woodfordia fruticosa*, *Carissa carandas* etc.

According to the Bihar Tribal Welfare Research Institute, Ranchi the total Scheduled Caste and Scheduled Tribe population in 1991 was 66,16,914. However, approximately 30 lacs of tribals (Census 1971) inhabit the Chotanagpur region. The major tribes of south Chotanagpur division are Oraons, Mundas, Kharias, Bhumijis, Loharas, Kisans, Asurs, Birjias and Mahlis. Other minor tribes are Birhor, Banjara and Gonds. The Mundas in Ranchi district, Oraons in Gumla district and

Asurs in Netarhat region of Palamau district are highly populated.

Ethnically the tribals of Chotanagpur are Protoaustraloid (Prasad- 1961). They are either of Dravidian or Kolarian origin and therefore language and dialect differ much. "Sadni" language is spoken by most of the tribals. Oraons speak "Sadni" mixed with "Kurukh" language. Mundas, Bhumijis and Birhors speak "Mundari" and Asurs speak "Asuri". "Sadni" language is mixed with either Hindi or Bengali and usually spoken by Birjias and Banjaras.

The tribals and other rural people of south Chotanagpur are very much close to forest and natural vegetation both in their habitat and livelihood. The plant and plant materials available from the nearby forest are used as food, fodder, fibre, medicine, veterinary medicine, timbers, households, drinks, beverages, oilseeds and also for socio-religious and magical purposes.

SOCIAL ORGANISATION

The tribals of Chotanagpur have their own principle and choice for a village site, house, family, dress and ornaments, weddings, childbirth, death ceremonies, cultural functions, festivals, socio-religious belief as well as village administrations. A village comprises of two or more "Tolas" and each "Tola" contains two to ten houses. A house consists of two rooms and a small door, without window. The inside of the room remains dark even during the day time. In the corner of the bed room they worship some wooden idol as the family god. The other room is used for storing the fodder, fuel or grain. The "varandah" is fenced with wood and leaves of *Shorea robusta*.

The tribal ladies are more dynamic and laborious in comparison to the gents. Regarding dress, the women prefer the coloured sarees. Small boys and girls are either naked or wear loin-cloth. On special occasions, they are however well dressed. The tribal women of all ages are much fond of the ornaments like hairpins, ear & nose rings, necklace, armlets, finger & toe rings. The

young girls and middle aged women decorate their hair with various flowers, particularly on occasion of wedding and cultural festivals. The marriage within the subcaste (clan) is not allowed. In the society the marriage with the wife of the deceased elder brother and wife's younger sister is possible. The marriage takes place in the months of December to March. The marriage proposal always comes from boy's side who offers "bride price" (some money and materials) to the bride's father before the marriage. The marriage takes place in the girl's village. The boy and girl sit on a common mat prepared of *Cyperus compressus*. The twig of *Lagerstroemia parviflora* is used by elders to wish the happy married life. Some men may marry twice or thrice. Divorce to the lady is granted on the grounds of impotency or neglect of household duties and if she is declared as a witch. The new birth of a child in the family is enjoyed with dance and song. The dead bodies are either burnt or buried. On the tenth day the bereaved family offer the alcoholic drink of *Madhuca longifolia* to the neighbours and then are accepted by the society. Before this, the house is cleaned by cow dung and all members have to take bath. The neighbours and the family celebrate with dance and music.

The dance and music programmes are held on some ceremonies (wedding, new birth & death ceremonies) or religious occasions. The common musical instruments are "Bansi", "Bami", "Bamli", "Murlu" (the bamboo flutes); "Dhol", "Dholka", "Khailu", "Madal", "Mander", "Nagera" (the drums made of *shorea robusta* wood and "Banam" or "Kendra" (the violin, made of *Gmelina arborea* wood). The traditional festivals such as "Karam Parab", "Sarhul Parab", "Aouba Parab", "Sheo-Chaturdasi", "Dashera", "Dipawali", "Nawakhani", "Phagu Parab", "Sohrai Parab" etc., are observed. Some of these festivals are connected with *Adina cordifolia* tree, *Shorea robusta* flowers, *Vitex negundo* flowers, *Lagerstroemia parviflora* twigs and many other plants. The participants of the festivals get together at "Akhra" (a specified area of the village) and

drink the alcohol of *Madhuca longifolia*. Sometimes they take country liquor ("Handia") prepared from fermented rice. The tribals have good religious faith on deities, gods and goddesses. They do not destroy the plants from the areas where their goddesses are believed to live.

PREVIOUS WORK

Dalton (1872), Risley (1891), Roy (1912, 1913-1925), Russel and Hiralal (1916), Gates (1962) and Prasad (1961) have studied the social political economical cultural and religious aspects of tribals of Chotanagpur. Haines (1910, 1921-25), Mooney (1950) and Bressers (1951) mentioned the uses of some of the plants in their respective floras. Bodding's (1925-1927) work on Santal medicine and connected folklores is the significant contribution of this region. Jain and Tarafder (1970) published a brief account of Bodding's work. Gupta (1962, 1963-1964, 1974, 1981) reported the nutrition habit of major tribals of Chotanagpur specifically of Asur, Korwa, Sauria, Pahariya and medicinal plants used by Asurs of Netarhat. Lal (1950, 1952) contributed to dietary habits of Chero, Dusadh and Hos. Tarafder (1984, 1984a, 1986, 1987) contributed on the ethnobotanical studies in Chotanagpur specifically in Ranchi and Hazaribagh districts. Tribedi *et al.* (1985) reported some uses of plants by the tribals. Hembrom (1991) has also studied and reported on the tribal medicine of this region. In spite of above reports many areas of this region as well as tribals viz. Oraons, Mundas, Asurs, Bhumij, Birjias, Gonds, Birhors, Banjaras were required to be further studied ethnobotanically.

PRESENT WORK & METHODOLOGY

The intensive field studies were undertaken at Madhatu, Kurpu, Chalkad, Barudi, Londuruli and Muchia villages under Arki block of Ranchi district; Adar, Jillingsira and Biropani villages under Ghaghra block and Jamti, Nirashi, Kumari and Harup villages under Bishnupur block of

Gumla district; Morwai and Netarhat under Mahuadad block of Palamau district.

Plants used by the local tribals were collected under 268 field numbers. During field studies, reliable informants were approached and taken to the field. Enquiries were made on the plants used for food, households, medicinal and other economical purposes. Voucher specimens as well as the sample of the particular part of the plant were collected and vernacular names of the plants were recorded. All the specimens are housed in the herbarium of Pharmacognosy Unit (CAL). The specimens were collected by the first author (AKS).

Information on mode of collection, processing, formulations, after effect of drugs, period of administrations etc., were enquired in detail while collecting the information on plants used for medicinal purposes. The processing of wild edible plants was personally observed as far as possible. The extraction methods of fibres from the stem bark and further processing for cordage preparation were studied. Processing for the extraction of oil from seeds was also observed. Methods of alcohol-extraction, beverage preparation were noted. Use of timbers and wood for house building, households, agricultural implements, musical instruments, fish traps, bird trap etc., were recorded.

Some useful discussions were held with a group of medicine-men ("Jangurus", "Ojhas" & "Baidas"), headman ("Mukhia") of the panchayat and other reliable informants to confirm the information recorded in the field from various informants and also to have some data on social life of the tribal people of that area. These discussions as well as enquiries with informants were taped and preserved in the possession of the Pharmacognosy Unit.

ENUMERATION

The plant names are arranged alphabetically along with family followed by vernacular names in either "Mundari" (M) or "Sadni" (S), place of

collection with field numbers and the name of the informant with his age. The causes of plants are common among different tribals inhabiting the same locality.

The amounts of plant material mentioned in the text are approximate assumptions based on the expressions of the informants.

The plants and their uses marked with asterisk have not been mentioned in Wealth of India (Anonymous 1948-72); Bodding (1925, 1927) Chopra *et al.* (1956, 1969); Kirtikar & Basu (1935) and Jain (1991). For easy scanning an usewise index is provided in the Appendix.

Abrus precatorius L. (Fabaceae)

Gunj-S ; Nirashi-561 ; Bulung Oraon (70).

The paste of the leaf is massaged twice a day for reducing the swelling of shoulder of bullocks.

Acacia catechu (L.f.) Willd. (Mimosaceae)

Khair-S ; Jamti-524 ; Bulung Oraon (70).

