



Ethnomedicinal plants used by the tribes of Nayagarh district, Odisha

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Abstract

The present paper deals with an account of 198 ethnomedicinal uses of 159 plant species belonging to 63 families and 142 genera, used for prevention and treatment of various diseases by the tribal and indigenous non-tribal communities of Nayagarh district of Odisha. This first-hand ethnomedicinal information was collected directly from a field survey of 230 remote tribal villages and forest areas of the district. Among them family Leguminosae is represented by maximum number of plants (21 species) followed by Apocynaceae (12 species). Habit-wise analysis revealed that herbs are dominated with 68 species followed by trees (42 species). These plant species are arranged in alphabetical order followed by family, habit, local name(s), locality (ies), field number (s) along with a method of preparation and mode of ethnomedicinal uses in detail.

Keywords: ethnomedicine, tribes, Nayagarh, Odisha

Introduction

Nayagarh district is located between 20°06'57.6" N Latitude and 85°00'36" E longitude. The District was created in 1995 when the erstwhile Puri District was split into three distinct Districts. The District is bounded by Cuttack District on the North, Kandhamal District on the West, Ganjam District on the South and Khordha District on its East. Birth history of Nayagarh District in around the thirteenth century and is considered as an important part in the political history of Odisha. King Suryamani of Baghela dynasty came to Puri on a pilgrimage from Madhya Pradesh and established his kingdom at Nayagarh. The District is situated on the hilly ranges in the West and its North Eastern parts have formed small well cultivated fertile valleys intersected by small streams. The district covers a geographical area of 3,890 sq. km with 1682 sq.km forest area. Type of forest of Nayagarh district is tropical semi evergreen forest. The aboriginal Khond, Saora and Shabar are the indigenous people of Nayagarh District. As per census 2011 tribal population of the district is 50836. [Khond-76.92%, Saora-8.06% & Shabar-7.77%]. The district is considered ideal from ethnobotanical study point of view, as rich in floristic as well as in ethnic diversity. Some tribal folks are inhabits in and around the forest areas and used many locally available plant species in their daily life for various purposes like food, medicinal, fodder, fuel, dye, fibre, tool, equipment, religious etc. Unfortunately, these valuable knowledge as well as plant species is getting depleted leading to their extinction due to lack of interest of younger generation towards traditional knowledge. Therefore, efforts have been made to collect, document and preserve the centuries old precious traditional knowledge from Nayagarh district before their complete depletion, which could be utilized for the welfare of people in future after proper scientific authentication.

Material and Methods

The field survey was carried out in seven different tribal populated areas of Naygarh Forest Division namely Panchirida, Mahipur, Gania, Nayagarh, Khandapara,

Dasapala, Odagaon during the year 2015 to 2017 and interviewed old and experienced men, women and medicine men (Kaviraj, Vaidya and Guni) for the first hand information on ethnomedicinal uses of the plants from 230 rural villages and forest areas of Nayagarh district. These surveys were conducted among several tribal groups namely Kandho, Shabar, Oraon, Munda, Kisan, Gond, Bhuinya, Paudia Bhuinya, Kolho, Khadia, Binjhal, etc. and several Scheduled Caste and General Caste people. The informers were taken to forest to show the exact plants that they had been using for various purposes including their vernacular names, method of preparation and mode of uses as well as collection of voucher specimens. Care has been taken to record only those medicinal information whose curative potentialities have been confirmed by the informants. The *Prior Informed Consent* (PIC) was obtained from the ethnic groups concerned. Repeated and cross queries were done for confirmation and verification of the information. The voucher specimens were collected, tagged with field numbers and kept between the blotting papers in a plant press for drying purposes. After drying these specimens were poisoned, mounted, stitched and labelled on herbarium sheets. These plant specimens have been identified with the help of keys and botanical descriptions described in different regional floras like Haines (1921-25) [1], Mooney (1941,1950) [2, 3] and Saxena & Brahmam (1994-96) [4]. After matching and verification with the authentic specimens housed in Central National Herbarium (CAL), these voucher specimens have been deposited in Ethno Botanical Herbarium of Central Botanical Laboratory (CBL), Howrah. For recent valid nomenclature The International Plant Names Index, The Plant List and Plants of the World Online (POWO) were referred and the names of authors were verified from Brummitt and Powell (1992) [5]. Further, these recorded ethnomedicinal uses were compared and cross checked with well-known standard Indian literatures (Ambasta, 1986; Anonymous, 1948-76; Chopra *et al.*, 1956; Jain, 1991; Jain and Jain 2016; Kirtikar and Basu, 1935) [6,7,8,9,10,11] and published research papers on

ethnobotany of the district (Dhole *et al.*, 2016; Prusti and Mishra, 2005) [12, 13].

The plants used by the tribal people are summarized in alphabetical order by their botanical names together with

their respective families, habit, local names, localities, collection numbers and a brief note on uses and method of using the drugs as revealed by the informants during field trips.