The wood is a very good timber. It is used for making the window, door, tools etc.

Achyranthes aspera L. (Amaranthaceae)

Chirchiti-S, Sitirked-M ; Duria-559, Madhatu-444 ; Mandru Munda (30) , Bulung Oraon (70).

* The paste of the root mixed with 10 black peppers is massaged on the chest to reduce pain.

The aqueous extract of roots acts as emetic. About 20 ml of the extract is advised on each occasion.

The whole plant is worshipped with a religious faith for the self protection. It is said that by doing so the rivals of the worshipper fails to defend themselves even in the court.

It is believed that the root by keeping on the head reduces the labour pain. The root is removed from the head after the delivery.

Aerva lanata (L.) Juss. ex. Schult. (Amaranthaceae)

Lupuora-M ; Kurpu-447 ; G. Lohar (50).

A bread of rice flour and the powder of whole plant is given to the children suffering from dysentery.

***A. sanguinolenta** (L.) Bl. syn. **A. scandens** (Roxb.) Moq. (Amaranthaceae)

Chordhuman-S; Nirashi-556; Bulung Oraon (70).

The Juice collected on grinding of the fresh plant along with 10 black pepper is used as diuretic. The drug is given once a day in the morning for a week.

Agave vera-cruz Miller. (Agavaceae)

Konga-M; *Mereba-S* ; Madhatu-411 ; Mandru Munda (30).

The fibre is extracted after softening the whole plant in water. It is a good raw material for making ropes.

Ageratum conyzoides L. (Asteraceae)

Gandhri-S, Puru-M ; Morwai-627, Madhatu-431 ; Jatia Nagasia (60) , G. Lohar (50).

The juice obtained by squeezing the young leaves and inflorescences are mixed with "Karanj" (*Pongamia pinnata*) or coconut oil and applied on the wounds, twice a day. It is said to cure even deep wounds within a week.

*The paste of the leaf along with the leaf of "Chakunda" (*Cassia sophora*) is applied on the cuts caused by the snake bite. It is believed that the medicine is effective only during day time and not in the evening.

Andrographis paniculata (Burm.f.) Wall. ex Nees (Acanthaceae)

Kalmegh-M, Chireita-S ; Arki-407, Chalkad-452 ; C. Balmuchu (45) , Mandru Munda (30).

The decoction of the whole plant is used in the treatment of fever and malaria. The decoction of 50 ml is taken twice a day in the morning and evening. It is said that patients get cured within two days. The use of the decoction is also advisable for headache and skin irritations.

Anisomeles indica (L.) Kuntze (Lamiaceae)

Bansara-M ; Dahudara-612 ; Etwa Oraon (60).

The leaf is eaten by goats and cattles.

Antidesma acidum Retz, syn. **A. diandrum** (Roxb.) Roth (Euphorbiaceae)

Matada-M ; Chalkad-451 ; Mandru Munda (30).

The leaf is used in curry preparation. The ripe fruit is edible.

* The juice of the fresh leaves (50 ml) is given to goats, twice a day for checking dysentery.

Argemone mexicana L. (Papaveraceae)

Bakula-M, *Rangeni kata*-S ; Jillingsira-497 ; Prem Oran (40).

The young leaves are boiled and eaten.

Equal quantities of dry seeds and dry seeds of "Dhatura" (*Datura metel*) are fried in mustard oil. It is smoked as "bidi" (a kind of cigarette) to cure caries tooth. The bidi is smoked 10-12 times for about a week or more if required.

Argyreia nervosa (Burm.f.) Boj. syn. **A. speciosa** (L.f.) Sweet (Convolvulaceae)

Jamruchalam-M, *Chherisim*-S ; Manaburu- 485, Kumbhikhad-641 ;

G. Lohar (50) , Kahro Nagasia (60).

* A solution prepared from the powder of the dry seeds along with "Karanj" oil is used as ear drops for reducing ear-ache.

* A paste of the root along with the fruits of "Ghanto" (*Schrebera swietenoides*) is applied and massaged on the swelling of "Andokos" (scrotum).

Arundinella bengalensis (Spreng.) Druce syn. **A. wallichii** Nees ex Steud. (Poaceae)

Burujono-M ; Manaburu-488 ; G. Lohar (50).

The whole plant is used for making of brooms.

Asparagus racemosus Willd. (Asparagaceae)

Atkir-M, *Satmul*-S ; Marara-427 ; Gopal Munda (40).

The aqueous extract of the roots (100 ml) is taken orally, twice a day for 2-3 days to recover from weakness due to prolonged illness.

Atylosia scarabaeoides (L.) Benth. (Fabaceae)

Ban kurthi-S ; Kumbhikhad-634 Nirashi-529 ; Kahro Nagasia (60), Bulung Oraon (70).

The juice collected after grinding the whole plant is massaged externally on the whole body. The massage provide comfort to a person feeling pain and weakness after the attack of evil spirit.

Barleria cristata L. (Acanthaceae)

Bantishi-S ; Salami mahua-649 ; Kahro Nagasia (60).

*The root (20 g) is crushed and mixed with 100ml of "Phulmahua" (alcohol from *Madhuca longifolia*) and taken, once a day for one week orally for abortion.

Bauhinia purpurea L. (Caesalpiniaceae)

Singda-M, *Koinar*-S ; Chalkad-454, Malgo-495 ; Mandru Munda (30), Prem Oraon (40).

The young leaves & inflorescences are used in curry preparations.

B. vahlii Wight & Arn. (Caesalpiniaceae)

Gungu Sakam-M, *Mahulan*-S ; Barudigada-464, Biropani-510, Suarchatain-657 ; Mandru Munda (30), Sukra Asur (75), Ghotlu Nagasia (80).

The roasted seeds are eaten. The seeds are also used in making curry.

Ropes are prepared from the bark. The leaves are used to prepare the "Gungu" (rain coat for ladies) and "Chupi" (the rain cap).

*The aqueous extract of the fresh roots and the roots of "Guma" (*Leucas mollissima*) is given for treatment of snake bite.

Biophytum sensitivum (L.) DC. (Oxalidaceae)

Japidsing-M ; Barudigada-461 ; Gopal Munda (40).

The root is given with the food to cool the mad dog.

***Blumeopsis flava** (DC.) Gagnep. syn. **Laggera flava** (DC.) Benth. ex Clarke (Asteraceae)

Mageba-M, *Bansorso*-S ; Manaburu-497, Kumari-593, Jamti-582, Biropani-503 ; Lukin Munda (35), Lala Mahto (70), Birsa Bhagat (70) Sukra Asur (75).

The aqueous extract of the roots is given for checking constipation and wind formation. Even a single dose (about 20 ml) is said to be sufficient for cure.

The plant is chewed to get relief from toothaches due to caries tooth.

The juice of the young leaves is used as nasal drops in headache. The girls decorate their hairs with the flowers during cultural ceremonies.

Boswellia serrata Roxb. ex Colebr.
(Burseraceae)

Salga-M, *Salia-S* ; Nirashi-549, Judi Buru-470; Mandru Munda (30), Bulung Oraon (70).

The powder of the dry bark is sprinkled externally on the wounds, 2-3 times a day. The application of the drug speedily cures the wounds. A mixtrure prepared with the aqueous extract of stem bark and the root of "Maunapitri" (*Cyperus compressus*) in equal quantity along with 10 black pepper is given thrice a day for 3 days in snake bite.

The wood is used for making the door, window, cots and tools.

Butea monosperma (Lam.) Kuntze, syn. **B. frondosa** Koenig. ex Roxb. (Fabaceae)

Bendo-S , *Parsa-S* ; Arki-403 Jamti-585 Dungipani-577 ; C. Balmuchu (45) Birsa Bhagat (70) , Lala Mahto (70).

The dry seeds are crushed in "Kulhu" (oil crusher) for extracting the edible oils.

The "Laha" (lac) collected from the twigs of the tree is sold in the market.

Calotropis gigantea (L.) Dryand
(Asclepiadaceae)

Palati-M, *Akanta-S* ; Manaburu-477 ; Gopal Munda (40).

The paste of the root is applied for reducing swelling caused by scorpion sting in cattles.

Canscora diffusa (Vahl) R.Br. ex R. & S.
(Gentianaceae)

Chiunraphul-S ; Kumbhikhad-643 ; Kahro Nagasia (60).

The aqueous extract (20 ml) of the plant is given in malaria, twice a day for 2 days.

Careya arborea Roxb. (Lecythidaceae)

Kumbhi-S ; Peruapat-609 ; Etwa Oraon (60).

The paste of the bark is massaged to reduce muscle strains and pains.

Carissa carandas L. (Apocynaceae)

Kanwad-S ; Malgo-496, Jamti-521 ; Prem Oraon (40), Bulung Oraon (70).

The berries are edible. These are sweet in taste when ripe.

The root paste is massaged to reduce muscle strains, twice a day, for 2 days.

The powder of the dry root is used in preparing "Biro" (a tablet). The "Biro" is used as catalyst for fermentation of boiled rice in making a local drink called "Handia".

Cassia fistula L. (Caesalpiniaceae)

Harri-M ; Madhatu-412 ; G. Lohar (50).

The decoction of the young leaves is taken for treatment of stomach-aches.

The paste of fruit along with the oil of "Mahua" (*Madhuca longifolia*) is given to buffalows for checking dysentery.

***C. hirsuta** L. (Caesalpiniaceae)

Chakunda-M ; Madhatu-443 ; Mandru Munda (30).

The juice obtained from young leaves and seeds cause vomiting. It is usually used in snake bite.

C. occidentalis L. (Caesalpiniaceae)

Barkachakur-S ; Nirashi-560 ; Bulung Oraon (70).

The young leaves are fried and taken with meals.

The root is tied with a thread and used as necklace for checking fever among children. It is also given to children for checking fever.

Celastrus paniculatus Willd. (Celastraceae)

Munjni-S ; Nirashi-534 ; Bulung Oraon (70).

The oil extracted from the dry seeds is massaged on the body for the treatment of the skin diseases like eczema, scabies and skin irritations. The application of the drug is continued till complete cure.

Centella asiatica (L.) Urb. syn. **Hydrocotyle asiatica** L. (Apiaceae).

Chokiada-M, Bengsak-S; Golap jharia-664 Madhatu-417; Ghotlu Nagasia (80), Gopal Munda (40).

The leaf is fried and taken with meals. Its taste is good.

The paste of the leaves is advised to be taken with food for women after the delivery. The medicinal use of this plant is not known in this area.

Centratherum anthelminticum (L.) Kuntze syn. **Vernonia anthelmentica** (L.) Willd. (Asteraceae)

Samraj-M; Kurputola-448; G. Lohar (50).

* The aqueous extract of roots is given to reduce the temperature in case of high fever. It is also advised thrice a day for 2 days to cure fever and headache.

Cissampelos pareira L. (Menispermaceae)

Parhi-S; Maliapat-605, Nirashi-546, Biropani-509; Somra Bhagat (55), Bulung Oraon (70), Sukra Asur (75).

The roots (10g) are crushed in 30 ml of water and filtered. The extract (30 ml) is taken in fever, once a day in the morning for two days.

The aqueous extract of root (50 ml) is taken as drink for belly-aches, twice a day.

The aqueous extract of root (100 ml) is given in snake bite, thrice a day. This use was reported by "Asur" tribe. Further inquiry revealed that other tribes are also aware of this use.

Cleistanthus collinus Benth. (Euphorbiaceae)

Dauntha-S, Heshel-M; Nirashi-545, Kumari-599, Marara-423; Bulung Oraon (70), Lala Mahto (70), Gopal Munda (40).

The dry bark and dry rhizome of "Nilkanth" (*Polygala crotalarioides*) is powdered along with 10 black pepper. It is consumed in the manner of raw tobacco in cough and cold. About 2 g powder is taken 4 times a day for two days.

* The decoction (50 ml) of the bark is taken once a day in the evening for the treatment of hydrocele. The drug may be continued for longer period.

The latex is used as adhesive.

The wood is used for household and agricultural materials such as "Dhenki" (the rice husker) "Har" (the plough) "Juat" (the yoke) & digging stick.

Clerodendrum indicum (L.) Kuntze. syn. **C. siphonanthus** R. Br. (Verbenaceae)

Chotkabhanwarmuli-S; Podajharia-602, Karathpani-631; Bulung Oraon (70), Jatia Nagasia (60).

The powder (5 g) of the dry root along with 20 black pepper is taken in the morning once a day for 21 days for treatment of venereal diseases both in males & females. The drug is continued even longer for complete cure. The paste of the root is massaged twice a day, for three days on the whole body for reducing swelling.

C. serratum (L.) Moon (Verbenaceae)

Bhanwarmuli-S; Kumari-571; Bulung Oraon (70).

The aqueous extract (20 ml) of the root along with 10 black pepper is taken in fever, once a day for 3 days.

C. viscosum Vent., syn. **C. infortunatum** auct. non L. (Verbenaceae)

Chamgar-M; Madhatu-430; Birsa Munda (50).

The paste of the root is massaged externally for reducing the body-aches and swellings.

Colocasia esculenta (L.) Schott., syn. **C. antiquorum** Schott. (Araceae)

Badasak-S; Golapjharia-663 Ghotlu Nagasia (80).

The young leaves are fried and eaten.

Crinum asiaticum L. (Amaryllidaceae)

Tainchara-M ; Londuruli-473 ; Gopal Munda (40).

The leaf juice is used as nasal drops to check the bleeding in summer.

Crotalaria bialata Schr., syn. **C. alata** Buch.
Ham.ex D.Don (Fabaceae)

Jhunjhunka-S ; Chalkadsiman-646 ; Kahro Nagasia (60).

*The aqueous extract of the root (50 ml) is mixed with an equal amount of "Phulidaru" (alcohol from *Madhuca longifolia*) and given once a day for 2 days for checking weakness.

C. spectabilis Roth syn. **C. sericea** Retz.
(Fabaceae)

Jhunka-S ; Kumbhikhad-635 ; Kahro Nagasia (60).

*The paste of the whole plant along with that of "Mandurchundi" (*Elephantopus scaber*) is massaged for 3 days during morning and evening to reduce muscular strains.

Croton roxburghii Balakr., syn. **C. oblongifolius** Roxb. (Euphorbiaceae)

Miridi-M, *Putri*-S ; Madhatu-415, Mudumati-651, Biropani-516 ; Mandru Munda (30), Ghotlu Nagasia (80), Sukra Asur (75).

The aqueous extract of the bark (20ml) is given as drink in the morning to keep stomach clear and to check wind formation and uneasy feeling. It is also used to clear the urine.

Curculigo orchioides Gaertn. (Amaryllidaceae)

Kitamuli-M, *Masvaru*-S ; Judiburu-469, Jamti-576 ; Mandru Munda (30), Birsa Bhagat (70).

*The paste of the root is applied externally on the abscess to bring out the pus and blood. The paste is also applied on the burns, boils and blisters to relieve the pain immediately.

The root is used as a drug for energetic body.

Cymbopogon martinii (Roxb.) Watson
(Poaceae)

Khami-S ; Nirashi-565 ; Bulung Oraon (70).

The plant is used for thatching the roof.

Cynodon dactylon (L.) Pers. (Poaceae)

Dubilata-M ; Barudigada-456 ; Mandru Munda (30).

The paste of the whole plant along with the root paste of "Sunam Sanga" (*Cyperus rotundus*) is applied externally on eyelids for reducing the swelling and redness of eyes and to relieve the pain. The application of the drug is made 4 times a day for 3 days.

Cyperus compressus L. (Cyperaceae)

Maunapitri-S ; Nirashi-553 ; Bulung Oraon (70).

The bride and bridegroom sit during their marriage ceremony on the mats prepared from this plant.

C. pangorei Rottb. syn. **C. tegetum** Roxb.
(Cyperaceae)

Pitri-S ; Kumari-598 ; Lala Mahto (70).

The tuber of the plant collected from the running water habitat is used as necklace to cure the fever of children of about one month old.

C. rotundus L. (Cyperaceae)

Mutha-S ; Kumari-596, Kumbhikhad-644 ; Lala Mahato (70), Kahro Nagasia (60).

The plant is used to cure chronic sores on scalp of children. The tuber is dipped in the warm cow ghee and touched on sores of the children on head. It is also believed that the necklace made out of the tubers cures scalp sores of children.

Datura fastuosa L. syn. **D. metel** L.
(Solanaceae)

Tuntura-M ; Kurputola-446 ; G. Lohar (50).