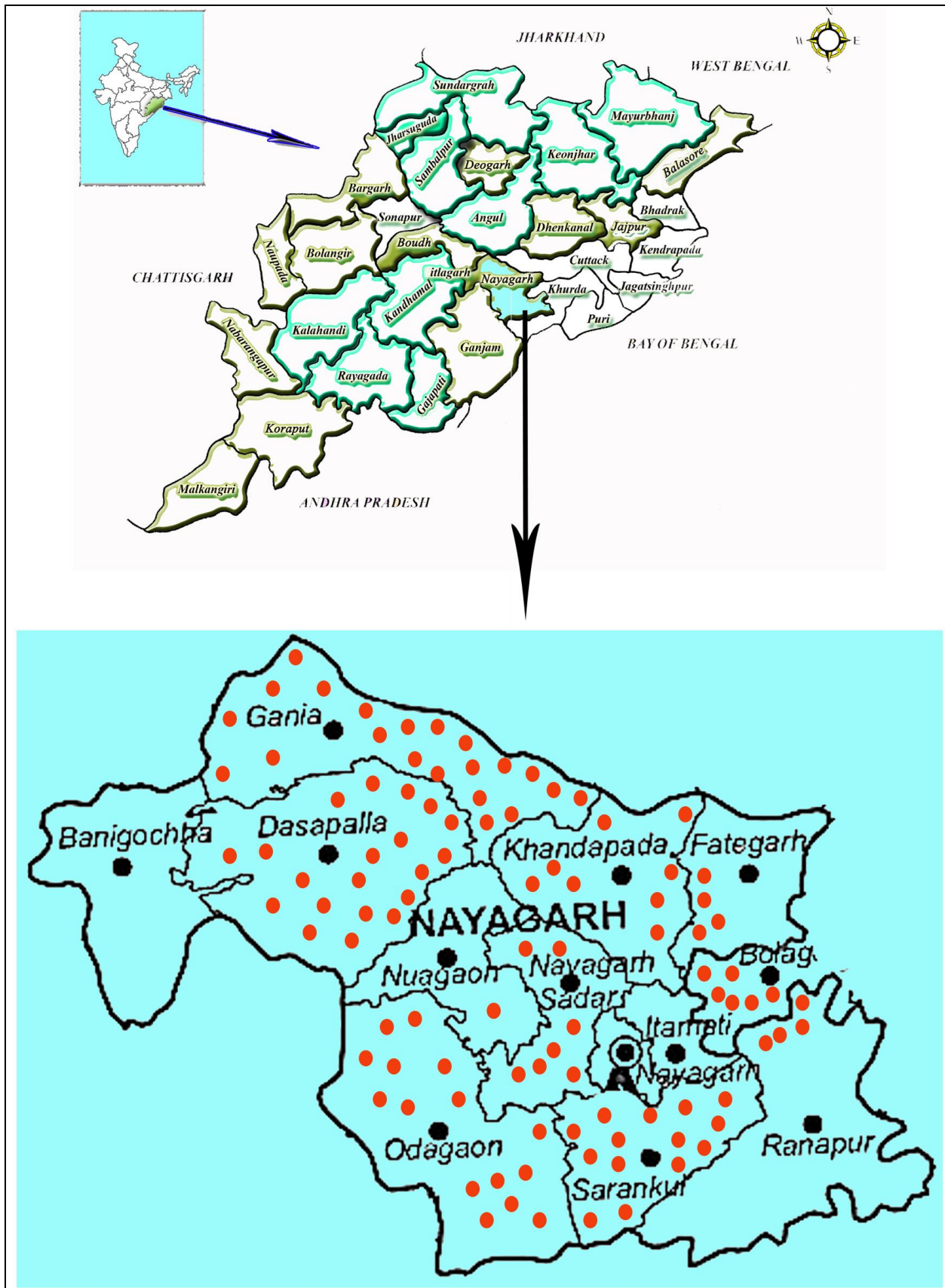


Fig 1: Map showing ethnobotanically surveyed areas of Nayagarh dist. Odisha

Enumeration of Ethnomedicinal Plants

Abrus precatorius L (Leguminosae) Climber, *Kainch*; Mahukana (CBL-37603); Kalapata, Manibhadra, Gania (CBL-37739) One seed is ground; powder is fed to cattle twice daily for three days to cure diarrhoea.

Abutilon indicum (L.) Sweet (Malvaceae), Shrub, *Pedipedika*; Masabadi, Dasapala (CBL-37663); Talamahukana, Manibhadra, Gania (CBL-37751) One tea spoonful seed-powder with one cup of lukewarm cow milk is prescribed once daily at bed time for 15 days to increase vitality.

Acacia farnesiana (L.) Willd. (Leguminosae), Tree, *Gandha gahira*; Tumandi, Dasapala (CBL-39912) One seed is pasted. Paste is given orally one dose only in empty stomach to cure diarrhoea and to prevent small pox.

Acalypha indica L. (Euphorbiaceae) Herb, *Indramarisha*; Rajanpalli (CBL-39922) Leaf juice is applied on gum of infected tooth to cure toothache.