*Some fruits are crushed in water and the extract is applied on the cheek to reduce swelling.

Derris indica (Lam.) Bennet syn. **Pongamia pinnata** (L.) Pierre (Fabaceae)

Karanja-M, *Karanj*-S ; Barudigada-462 ; Gopal Munda (40).

The oil extracted from the dry seeds is massaged on the body for treatment of skin

irritations. The oil is also applied on wounds. Small twigs are used as tooth-brush.

Desmodium gangeticum (L.) DC. (Fabaceae)

Sinar-S ; Pakhalkudua-618 ; Jatia Nagasia (60).

The paste of the root is massaged on the chest for reducing pain. The drug cures chest pains within 2-4 days.

Desmodium oojeinense (Roxb.) Ohashi syn.

Ougeinia dalbergioides Benth. (Fabaceae)

Sanan-S ; Biropani-515, Pakhalkudua-623, Nirashi-552 ; Matlub Asur (40), Jatia Nagasia (60) Bulung Oraon (70).

Stem bark is crushed and mixed with cow milk (1 : 2 ratio) and filtered. About 10 ml of this milk is given in diarrhoea and dysentery, twice a day for two days.

The aqueous extract of 20 g fresh bark mixed with equal amount of curd is also taken in early morning in empty stomach. It is claimed that loose motions are immediately checked by this drug.

*The paste of the root is massaged for reducing pain and muscle strain. The massage is applied in the morning and evening for a couple of days.

Desmodium triflorum (L.) DC. (Fabaceae)

Amtua-M ; Madhatu-416 ; Mandru Munda (30).

*The aqueous extract of the fresh roots act as diuretic and is taken for treatment of red colouration of the urine. A dose of 50 ml of the drug is advised once a day for 2-3 days.

***Dichanthium glabrum** (Roxb.) Jain *et* Deshpande syn. **Amphilophis glabra** (Roxb.) Stapf (Poaceae)

Sudugan-M ; Manaburu-484 ; Mandru Munda (30).

A blue dye is prepared from the flowers.

Dillenia indica L. (Dilleniaceae)

Korkot-S ; Chorkakhad-645 ; Kahro Nagasia (60).

*The paste of the root along with the paste of "Kharhar" (*Randia dumetorum*) root in equal

quantity is applied externally on the "Kurha" disease (wounds on the hoof) of the cattles.

Dioscorea alata L. (Dioscoreaceae)

Pahadkanda-M ; Bachumburu-439 ; Mandru Munda (30).

The rhizome is boiled and used in curry preparation.

D. bulbifera L. (Dioscoreaceae)

Darukanda-S ; Biropani-507 ; Sukra Asur (75).

The rhizome is used in curry.

D. glabra Roxb. (Dioscoreaceae)

Dorukanda-S ; Maliapat-606 ; Somra Bhagat (55).

The fresh rhizome is eaten. It is also used in curry preparation.

Diospyros exsculpta Buch.-Ham., syn. **D. melanoxylon** Roxb. (Ebenaceae)

Tiril-M, Kend-S ; Kumbhikhad-633, Manaburu-486 ; Kahro Nagasia (60), Lukin Munda (35).

The ripe fruits are sweet in taste. They are edible.

The dry bark is used for the black colouration on the forehead, while worshipping "Bandepta" (The God of forest).

The root is used as "Dhoop" (incense). It is believed that evil spirits keep away if the roots are kept at the four corners of the house.

Diplocyclos palmatus (L.) Jeffrey syn. **Bryonopsis laciniosa** (L.) Naud (Cucurbitaceae)

Kaoputki-M ; Madhatu-429 ; Pandu Munda (55).

The roots are crushed, mixed with little amount of water and filtered. The extract is massaged on the whole body to recover from weakness.

Elephantopus scaber L. (Asteraceae)

Marachuta-M ; Kumbhikhad-636, Barudigada-458, Pakhalkudua-622, Biropani- 505 ; Kahro Nagasia (60), Gopal Munda (40), Jatia Nagasia (60), Sukra Asur (75).

The aqueous extract of the root is taken as drink for diarrhoea.

The root of this plant and the rhizome of "Sabaighas" (*Eulaliopsis binata*) tied in the neck of the cattle and believed to keep them safe from the attack of worms on the wounds of their body.

Embllica officinalis Gaertn. (Euphorbiaceae)

Meral-M ; Marara-419 ; G. Lohar (50).

Both green and ripe fruits are eaten. They are also used in pickle preparations.

Emilia sonchifolia (L.) DC. ex Wight (Asteraceae)

Teli-S ; Karathpani-628 ; Jatia Nagasia (60).

*The leaf paste is kept on caries teeth. The application of the drug cures teeth after a few days and the cheek pain gets reduced.

Equisetum ramosissimum Desf. ssp. **debile** (Roxb. ex Vauch.) Hauke syn. **E. debile** Roxb. ex Vauch (Equisetaceae)

Hajorua-S ; Jamti-580 ; Birsa Bhagat (70).

*The decoction of the whole plant along with "Kimado" (*Ludwigia parviflora*) is given for treatment of the "Chhai" disease (blood discharge through anus). The 50 ml of decoction is advised twice a day for 7 days for complete cure. It is also used in the pain of abdomen rectum and also for checking high blood pressure.

Eulaliopsis binata (Retz.) Hubb., syn. **Pollinidum angustifolium** (Trin.) Haines (Poaceae)

Bachum-M ; Manaburu-478, Gopal Munda (40).

It is used for preparing ropes.

Euphorbia hirta L. (Euphorbiaceae)

Lal dudhia-S ; Jamti-528 ; Bulung Oraon (70).

A solution prepared with the burnt ash of the whole plant and coconut oil is applied for curing skin irritations.

The plant is just touched on the sores of the cattle to remove worms therein.

E. nivulia Buch.-Ham. (Euphorbiaceae)

Etke-M ; Londuruli-474 ; Mandru Munda (30).

*The latex is applied on the angle of jaws in watering from the eyes of the cattle.

Ficus bengalensis L. (Moraceae)

Badejoroi-M ; Manaburu-483 ; Mandru Munda (30).

*The aqueous extract of the prop root is given to the mother for promoting secretion of milk. About 100 ml of the drug is given twice a day for a week.

***F. concinna** Miq. var. **subsessilis** Corner, syn. **F. glabella** Blume (Moraceae)

Putkal-M ; Tubil-410 ; Mandru Munda (30).

The young leaves are fried and eaten with meals.

The wood is a fuel.

F. racemosa L., syn. **F. glomerata** Roxb. (Moraceae)

Dumbri-S ; Sahanidera-572, Amtikona-499 ; Bandu Oraon (30), Bilash Topno (25).

The ripe fruit is edible. They are sweet in taste.

The leaf is a good fodder for the goats and cattles.

F. semicordata J.E. Sm. syn. **F. cunia** Buch.-Ham. ex Roxb. (Moraceae)

Arni-M, *Podho*-S ; Madhatu-413, Biropani-502 ; Mandru Munda (30), Matlub Asur (40).

The ripe fruits are edible. They are sweet in taste.

The paste of the bark is kept on the wounds caused by snake bite along with chanting on some hymn.

Flemingia chappar Ham. ex Benth. (Fabaceae)

Galphuli-S ; Jamti-526, Pakhalkudua-616 ; Bulung Oraon (70), Jatia Nagasia (60).

* A mixture of paste is prepared by crushing the root of this plant, "Banskaphul" (inflorescence of *Dendrocalamus strictus*), "Chitavarkajad" (root of *Plumbago zeylanica*) and "Mungakachal" (bark of *Moringa oleifera*). "Phulidaru", 100 ml (alcohol

from *Madhuca longifolia*) is mixed with the above paste and given to the woman in the empty stomach to avoid conception. The drug is repeated for five days. The first dose is given soon after the completion of menstruation.

* **Flemingia semialata** Roxb. (Fabaceae)

Birbutu-M ; Bachampuru-434 ; G. Lohar (50).

The aqueous extract of the fresh root cause vomiting. It is used for bringing out the poison from the stomach.

F. strobilifera (L.) Ait. syn. **F. bracteata** Wight (Fabaceae)

Chotkigalphuli-M; Madhatu-432 ; Mandru Munda (30).

*The roots are crushed and mixed with 50 ml of water. This extract is taken as drink to bring out the poison from the stomach by way of vomiting.

Glossogyne bidens (Retz.) Alston, syn. **G. pinnatifida** DC. (Asteraceae)

Otebarangu-M ; Muchia-492 ; Gopal Munda (40).

The paste of the whole plant is applied externally on the cheek to get relief from the ache caused due to caries tooth. It is a belief that the plant is collected by the right hand if pain is there on the left cheek and vice versa. The drug is applied twice a day and said to cure within 2-3 days.

Gmelina arborea Roxb. (Verbenaceae)

Kasmar-M; Arki-405 ; C. Balmuchu (45).

The wood is used for the various household materials like doors, windows, almirahs and "Tharki" (the wooden bell).

Grewia asiatica L. (Tiliaceae)

Bhursa-S ; Biropani-514, Kumari-591 ; Sukra Asur (75), Lala Mahto (70).

The aqueous extract of root (50 ml) is advised for dysentery, twice a day.

The wood is used for making "Bahinga" (the load carrier), a household material.

G. hirsuta Vahl. (Tiliaceae)

Setalendem-M, *Gursikri*-S ; Judiburu-465, Nirashi-541 ; Gopal Munda (40), Bulung Oraon (70).

*The paste of the root is externally applied on the cheek for reducing swelling due to cold.

Some pieces of the root thrown in all the four direction (a medicinal belief) and the aqueous extract of the root along with the root of "Kharhar" (*Randia dumetorum*) is taken once in the morning, for 3 days for treatment of symptoms similar to that of tuberculosis.

Guizotia abyssinica (L.f.) Cass. (Asteraceae)

Maga-M ; Arki-408; Lukin Munda (35).

Dry seeds are crushed by "Cheped" (the oil crusher) to extract the edible oil.

Haldinia cordifolia (Roxb.) Ridsdale, syn.

Adina cordifolia (Roxb.) Hook. f. ex Brandis (Rubiaceae)

Karam-S ; Tulbul-530 ; Bulung Oraon (70).

The wood is used for making the household materials and musical instruments like "Banam" (violin), "Dhol" (drum), "Har" (plough), "Juat" (yoke), "Pai" (wooden measuring instruments), "Sikabahinga" (load carrier) etc. The twigs are planted in the ground during "Dushera" festival and boys and girls dance around them.

Helicteres isora L. (Sterculiaceae)

Aintha-S ; Kumari-589 ; Lala Mahto (70).

The roots are crushed in water and the fresh extract (20 ml) is given once a day for checking stomach pain. It is said that higher doses of this drug is harmful.

Hemidesmus indicus (L.) R. Br. (Asclepiadaceae)

Analsing-M, *Dudhma*-S ; Pakhalkudua-625, Biropani-506, Madhatu-428 ; Jatia Nagasia (60), Sukra Asur (75), G. Lohar (50).

The aqueous extract of the root (50 ml) is given twice a day for curing fever.

The application of paste of fresh root is useful in case of scorpion stings.

The root extract, obtained by crushing them in 50 ml of water, is given twice a day for 3 days, for promoting secretion of milk. It is said to be effective even in the cases where secretion of milk is very less.

The plant sometimes tied in the nearest tree or stumps of the house for hastening the secretion of mother's or cow's milk.

Heteropogon contortus (L.) P.-Beauv ex R. & S. (Poaceae)

Saurighas-M, *Chorant*-S; *Badeburu*-471, *Suarchatain*-653; *G. Lohar* (50), *Ghotlu Nagasia* (80).

The plant is used for thatching the house roofs.

It is believed that no poisonous snake can do harm if the rhizome is kept in the pocket. It is also said that, if the rhizome is kept in the mouth and juice sucked immediately after the snake bite, the poison from the place of bite can not spread further. The juice of rhizome is considered most effective.

The other social belief is that the use of necklace prepared from the rhizome protect beautiful woman from evil spirits.

The plant is also used as fodder.

Hibiscus cannabinus L. (Malvaceae)

Thepa-S; *Peruapat*-604; *Somra Bhagat* (55).

The young leaves are fried and eaten with rice.

The fibres collected after softening the bark are used for making ropes.

H. sabdariffa L. (Malvaceae)

Jajoara-M; *Kurupu*-450; *Mandru Munda* (30).

The young leaves and epicarp of fruit are fried and eaten with rice as "Chatni" (a sauce).

The fibres collected after softening the bark in the water are used in making rope.

Holarrhena antidysenterica Wall. ex DC. (Apocynaceae)

Korea-S; *Nirashi*-548, *Kumari*-586; *Bulung Oraon* (70), *Lala Mahto* (70).

The powder of the dry bark is used in making the "Biro" (a catalytic agent for making a local drink called "Handia").

In the social marriage the vermilion box prepared from the wood is used by the newly married bride.

Ichnocarpus frutescens (L.) R. Br. (Apocynaceae)

Gailakhan-S; *Pathelkudua*-652; *Ghotlu Nagasia* (80).

* The paste of the root mixed with the "mud" (gruel of rice) is given twice a day for 3 days to the mother as food for promoting the secretion of milk.

Imperata cylindrica (L.) P.—Beauv syn. **I. arundinacea** Cyr. (Poaceae)

Chiro-S; *Suarchatain*-656; *Ghotlu Nagasia* (80).

The paste of the root is applied on snake bite. Simultaneously the fruit of "Bankundri" (*Melothria heterophylla*) is also smelt by the patient.

Indigofera cassioides Rottl. ex DC., syn. **I. pulchella** Roxb. (Fabaceae)

Huterba-M, *Jirhulphul*-S; *Bachamburu*-435, *Nirashi*-551; *Lukin Munda* (35), *Bulung Oraon* (70).

The flowers are used in curry preparations.

Indoneesiella echioides (L.) Sreem., syn. **Andrographis echioides** (L.) Nees (Acanthaceae)

Jharghas-S; *Kumari*-594, *Jamti*-573; *Lala Mahto* (70), *Birsa Bhagat* (70).

* The juice collected after grinding the whole plant along with 10 black peppers is used as an antidote for the snake bite. The drug is taken orally and repeated for a couple of days.

Ipomoea batatas (L.) Lam. (Convolvulaceae)

Sanga-M, *Shakarkanda*-S; *Jillingsira*-501; *Bilash Topno* (25).

* The paste of the leaf is applied externally and bandaged, for treatment of the bone fractures among the cattles.

Jatropha curcas L. (Euphorbiaceae)

Kulejada-M ; Manaburu-481 ; Lukin Munda (35).

* The latex is massaged on the body for treatment of muscle strain and pain.

Lagerstroemia parviflora Roxb. (Lythraceae)

Sidha-S ; Jamti-523, Chhatapathal-661 ; Bulung Oraon (70), Ghotlu Nagasia (80).

The twig of the plant called "Kaliani" is used during the marriage ceremony in worshipping for the welfare of the newly married couple.

Lantana camara L. var. *aculeata* (L.) Moldenke, syn. *L. camara* auct. non L. (Verbenaceae)

Putus-M ; Arki-402 ; C. Balmuchu (45).

The ripe berries are edible.

The stem is used as tooth brush.

The plant is grown for fencing.

The plant is used as a fuel.

Lasia spinosa (L.) Thaw. (Araceae)

Katasaru-S ; Golapjharia-665 ; Ghotlu Nagasia (80).

* A paste of the root is massaged for reducing muscle strain. Root may also be eaten for the same purpose.

Leea asiatica (L.) Ridsdale, syn. *L. crispa* van Royen ex L. (Leeaceae)

Hansuafal-S ; Nirashi-562 ; Bulung Oraon (70).

* Fresh roots are eaten for reducing pains, swelling and bodyaches. It usually cures within three days.

L. guineensis G. Don syn. *L. acuminata* Wall. ex Clarke (Leeaceae)

Hutid-M ; Barudigada-463 ; Gopal Munda (40).

The paste of the root is given to the hens along with some food. It makes them energetic and angry for a friendly fighting with the partner.

Leonotis nepetaefolia (L.) Aiton (Lamiaceae)

Tompepuru-M ; Kurputola-449 ; Gopal Munda (40).

A solution prepared with the burnt ash of the inflorescences and "Karanj" oil is applied externally on the skin diseases like eczema and scabies.

Leucas cephalotes (Roth) Spreng. (Lamiaceae)

Domepuru-M ; Madhatu-441 ; Mandru Munda (80).

The leaf is used in curry preparations.