Acanthospermum hispidum DC. (Asteraceae), Herb; *Gokhura*; Dhipamal (CBL-39926) Two inch long root and four black peppers (*Piper nigrum*) is pasted. It is given twice daily for 30 days to dissolve stone of gall bladder.

Achyranthes aspera L. (Amaranthaceae), Herb; *Opamaranga*, *Apamaranga*; Godipada, Panchirida; Kalapata, (CBL-37515), Manibhadra, Gania (CBL-37726) Root bark with 21 peppers (*Piper nigrum*) is ground. Half a tea spoon powder is given once daily for three days to cure diarrhoea.

Root is rubbed on stone, paste is applied on tongue of baby to stop crying and for sleepiness.

Acorus calamus L. (Acoraceae), Herb; *Bacha*; Bahadajhola, Odagaon (CBL-37783) Half a tea spoon leaf juice is given to baby to stop crying due to body ache.

Aegle mermelos (L.) Correa (Rutaceae), Tree, *Belo*; Godipada, Panchirida, Gudupangi, Nayagarh (CBL-37512, 39940) Young fruit cut into pieces and boiled in water. One cup of aqueous extract is given for seven days to cure indigestion. Pulp of ripe fruit is made into drink. One glass of drink is prescribed to cure constipation.

Alangium salviifolium (L.f.) Wangerin (Cornaceae), Tree, *Ankula*; Kalapata, Manibhadra R.F., Gania, (CBL-37584, 37727) Leaf paste is applied on spot of hurt to relieve pain.

Young stem is used as tooth brush to cure toothache.

Alstonia scholaris (L.) R. Br. (Apocynaceae), Tree, *Chatian*; Singapara, Khandapara, (CBL- 39902) Latex is applied on ear to cure earache due to pus formation.

Amaranthus spinosus L. (Amaranthaceae), Herb, *Kantaleutia*, *Kantamarish*; Masabadi, Saken, Dasapala, Bahadajhola, Odagaon, (CBL-37644, 37772) Root paste is applied on boil for bursting and healing wound.

Ammannia baccifera L. (Lythraceae), Herb, *Khetapapri*; Dhipamal (CBL-39924) Whole plant with that of *Pitasago* (*Oldenlandia corymbosa*) and leaf of *Ganga seuli* (*Nyctanthes arbor-tristis*) is ground. One tea spoonful powder is given twice daily in empty stomach for seven days to cure fever.

Amorphophallus paeoniifolius (Dennst.) Nicolson. (Araceae) Herb, *Oloua*; Mahukana, Gania (CBL-37598) Rhizome is eaten as vegetable for curing piles.

Andrographis paniculata (Burm.f.) Nees (Acanthaceae), Herb, *Bhuinlimbo*; Kespacea, Panchirida, Sampada, Mahipur (CBL-37536, 37707) Leaf-juice is given one tea spoon once daily for five days for deworming. Whole plant is boiled in water. Aqueous extract two tea spoon is

administered once daily in empty stomach for seven days to cure dermatitis and also for deworming.

Annona squamosa L. (Annonaceae), Tree, *Borial*, *Aata*; Godipada, Panchirida; Jodashahi, Odagaon (CBL-37522, 37799) Half an inch long root with 21 black peppers is pasted and given once only to cure diarrhoea. The dose is repeated if it is not cured after the first dose. Leaf-juice is applied on hair to repel lice.

Anogeissus latifolia (Roxb. ex DC.) Wall.ex Guillem. & Perr. (Combretaceae), Tree, *Dhauranj*; Kalapata, Manibhadra, Gania (CBL-37723) Leaf juice is applied on skin to cure urticaria.

Argemone mexicana L. (Papaveraceae), Herb, *Maratha*, *Odosomari*; Talamahukana, Manibhadra, Gania (CBL-37750) Plant juice is applied to cure skin diseases.

Aristolochia indica L. (Aristolochiaceae), Climber, *Panaairi*; Kespacea, Nihalprasad, Panchirida, Sikharpur R.F., Khandapara (CBL-37533, 37610, 37759) Whole plant with sunti, black pepper, belo sunti and leaves, anantamul, pipuli, labanga, jowani are ground. One tea spoonful powder is given for seven days to cure gastric problem and deworming. Root and leaves are ground. Powder is given one tea spoonful twice daily for three days to cure stomach-ache. Root is used for repelling snake at home.

Asparagus racemosus Willd. (Asparagaceae), Climber, *Satabari*; Sulia R.F., Mahipur; Ostiamala, Panchirida, (CBL-37556, 37765) Tuberous root is ground. Five gm powder is given twice daily for 21 days to increase vitality and to reduce blood sugar level of diabetic patient.

Atylosia scarabaeoides (L.) Benth. (Leguminosae), Climber, *Lata kulthia*; Sulia R.F., Mahipur (CBL-37562) Leaves with turmeric (*Curcuma longa*) are pasted. Paste is applied in between finger and toe to cure hanja (due to fungal infection).

Ayapana triplinervis (Vahl) R.M.King & H.Rob. (Asteraceae), Herb, *Pokosunga*; Godipada, Panchirida (CBL-37503) Leaf juice is applied on cuts to stop bleeding.

Azadirachta indica A. Juss. (Meliaceae) Tree, *Limbo*; Godipada, Nihalprasad, Panchirida (CBL-37507, 37763) Four to five leaves with one inch long turmeric (*Curcuma longa* L.) are pasted. It is given once in empty stomach for deworming. Paste is also applied for curing dermatitis. Seed-oil is applied for curing leprosy.

Bacopa monnieri (L.) Wettst. (Plantaginaceae), Herb, *Brahmi*; Jodashahi, Odagaon (CBL-37788) Plant juice half spoon with honey is given twice daily for 30 days for boosting memory power. One teaspoon plant juice is also given twice daily for 15 days to cure epilepsy.

Bauhinia vahlii Wight & Arn. (Leguminosae), Liana, *Siali*, *Siari*; Ududa, Dasapala, Ostiamala, Panchirida; Jodashahi, Odagaon (CBL-37643, 37764, 37788) One tea spoonful seed-powder is administered once daily in empty stomach for two days for deworming.

Blumea lacera (Burm.f.) DC. (Asteraceae), Herb, *Pokasunga*; Kalapata, Manibhadra, Gania, (CBL-37725) Leaf juice is applied on cuts to stop bleeding and healing wound.

Bombax ceiba L. (Malvaceae), Tree, *Balsimli*; Kadamjhar, Odagaon (CBL-37665) Tuberous root with that of *Bhuinkakaru*, *Talmuli*, *Aswagandha*, *Satabari* and seeds of *Kuilekha* is ground. One tea spoonful powder is given with sugar candy twice daily for 30 days to increase vitality.

Brassica nigra (L.) W.D.J. Koch (Brassicaceae), Herb, *Sarisha*; Kadamjhar, Odagaon (CBL- 37672) Leaves are used as greens to cure constipation.

Bryophyllum pinnatum (Lam.) Oken (Crassulaceae), Herb, *Hemkal*, *Hemkalopatra*; Majhiakhanda, Panchirida; Bahadajhola, Odagaon (CBL-37525, 37785) Three leaves with five to seven peppers (*Piper nigrum*) are pasted. One tea spoon paste is given twice daily for five days to cure blood dysentery.

Buchanania cochinchinensis (Lour.) M.R. Almeida, (Anacardiaceae), Tree, *Char*; Sikharpur, R.F., Khandapara; Sulia R.F., Mahipur (CBL-37614, 37693) Stem bark paste is boiled in Jara (*Ricinus communis*) oil. After cooling oil is massaged on joint to relieve pain.

Byttneria herbacea Roxb. (Sterculiaceae), Herb, *Sonaragoda*; Sikharpur R.F., Khandapara (CBL-37622) Root with 21 peppers (*Piper nigrum*) is pasted. It is applied on swelling part due to filaria and also cures pain.

Butea monosperma (Lam.) Taub. (Leguminosae), Tree, *Khuntapalas*; Pinki Chhak, Dasapala, (CBL -39911) Stem bark with raw cow milk is pasted (add no water). It is applied on broken part and bandage with cotton cloth keep it for seven days. If not join bones repeat as previous for seven days to join bones. Flowers with curd are pasted. Two tea spoon paste is given in empty stomach for seven days to cure leucorrhoea.

Butea superba Roxb. (Leguminosae), Liana, *Latapalash*; Sulia R.F., Mahipu; Jodashahi, Odagaon (CBL-37560, 37796) Half a tea spoon seed-powder is given once daily for four days for deworming.

Cajanus cajan (L.) Millsp. (Leguminosae), Shrub, *Kandul*; Kadamjhar, Odagaon, Sampada, Mahipur, (CBL-37676, 37708) Two tea spoonleaf-juices with sour curd and sugar candy is given in empty stomach for seven days to cure jaundice.

Cajanus scarabaeoides (L.) Thouars (Leguminosae), Climber, *Lata kulthia*; Sulia R.F., Mahipur (CBL-37562) Leaves with turmeric (*Curcuma longa*) are pasted. Paste is applied in between finger and toe to cure Hanja (due to fungal infection).

Calotropis gigantea (L.) Dryand. (Apocynaceae), Shrub, *Arakha*; Datta pokhori, Khandpara; Jodashahi, Odagaon (CBL-37630, 37800) Latex is applied on gum of infected tooth to cure tooth-ache. It is also applied on spot of snake bite to neutralize poison effect. One inch long root is pasted. It is given twice daily for three days to cure dysentery.

Capparis zeylanica L. (Capparaceae), Liana, *Asadua*, *Asharua*; Kadamjhar, Odagaon, Nihalprasad, Panchirida, (CBL-37674, 37761) Root with three black peppers (*Piper nigrum*) is made into powder. Two tea spoonful powder is given once daily in empty stomach to relieve rheumatic pain.

Cardiospermum halicacabum L. (Sapindaceae), Climber, *Putariloi*; Pokhorigochha, Dasapala (CBL-37641) Whole plant paste is applied on fracture part to join bones.