L. mollissima Wall. ex Benth. (Lamiaceae)

Guma-S ; Kumbhikhad-638, Nirashi-564 ; Kahro Nagasia (60), Bulung Oraon (70).

The young leaves are fried and eaten with rice.

Litsea glutinosa (Lour.) Robinson, syn. *L. sebifera* (Willd.) Pers. (Lauraceae)

Meda-S ; Nirashi-535 ; Bulung Oraon (70).

* The powder of the dry bark mixed with salt is given to the buffalows for making them energetic.

Lygodium flexuosum (L.) Sw. (Lygodiaceae)

Nagenacha-M, *Mahadebjat*-S ; Jamti-575, Barudigada-460 ; Birsa Bhagat (70), Gopal Munda (40).

The powder of the dry plant is sprinkled on the wounds for quick healing.

Roots are crushed and mixed with 50 ml of water. The extract is taken for reducing bodyaches and swelling.

Manihot esculenta Crantz., syn. *M. utilissima* Pohl (Euphorbiaceae)

Edelsanga-M ; Manaburu-480 ; Lukin Munda (35).

* The aqueous extract of the root is advised as digestive juice.

Martynia annua L., syn. *M. diandra* Glox. (Martyniaceae)

Budisarsar-M ; Arki-404 ; C. Balmuchu (45).

The decoction of the fruits is externally applied on the cuts, wounds and burns to get immediate relief from the pain.

Mentha arvensis L. (Lamiaceae)

Pudina-S ; Jillingsira-498 ; Bilash Topno (25).

The leaves are used in curry preparation. They are also used in preparation of "Chatni" (sauce).

Meyna laxiflora Robyns syn. **Vangueria spinosa** Roxb. (Rubiaceae)

Katob-M, *Mauna*-S ; Maunakona-558, Suarchatain-655, Biropani-513 ; Bulung Oraon (70), Ghotlu Nagasia (80), Sukra Asur (75).

Fresh roots (10 g) are crushed in water (50 ml). The extract so made is given in bellyache. The drug is administered in dose of 30 ml twice a day for two days.

The unripe fruits crushed and spread in the water to stupify fishes and this helps in fishing.

* The powder of the dry fruit (20 g) mixed with 50 ml of water. The foams obtained from the mixture is massaged on the body of the children suffering from fever.

* **M. pubescens** (Kurz) Robyns syn. **Vangueria pubescens** Kurz (Rubiaceae)

Poto-M, *Mauna*-S ; Judiburu-466 ; Mandru Munda (30).

The paste of the fruit is applied externally on the abscess to bring out the pus.

The paste of the fruit is also useful for fishing. The fishes are easily caught after spreading the paste in water.

Moringa oleifera Lam. (Moringaceae)

Munga-M ; Manaburu-482 ; Mandru Munda (30).

The flowers and leaves are fried and eaten. The fruits are used as vegetable.

The powder of the dry bark is sprinkled around the house to keep away the snakes.

Mucuna pruriens (L.) DC., syn. **M. prurita** Hook. (Fabaceae)

Alkusi-S ; Kumari-583 ; Bulung Oraon (70).

About 10 g of roots are crushed in 50 ml of water alongwith 10 black pepper and the extract is given in malaria. The drug is administered in dose of 30 ml once a day, for 2 days.

Nyctanthes arbortristis L. (Oleaceae)

Saparum-M, *Khirsari*-S ; Nirashi-554, Lohardera-658, Badeburu-472 ; Bulung Oraon (70), Ghotlu Nagasia (80), G. Lohar (50).

* The dry leaf along with tobacco is smoked as cigarette by the tribals suffering from cough and cold.

Sometimes the aqueous extract of the fresh leaves and twigs is also taken once a day in the morning for 3-4 days, to cure cough and cold.

Ochna obtusata DC., syn. **O. squarrosa** auct. non L. (Ochnaceae)

Bhuikumbi-S ; Nirashi-601, Telhapani-595 ; Bulung Oraon (70), Lala Mahto (70).

* The paste of the roots is applied externally on the swelling of the cheek due to toothache, twice a day for 4-5 days.

The aqueous extract of the root is given orally (1-2 drop) to children to check mouth sores. There is a belief that if the extract is massaged on the whole body, it hasten the healing process.

Ocimum basilicum L. (Lamiaceae)

Jatni-M ; Kurputola-445 ; Mandru Munda (30).

The juice of the fresh leaves (10 ml) is taken thrice a day in headache.

O. gratissimum L. (Lamiaceae)

Bhusudi-S ; Periapat-603, Somra Bhagat (55).

Dry seeds are powdered. The powder is boiled and used as substitute of "dal" (pulses).

Olax scandens Roxb. (Olacaceae)

Rimbilada-M ; Bachumburu-438 ; G. Lohar (50).

The young leaves are used in curry preparations.

Pentanema indicum (L.) Ling syn. **Vicoa indica** (L.) DC. (Asteraceae)

Banjatangi-S ; Suarchatain-654, Pakhalkudua-617 ; Ghotlu Nagasia (80), Jatia Nagasia (60).

* The extract of root prepared with "Kharhar" (*Xeromphis spinosa*) root and "Phulidaru" (alcohol from *Madhuca longifolia*) is kept in a container for a week. This is taken on the following two days after menstruation, for avoiding conception.

The paste of the root is applied on the feet for reducing swelling and pain.

Phoenix acaulis Roxb. ex Buch.-Ham. (Arecaceae)

Khijur-S ; Karatjharia-632 ; Jatia Nagasia (60).

The root is chewed by the labourers. By taking rhizome juice in this manner the labourers become more energetic for doing manual labour in the forest.

* **Pimpinella heyneana** (DC.) Kurz (Apiaceae)

Tirio-S ; Lohardera-659, Nirashi-536 ; Ghotlu Nagasia (80), Bulung Oraon (70).

Powder of dry roots mixed with the powder of roots of "Talmuli" (*Thespesia lampas*) and roots of "Tejraj" (*Curculigo orchioides*), in equal quantities is given to persons suffering from weakness. The drug is taken once in the morning for 21 days or more after brushing the teeth with the stick of "Randpawan" (*Smilax macrophylla*). The drug is believed to cure weakness and make the person more energetic.

Plumbago zeylanica L. (Plumbaginaceae)

Chitawar-S ; Nirashi-532 ; Bulung Oraon (70).

The root is tied in a thread and used as the necklace for treatment of fever among children.

The powder of the dry root is used in making "Biro" (a catalytic agent used for "Handia").

Polygala crotalarioides Buch.-Ham. ex DC. (Polygalaceae)

Chanbida-M, *Nilkanth*-S ; Jamti-574, Nirashi-544, Marara-422 ; Birsa Bhagat (70), Bulung Oraon (70), Lukin Munda (35).

* Roots (5 g) are crushed and mixed with 20 ml water. The extract so made is given to cure fever. The drug is advised four times on the first day and two times, daily, on the following two days. Each time the fresh dose is prepared.

Roots are chewed and juice is taken in during cough and cold, thrice a day for two days.

Polygonum barbatum L. (Polygonaceae)

Senso-S ; Jamti-578 ; Bulung Oraon (70).

The young leaves are used in curry preparations.

Pterocarpus marsupium Roxb. (Fabaceae)

Bija-S ; Biropani-511 ; Matlub Asur (40).

The leaf is a good choice of food for buffalows.

Pueraria tuberosa (Roxb. ex Willd.) DC. (Fabaceae)

Bandundi-M ; Manaburu-490, G. Lohar (50).

The paste of the bark and leaves is massaged on the whole body of cattles to keep them unaffected from the attack of worms on their body.

Ruellia suffruticosa Roxb. (Acanthaceae)

Charpandu-M ; Judiburu-468, Tabiltola-500 ; Mandru Munda (30), Prem Oraon (40).

Roots (20 g) are crushed and mixed with 100 ml "Phulidaru" (alcohol from *Madhuca longifolia*) and taken as drink for abortion, once a day for two weeks continuously. The root powder is a constituent of the "Biro" (a mixture which acts as catalytic agent for "Handia").

Semecarpus anacardium L. f. (Anacardiaceae)

Soso-M ; Madhatu-414 ; Mandru Munda (30).

The ripe fruits are eaten. The lower part of the fruit (red colour) is eaten while the upper part (black colour) is discarded.