Carissa carandas L. (Apocynaceae), Shrub, *Khirkuli*, *Kujikaranda*; Sikharpur R.F., Khandapara, Jodashahi, Odagaon (CBL- 37609, 37794) Root powder 4 gm is diluted with cold water. It is given twice daily for seven days to cure delay menstruation start of teen agers.

Cascabela thevetia (L.) Lippold (Apocynaceae), Tree, *Kaniari*; Pathara, Odagaon (CBL-37664) Latex is applied on cuts to stop bleeding and healing wound.

Cassia fistula L. (Leguminosae) Tree, *Sunaari*; Manibhadra R.F., Gania, Sulia R.F., Mahipur, Kutibari, Dasapala (CBL-37582, 37687, 39918) Stem bark 5-6 gm is moistened in a glass of water. Extract is given in empty stomach once daily for 21 days to reduce cholesterol level of blood. Young stem is chewed and juice taken twice daily. It is done for seven days to cure impotency.

Catharanthus roseus (L.) G. Don (Apocynaceae) Herb, *Sadabahari*; Gudupangi, Nayagarh, (CBL-39938) One tea spoon leaf juice with half tea spoon water is prescribed in empty stomach for three days to cure blood dysentery.

Centella asiatica (L.) Urb. (Apiaceae), Herb, *Thalkuri*; Majhiakhanda, Nihalprasad, Panchirida (CBL 37523, 37754) Plant paste is applied on head to relieve headache.

Chloroxylon swietenia DC. (Rutaceae), Tree, *Veru*; Sikharpur R.F., Khandapara; Sampada, Mahipur, (CBL-37623, 37716) Stem bark with seven peppers (*Piper nigrum*) is pasted. Paste is applied on hurt spot and bandage with cotton cloth to relieve pain.

Chromolaena odorata (L.) R.M. King & H. Rob. (Asteraceae), Shrub, *Pokasungha*; Sampada, Mahipur (CBL -37719) Leaf juice is applied on cuts to stop bleeding and healing wound.

Chrysopogon zizanioides (L.) Roberty (Poaceae), Herb, *Benamul*; Kutibari, Dasapala, (CBL -39917) Root powder is applied on head to cure vertigo.

Cipadessa baccifera (Roth) Miq. (Meliaceae), Shrub, *Rana*, *Nahalabeli*; Manibhadra R.F., Gania; Sulia R.F., Mahipur, (CBL-37569, 37697) Stem bark powder or paste is applied on cuts to stop bleeding and healing wound.

Cissampelos pareira L. (Menispermaceae), Climber, *Akanbindi*, *Onkarbindi*; Datta pokhori, Khandpara; Nihalprasad, Panchirida (CBL-37637, 37769) Root is ground. One tea spoonful powder is given twice daily for five days to cure diarrhea.

Clerodendrum infortunatum L. (Lamiaceae), Shrub, *Kumbatua*; Sulia R. F., Mahipur (CBL-37702) Two leaves are soaked in a glass of water over night. Aqueous extract is prescribed once daily in empty stomach for 45 days to reduce blood sugar level of diabetic patient.

Clerodendrum phlomidis L.f. (Lamiaceae), Shrub, *Dankar*; Dhipamal, Nayagarh (CBL-39929) Three leaves and seven black peppers are ground. One tea spoonful powder is given once daily for 15 days to relieve rheumatic and joint pain.

Cocculus hirsutus (L.) W. Theob. (Menispermaceae), Climber, *Chakrakedar*, *Daha Dahaka*, *Daadaya*; Masabadi, Dasapala, Sulia R.F., Mahipur (CBL-37652, 37703) Root with leaves of tulsi (*Ocimum tenuiflorum*) and three peppers (*Piper nigrum*) is pasted. It is given to the victim of snake bite to neutralize poison effect. Leaf juice is given one tea spoonful twice daily for seven days to cure indigestion and vertigo. Root paste is applied on spot of scorpion sting to neutralize poison effect and relieve pain.

Combretum dacandrum Jacq. (Combretaceae), Liana, *Atundi*; Sulia R.F., Mahipur, (CBL-37561, 37686) Stem fibre is tied around the blunt spot to relieve pain. Stem bark is boiled in Jara (*Ricinus communis*) oil. Luke warm oil is applied on swelling part of joint to relieve pain. Leaf paste is boiled in Jara oil and applied on blood clotting spot to dissolve clot.

Cordia dichotoma G. Forst. (Boraginaceae), Tree, *Gual*; Sulia R.F., Mahipur, (CBL-37543, 37700) Stem bark is soaked in a cup of water over night. Extract is given in

empty stomach once daily for seven days to cure spermatorrhoea.

Croton bonplandianus Baill. (Euphorbiaceae), Herb, *Himaricha*, *Hawmaricha*; Majhiakhanda, Panchirida; Kutibari, Dasapala (CBL-37524, 39916) Leaves are boiled in Jara (*Ricinus communis*) oil. Luke warm oil is applied on joint to relieve pain. Latex is applied for curing wart.