Sida acuta Burm. f. (Malvaceae)

Bariatu-S, *Ipidipium*-M ; Kumari-592, Barudiguda-457 ; Lala Mahto (70), Gopal Munda (40).

* The aqueous extract of the root is given in case of dog bite. About 100 ml of the drug is taken twice a day for two days.

The plant is used for making broom (the household material).

The fibre extracted from the bark is used for making ropes.

Smilax ovalifolia Roxb. ex D. Don syn. *S. macrophylla* Roxb. (Smilacaceae)

Atkir-M ; Madhatu-433 ; Gopal Munda (40).

About 50 g of root is crushed in 200 ml of water and the extract is given to check discharge of

semen with urine and the subsequent weakness, twice a day in the morning and evening for two weeks.

Solena amplexicaulis (Lamk.) Gandhi syn. **Melothria heterophylla** (Lour.) Cogn. (Cucurbitaceae)

Kundri-M, Bankundri-S ; Biropani-504, Kumbhikhad-640 ; Sukra Asur (75), Kahro Nagasia (60).

The rhizome is boiled and used in curry preparation.

The green fruits are edible. It is believed that eating of the ripe fruits cause deafness.

Strobilanthes scaber Nees (Acanthaceae)

Vainsha-S ; Nirashi-538 ; Bulung Oraon (70).

* The paste of the root is massaged and applied for treatment of bone fracture of the cattles. The drug is said to be very effective in bone fractures and within two weeks the animal resumes normal functioning.

Symplocos racemosa Roxb. (Symplocaceae)

Ratangauda-S ; Jamti-525, Dushimania-615 ; Bulung Oraon (70), Jatia Nagasia (60).

The paste of the bark mixed with the bark of "Salia" (*Boswellia serrata*) is applied externally on eyelids for reducing the redness of the eyes, thrice a day and for 3 days or until cure. For the treatment of ophthalmic infections the paste of the bark alone is also effective.

Syzygium cumini (L.) Skeels syn. **Eugenia jambolana** Lam. (Myrtaceae)

Kudda-M, Jamun-S ; Tubil-409, Golapjharia-667 ; G. Lohar (50), Ghotlu Nagasia (80).

The ripe fruit is edible.

The juice of the ripe fruit is kept in a container for some days. It is then used for all types of stomachaches and disorders.

* The juice of the young leaves (about 20 ml) is given as a drink for the initiation of menstruation, once a day in the morning in empty stomach for a month continuously.

The wood is a reputed timber. It is used for making "Kulhu" (the crushing machine of oil seeds), "Dhanki" (rice husker), "Dholka" (drum), "Gando" (wooden seat), "Okheri" (Mortar) etc.

The bark is said to be rubbed to soften the stiff leather.

Taxillus tomentosus (Roth) van Tieghim syn.

Loranthus tomentosus Roth (Loranthaceae)

Suam-M ; Marara-425 ; Gopal Munda (40).

The paste of the inflorescence is spread on the ground. It is sticky and used to catch the birds.

* **Tectaria cicutaria** (L.) Copel. (Aspidiaceae)

Kukdi-S ; Jamunkhai-569 ; Bulung Oraon (70).

The young plant (particularly fronds) is fried and taken with rice. It tastes like the fish curry.

Telosma pallida (Roxb.) Craib syn. **Pergularia pallida** Wight. & Arn. (Asclepiadaceae)

Chhit-S ; Thunkudera-614 ; Etwa Oraon (60).

The powder of the dry root is one of the constituents of "Biro" (a catalytic agent for "Handia").

Terminalia alata Heyne ex Roth syn. **T. tomentosa** (Roxb.) Wight. & Arn. (Combretaceae)

Hatna-M ; Manaburu-491 ; Lukin Munda (35).

The red dye obtained on boiling the bark, is used to decorate walls.

T. chebula (Gaertn.) Retz. (Combretaceae)

Rolla-M ; Bachumburu-436 ; Mandru Munda (30).

* The aqueous extract of the bark is advised as a drink for cooling the brain.

Thalictrum foliolosum DC. (Ranunculaceae)

Jurbula-S ; Peruapat tola-613 ; Ettwa Oraon (60).

* A mixture of powdered dry root along with powder of "Kanwad" (*Carissa carandas*) root, "Korea" (*Holarrhena antidysenterica*) bark, "Chitwar" (*Plumbago zeylanica*) root, "Charpandu" (*Ruellia suffruticosa*) root, and "Chhit" (*Telosma pallida*) root is prepared. This is

further mixed with powder of rice and "Biro" prepared for "Handia" (the most common drink). "Biro" along with mixture of above plants acts as catalytic agent and produce particular taste to this drink. It is believed that the drinks keep away many diseases.

Thespesia lampas (Cav.) Dalz. & Gibs.
(Malvaceae)

Bankapas-S; Kumari-600 ; Lala Mahto (70).

Powder of equal number of seeds of this plant and black peppers mixed with little cow ghee is given to cure cough and cold, twice a day for 2 days.

Trema politoria (Planch.) Blume (Ulmaceae)

Nahamunja-S ; Nirashi-531 ; Bulung Oraon (70).

The seeds are believed to be quite nutritious and given as food for hen.

Tridax procumbens L. (Asteraceae)

Rochopuru-M, *Vengraj-S* ; Kumari-590, Bachumburu-440 ; Lala Mahto (70), Mandru Munda (30).

The juice of the fresh leaves is directly squeezed on the wounds, twice a day. It normally heals the wound within 2-3 days.

The juice of young leaves is used as eye drops for treatment of conjunctivitis.

Vernonia conyzoides DC., syn. **V. cinerea** auct non Less (Asteraceae).

Jonkitin-S ; Pakhalkudua-619 ; Jatia Nagasia (60).

* A solution prepared from the powder of the dry root and "Munjni" (*Celastrus paniculatus*) oil is used as eardrops for treatment of the ear-aches.

V. squarrosa (D.Don) Less, syn. **V. teres** Wall. ex DC. (Asteraceae)

Banjatngi-S ; Kumbhikhad-639; Kahro Nagasia (60).

The powder of the root is mixed with some food and given to ladies by males. It is believed that they get attracted by doing so.

Vitex negundo L. (Verbenaceae)

Hudri-M ; Chalkad-453, Arki-401 ; C. Balmuchu (45), Mandru Munda (30).

The juice of fresh leaves is applied in headache.

Tribal ladies keep the young twigs on the head. It is believed that the twigs keep the head cool in hot sun.

V. peduncularis Wall. ex Schauer
(Verbenaceae)

Simjanga-M ; Manaburu-489 ; G. Lohar (50).

The bark is kept on the cuts caused by snake bite. The wounds caused by snake-bite are bandaged with the paste of the bark.

Woodfordia fruticosa (L.) Kurz (Lythraceae)

Ichha-M, *Dhaunai-S*; Marara-421, Nirashi-543; Mandru Munda (30), Bulung Oraon (70).

About 20 g root is crushed in water (100 ml) and the extract is taken in headache. The drug is advised thrice a day. Massaging the paste of root on the whole body is said to reduce the temperature due to high fever.

Xeromphis spinosa (Thunb.) Keay syn. **Randia dumetorum** (Retz.) Lam. (Rubiaceae)

Kharhar-S ; Nirashi-542, Pakhalkuda-621 ; Bulung Oraon (70), Jatia Nagasia (60).

The aqueous extract of the root is taken, twice a day for two days to cure fever.

Ziziphus rugosa Lam. (Rhamnaceae)

Pithoer-S ; Biropani-512, Sukra Asur (75).

The ripe fruits are eaten. The taste of fruit is sweet.

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APPENDIX

I. Edible Plants

Young leaves and twigs : *Antidesma acidum*, *Argemone mexicana*, *Bauhinia purpurea*, *Cassia occidentalis*, *Centella asiatica*, *Colocasia esculenta*, *Ficus concinna* var. *subsessilis*, *Hibiscus cannabinus*, *H. sabdariffa*, *Leucas cephalotes*, *L. mollissima*, *Mentha arvensis*, *Moringa oleifera*, *Olex scandens*, *Polygonum barbatum* and *Tectaria cicutaria*.

Inflorescence and Flowers : *Bauhinia purpurea*, *Indigofera cassioides* and *Moringa oleifera*.