Croton caudatus Geiseler (Euphorbiaceae), Shrub, *Bazramali*, *Kumbatua*; Sulia R.F., Mahipur (CBL-37564) Leaves with seven peppers (*Piper nigrum*) are pasted. It is given twice daily in empty stomach to reduce blood sugar level of diabetic patient.

Cryptolepis dubia (Burm.f.) M.R. Almeida (Apocynaceae), Climber, *Gopokanu*; Datta pokhori, Khandpara; Sulia R.F., Mahipur, (CBL-37625) Latex is applied on gum of infected tooth to cure looseness of tooth and relieves toothache. It is also applied on boil to suppress.

Curculigo orchioides Gaertn. (Hypoxidaceae), Herb, *Talmuli*; Sulia R.F., Mahipur, (CBL -37552) Tuberous root with that of Bal semal (*Bombax ceiba*) and date palm (*Phoenix sylvestris*) is ground. One tea spoonful powder with cold water is given twice daily till increased sperm count.

Cuscuta reflexa Roxb. (Convolvulaceae), Climber, *Nirmuli*; Kespania, Nihalprasad, Panchirid, (CBL-37534, 37762) Whole plant with turmeric (*Curcuma longa*) and leaf of neem (*Azadirachta indica*) is pasted. It is applied to cure dermatitis. Whole plant paste is applied on broken part and bandage with cotton cloth to join bones.

Cynodon dactylon (L.) Pers. (Poaceae), Herb, *Durba*; Godipada and Kespania, Panchirid, Gochhabari (CBL-37510, 39933, 37532) Juice of the plant is applied on cuts to stop bleeding. Plant juice is dropped in nostril to cure bleeding from nose. Whole plant with unboiled rice and sunti (*Zingiber officinale*) is ground. Paste is applied on forehead to cure headache.

Cyperus rotundus L. (Cyperaceae) Herb, Mutha; Godipada, Panchirida (CBL-37514) Five to Seven tuberous root, stipule of betel (*Piper betle* L.), Cumin (*Carum carvi* L.) Carom (*Trachyspermum amni*) and seven peppers (*Piper nigrum*) are ground. One tea spoonful powder is given once daily for three days to cure indigestion.

Dalbergia sissoo DC. (Leguminosae) Tree, *Shishu*, *Shishoo*; Manibhadra R.F., Gania; Gudupangi, (CBL-37573, 39934) Stem is kept in fire; juice is coming out from both ends of stem. Juice is applied to cure eczema.

Datura metel L. (Solanaceae) Shrub, *Kaladutura*; Godipada, Panchirida, Rajanpalli, Nayagarh, (CBL-37516, 39923) Leaf- juice is boiled in Jara (*Ricinus communis*) oil. It is applied on joint and massaged to relieve pain. Root with two black peppers is pasted. Paste is applied on reddishness of breast to reduce swelling and relieve pain.

Desmodium gangeticum (L.) DC. (Leguminosae) Herb, *Salparni*; Masabadi, Dasapala, (CBL-37650) Root is ground. One tea spoonful powder is taken twice daily for 30 days to relieve joint pain.

Desmodium heterocarpon (L.) DC. (Leguminosae), Herb, *Krishnaparni*; Masabadi, Dasapala, (CBL-37653) Root is ground. One tea spoon powder with sugar candy is given twice daily for Seven days to relieve joint pain.

Desmodium triflorum (L.) DC. (Leguminosae), Herb, *Adhaigolia*; Manibhadra R.F., Gania (CBL-37586) Whole plant with Mathuramul, Sonaragoda (*Grewia helicterifolia*)

are pasted. It is fried in jara (*Ricinus communis*) oil and applied on broken part to join bones.

Diospyros montana Roxb. (Ebenaceae), Tree, *Kalucha*, *Kataka*; Nihalprasad, Panchirida (CBL-37758) Seed-oil is applied for curing skin diseases.

Elephantopus scaber L. (Asteraceae) Herb, *Mayurchulia*; Nihalprasad, Panchirida (CBL-37767) Two inch long root with two long peppers (*Piper longum*) and sugar candy is made into powder. Half a tea spoon powder is prescribed to baby twice daily for three days to cure diarrhoea.

Euphorbia hirta L. (Euphorbiaceae), Herb, *Narahari*; Mahukana, Gania; Sampada, Mahipur, (CBL-37593, 37715) Latex is applied to cure ring worm. Plant juice is applied on eyes to cure conjunctivitis. One teaspoon leaf juice is given with honey for seven days to cure spermatorrhoea.

Euphorbia tithymaloides L. (Euphorbiaceae) Herb, *Khirokanchan*; Kadamjhar, Odagaon, (CBL-37668) Mustard oil is massaged on joint and thereafter latex is applied on it to relieve pain.

Evolvulus nummularius (L.) L. (Convolvulaceae), Herb, *Bhuinharkankali*; Sampada, Mahipur (CBL-37717) Whole plant is boiled in jara (*Ricinus communis*) oil. Oil is applied and massaged on affected joint to relieve pain.