Fruits and Seeds : *Antidesma acidum*, *Bauhinia vahlii*, *Carissa carandas*, *Diospyros exsculpta*, *Emblica officinalis*, *Ficus racemosa*, *F. semicordata*, *Lantana camara* var. *aculeata*, *Moringa oleifera*, *Ocimum gratissimum*, *Semecarpus anacardium*, *Solena amplexicaulis*, *Syzygium cumini* and *Ziziphus rugosa*.

Rhizomes & Tubers : *Dioscorea alata*, *D. bulbifera*, *D. glabra* and *Solena amplexicaulis*.

Oil seeds : *Butea monosperma* and *Guizotia abyssinica*.

II. Medicinal Plants and parts used

(Abbrev. FL : Flower, FR : Fruit, LF : Leaf, PL : Plant, RT : Root, SB : Stem Bark, SD : Seed)

Abortifacient : *Barleria cristata* (RT) and *Ruellia suffruticosa* (RT).

Analgesic for muscle strain : *Careya arborea* (SB), *Carissa carandas* (RT), *Crotalaria spectabilis* (PL), *Desmodium oojainense* (RT), *Jatropha curcas* (Latex) and *Lasia spinosa* (RT).

Antifertility : *Flemingia chappar* (RT) and *Pentanema indicum* (RT).

Boil and Abscess : *Curculigo orchioides* (RT) and *Meyna pubescens* (FR).

Brain tonic : *Terminalia chebula* (SB).

Chest pain : *Achyranthes aspera* (RT) and *Desmodium gangeticum* (RT).

Cough and Cold : *Cleistanthus collinus* (SB), *Grewia hirsuta* (RT), *Nyctanthes arbortristis* (LF), *Polygala crotalarioides* (RT) and *Thespesia lampas* (SD).

Cut, Sore, Wound and Burn : *Ageratum conyzoides* (LF & FL), *Boswellia serrata* (SB), *Curculigo orchioides* (RT), *Cyperus rotundus* (PL), *Derris indica* (SD), *Lygodium flexuosum* (PL), *Martynia annua* (FR) and *Tridax procumbens* (LF).

Dental problems : *Argemone mexicana* (SD), *Blumeopsis flava* (PL), *Emilia sonchifolia* (LF), *Glossogyne bidens* (PL) and *Ochna obtusata* (RT).

Diarrhoea and Dysentery : *Aerva lanata* (PL), *Antidesma acidum* (LF), *Desmodium oojainense* (SB), *Elephantopus scaber* (RT) and *Grewia asiatica* (RT).

Diuretic and Urinary complaints : *Aerva sanguinolenta* (PL), *Croton roxburghii* (SB) and *Desmodium triflorum* (RT).

Dogbite : *Sida acuta* (RT).

Ear complaints : *Argyrea nervosa* (SD) and *Vernonia conyzoides* (RT).

Emetic : *Achyranthes aspera* (RT), *Cassia hirsuta* (LF & SD), *Flemingia semialata* (RT) and *F. strobilifera* (RT).

Eye diseases : *Cynodon dactylon* (PL), *Symplocos racemosa* (SB) and *Tridax procumbens* (LF).

Fever and Malaria : *Andrographis paniculata* (PL), *Canscora diffusa* (PL), *Centratherum anthelminticum* (RT), *Cissampelos pareira* (RT), *Clerodendrum serratum* (RT), *Hemidesmus indicus* (RT), *Meyna laxiflora* (FR), *Mucuna pruriens* (RT), *Polygala crotalarioides* (RT), *Woodfordia fruticosa* (RT) and *Xeromphis spinosa* (RT).

Galactagogue : *Ficus bengalensis* (RT), *Hemidesmus indicus* (RT) and *Ichnocarpus frutescens* (RT).

Headache : *Andrographis paniculata* (PL), *Blumeopsis flava* (PL), *Centratherum anthelminticum* (RT), *Ocimum basilicum* (LF), *Vitex negundo* (LF) and *Woodfordia fruticosa* (RT).

Hydrocele and Hernia : *Argyreia nervosa* (RT) and *Cleistanthus collinus* (SB).

Menstrual disorder : *Syzygium cumini* (LF).

Mouth sores : *Datura alba* (FR).

Nasal bleeding : *Crinum asiaticum* (LF).

Pain, Muscular pain and Bodyache : *Clerodendrum indicum* (RT), *C. viscosum* (RT), *Leea asiatica* (RT), *Lygodium flexuosum* (RT) and *Pentanema indicum* (RT).

Piles : *Equisetum debile* (PL).

Snake bite and Scorpion stings : *Ageratum conyzoides* (LF), *Bauhinia vahlii* (RT), *Boswellia serrata* (SB), *Cissampelos pareira* (RT), *Hemidesmus indicus* (RT), *Imperata cylindrica* (RT), *Indoneesiella echiodides* (PL) and *Vitex penduncularis* (SB).

Skin diseases : *Andrographis paniculata* (PL), *Celastrus paniculatus* (SD), *Derris indica* (SD), *Euphorbia hirta* (PL) and *Leonotis nepetaefolia* (FL).

Stomach ache and Digestive disorders : *Blumeopsis flava* (RT), *Cassia fistula* (LF), *Cissampelos pareira* (RT), *Croton roxburghii* (SB), *Helicteres isora* (RT), *Manihot esculenta* (RT), *Meyna laxiflora* (RT) and *Syzygium cumini* (FR).

Tonics : *Asparagus racemosus* (RT), *Crotalaria bialata* (RT), *Curculigo orchoides* (RT), *Diplocyclos palmatus* (RT), *Phoenix acaulis* (RT) and *Pimpinella heyneana* (RT).

Veneral diseases : *Clerodendrum indicum* (RT) and *Smilax ovalifolia* (RT).

III. Plants used as veterinary medicine

Abrus precatorius, *Calotropis gigantea*, *Cassia fistula*, *Dillenia indica*, *Euphorbia hirta*, *E. nivulia*, *Ipomoea batatas*, *Litsea glutinosa*, *Pueraria tuberosa* and *Strobilanthes scaber*.

IV. Plants of medicinal belief

Achyranthes aspera, *Cassia occidentalis*, *Cyperus pangorei*, *C. rotundus*, *Elephantopus scaber*, *Euphorbia hirta*, *Ficus semicordata*, *Grewia hirsuta*, *Heteropogon contortus*, *Ochna obtusata*, *Plumbago zeylanica* and *Solena amplexicaulis*.

V. Fibre Plants

Agave vera-cruz, *Bauhinia vahlii*, *Eulaliopsis binata*, *Ficus glabella*, *Hibiscus cannabinus*, *H. sabdariffa* and *Sida acuta*.

VI. Fodder Plants

Anisomeles indica, *Ficus racemosa*, *Heteropogon contortus*, *Pterocarpus marsupium* and *Trema politoria*.

VII. Plants used in drinks

Carissa carandas, *Holarrhena antidysenterica*, *Plumbago zeylanica*, *Ruellia suffruticosa*, *Telosma pallida* and *Thalictrum foliolosum*.

VIII. Plants used as timbers and household materials

Acacia catechu, *Arundinella bengalensis*, *Bauhinia vahlii*, *Boswellia serrata*, *Cleistanthus collinus*, *Cymbopogon martinii*, *Ficus concinna* var. *subsessilis*, *Gmelina arborea*, *Grewia asiatica*, *Haldinia cordifolia*, *Heteropogon contortus*, *Sida acuta* and *Syzygium cumini*.

IX. Plants used for socio-religious and magical purposes

Achyranthes aspera, *Atylosia scarabaeoides*, *Biophytum sensitivum*, *Blumeopsis flava*, *Centella asiatica*, *Cyperus compressus*, *Cuscuta reflexa*, *Diospyros exsculpta*, *Haldinia cordifolia*, *Hemidesmus indicus*, *Heteropogon contortus*, *Holarrhena antidysenterica*, *Lagerstroemia parviflora*, *Leea guineensis*, *Moringa oleifera*, *Vernonia squarrosa* and *Vitex negundo*.

X. Plants used in fishing and bird catching

Meyna laxiflora, *M. pubescens* and *Taxillus tomentosus*.

XI. Miscellaneous uses

Butea monosperma (in lac production), *Cleistanthus collinus* (latex as adhesive), *Derris indica* (as tooth brush), *Dichanthium glabrum* (as blue dye), *Lantana camara* var. *aculeata* (as fencing, fuel and tooth brush), *Syzygium cumini* (for softening of leather) and *Terminalia alata* (as red dye).

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