Ficus hispida L.f. (Moraceae) Tree, *Dimri*; Sulia R.F., Mahipur (CBL-37558) Root-sap is given one tea spoon twice daily for seven days to cure spermatorrhoea.

Flacourtia indica (Burm. f.) Merr. (Salicaceae), Herb, *Baichakuli*; Kespania, Panchirida (CBL-37531) Root bark with five to seven peppers (*Piper nigrum*) is ground. It is given to cure stomach-ache.

Glycosmis pentaphylla (Retz.) DC. (Rutaceae), Shrub, *Kuraria*; Manibhadra R.F., Gania (CBL-37577) Stem is used as tooth brush to cure toothache.

Grewia helicterifolia Wall. ex G.Don (Malvaceae), Herb, *Sunaregada*, *Sonaragoda*; Sulia R.F., Mahipur, (CBL-37548, 37683) Bark with root is pasted. It is applied on swelling part to relieve pain. Fruits are boiled in mustard oil. Oil is massaged on joint to relieve pain. Leaf paste is applied on scrotum to cure hydrocele.

Gymnema sylvestre (Retz.)R. Br. ex Sm. (Apocynaceae), Climber, *Gudmari*; Masabadi, Dasapala (CBL-37660) Whole plant with inner bark of Piyasal (*Pterocarpus marsupium*), seeds of Jamun (*Syzygium cumini*) are ground in same ratio. One tea spoonful powder is given twice daily for 15 days to reduce blood sugar level of diabetic patient.

Helicterus isora L. (Malvaceae), Shrub, *Muraphal*; Sulia R.F., Mahipur; Kalapata, Manibhadra, Gania (CBL-37559, 37734) Fruit is boiled in mustard or Rashi oil. After cooling oil is massaged whole body of baby to cure twisting of body due to body ache.

Heliotropium indicum L. (Boraginaceae), Herb, *Hatisuro*; Nihalprasad, Panchirida, (CBL-37768) Root paste is mixed with lime water and applied in ringworm till cured.

Hellenia speciosa (J.Koenig) S.R.Dutta (Costaceae), Herb, *Gaigendaria*; Kespania, Panchirida (CBL-37541) Tuberous root paste is mixed with cow milk. It is applied on head to cure vertigo.

Hemidesmus indicus (L.) R. Br. ex Schult. (Apocynaceae), Climber, *Sugandhi*; Sulia R.F., Mahipur, (CBL-37549) Root is ground. One tea spoonful powder is given with honey in the morning for 15 days to cure spermatorrhoea.

Hibiscus rosa-sinensis L. (Malvaceae), Shrub, *Rudrapushpa*, *Mandara*; Godipada, Panchirida (CBL-

37518) Leaf-juice is applied on boil for bursting and healing wound.

Holarrhena pubescens Wall. ex G. Don (Apocynaceae) Tree, *Kerua*; Majhiakhanda, Panchirida (CBL-37527) Bark paste with sour curd is given once daily for seven days to cure stomach-ache during menstrual period.

Hybanthus enneaspermus (L.) F. Muell. (Violaceae), Herb, *Ratan purus*; Sulia R.F., Mahipur (CBL-37551) Root is ground. One tea spoonful powder is given with sugar candy once daily in empty stomach for 21 days to cure impotency.

Ichnocarpus frutescens (L.) W.T.Aiton (Apocynaceae) Climber, *Shyamata*; Sulia R.F., Mahipur (CBL-37547) Root is ground. One tea spoonful powder is given once daily in empty stomach for 15-45 days to cure loss of appetite.

Ipomoea cheirophylla O'Donnell (Convolvulaceae), Climber, *Bhuinkakaru*; Datta pokhori, Khandpara (CBL-37624) Tuberous root with that of Satabari, Talmuli, Balsimli, seeds of Baidanka and sugar candy in equal proportion are ground. One tea spoonful powder is given twice daily for 30 days to cure impotency.

Ipomoea pes-tigridis L. (Convolvulaceae), Climber, *Krushnatamala*; Manibhadra R.F., Gania (CBL-37578) Root paste is applied on boils for bursting and healing the wound.

Jatropha gossypifolia L. (Euphorbiaceae) Shrub, *Lanka kalo*; Kspania, Panchirida; Bahadajhola, Odagaon (CBL-37535, 37775) Stem is used as tooth brush to cure toothache, looseness of gum and mouth sores.

Justicia adhatoda L. (Acanthaceae), Shrub, *Basanga*; Godipada, Panchirida (CBL -37508) Leaves are boiled in one glass of water till it reduced to half. It is given with one tea spoon honey twice daily for 30 days to cure asthma, cough and cold.

Leea indica (Burm.f.) Merr. (Vitaceae), Herb *Kanjikanjia*, *Bana angora*; Sulia R.F., Mahipur (CBL-37555) Stem is ground. One tea spoonful powder is given once daily for five days to cure acidity.

Leonotis nepetifolia (L.) R.Br. (Lamiaceae), Herb, *Butoiri*; Barajhara, Khandapara (CBL -39901) Inflorescence is boiled in Rasi (*Sesamum indicum*) oil. After cooling oil is applied on head to cure sores and also applied to cure skin diseases.

Leucas zeylanica (L.) W.T.Aiton (Lamiaceae) Herb, *Gaiesha*, *Gayesh*; Mahukana, Gania, Masabadi, Dasapala (CBL-37602, 37659) Leaf juice is dropped into nostril of snake bite victim to neutralize snake poison effect. Leaf juice with powder of seven peppers (*Piper nigrum*) is given twice daily for seven days to cure fever.

Lindernia crustacea (L.) F. Muell. (Linderniaceae) Herb, *Shankapushpi*; Masabadi, Saken, Dasapala (CBL-37647) Leaf juice is given half a tea spoon twice daily for 15 days for boosting memory power.

Litsea glutinosa (Lour.) C.B.Rob. (Lauraceae) Tree, *Joysanda*, *Masania*; Sulia R.F., Mahipur, (CBL-37705) Stem bark paste is applied on broken part and bandage with cotton cloth to join bones.

Lygodium flexuosum (L.) Sw. (Lygodiaceae) Herb, *Kalachero*; Kalapata, Manibhadra, Gania (CBL-37732) Root with five black peppers (*Piper nigrum*) is pasted. Paste is prescribed once daily for five days to cattle for curing swelling of eyes.

Madhuca longifolia var. *latifolia* Roxb.) A. Chev. (Sapotaceae), Tree, *Mahul*; Datta pokhori, Khandpara (CBL-37636) Latex is applied on gum to cure tooth-ache.

Magnolia champaca Baill. ex Pierre (Magnoliaceae), Tree, *Champa*; Godipada, Panchirida, (CBL-37501) Juice of five-seven leaves is applied on hair to repel lice.

Marsilea quadrifolia L. (Marsileaceae) Herb, *Sunsumia*; Mahukana, Gania (CBL-37606, 37781) Leaves are eaten as vegetable for curing insomnia.

Martynia annua L. (Martyniaceae), Shrub, *Baghnakhi*; Manibhadra R.F., Gania (CBL -37580) Seed-oil is applied for curing dermatitis.

Mentha piperita L. (Lamiaceae) Herb, *Pudina*; Bahadajhola, Odagaon (CBL-37773) Leaf-juice is given twice daily for seven days to cure indigestion.

Mimosa pudica L. (Leguminosae) Herb, *Lajakuri*; Majhiakhanda, Panchirida (CBL-37526) Leaves 12 with six peppers (*Piper nigrum*) are ground. It is given twice daily for 15 days to cure piles.

Mimusops elengi L. (Sapotaceae) Tree, *Boul*; Godipada, Panchirida (CBL-37505) Stem is used as tooth brush to cure toothache. Epicarp of fruit is made into powder. It is used as toothpowder to cure toothache.

Mitracarpus hirtus (L.) DC. (Rubiaceae) Herb, *Suganthia*; Sampada, Mahipur (CBL-37709) Whole plant paste is given one tea spoon twice daily for seven days to cure leucorrhoea.

Murraya koengii (L.) Spreng. (Rutaceae), Tree, *Mirsinga*; Godipada, Panchirida (CBL- 37521) Leaf-juice is mixed with Jara (*Ricinus communis*) oil. It is applied on hair for blackening and healthy growth.

Naringi crenulata (Roxb.) Nicolson (Rutaceae), Tree, *Behenta*, *Benta*; Sikharpur R.F., Khandapara (CBL-37611) Bark with seven peppers (*Piper nigrum*) is ground. 10 gm powder is given twice daily for seven days to relieve rheumatic pain.

Nyctanthes arbor-tristis L. (Oleaceae) Tree, *Gangaseoli*; Godipada, Panchirida, (CBL-37504) Leaf juice three teaspoon with powder of three peppers is given twice daily for three days to cure malarial fever.

Ocimum basilicum L. (Lamiaceae), Herb, *Durlava*, *Kapparkanta*; Jodashahi, Odagaon, (CBL-37786) Leaf juice is applied on old wound for healing. Seed paste with sugar candy is made into drink. One glass of drink is given twice daily for seven days to cure spermatorrhoea.

Ocimum gratissimum L. (Lamiaceae), Shrub, *Gayatulosi*; Kadamjhar, Odagaon, (CBL-37666) Leaf-juice is applied on cuts to stop bleeding and healing wound.

Ocimum tenuiflorum L. (Lamiaceae), Herb, *Tulosi*; Datta pokhori, Khandpara, (CBL -37632) Leaf juice is taken with honey twice daily to cure cough and cold till cure.

Paederia foetida L. (Rubiaceae), Climber, *Prasarani*; Masabadi, Dasapala, (CBL-37661) Whole plant is ground. One tea spoonful powder is given twice daily for 15 days to relieve joint pain.

Pentapetes phoenicea L. (Malvaceae) Herb, *Bodhuli*; Masabadi, Dasapala, (CBL-37662) Leaf-juice is applied for curing dermatitis.

Persicaria hydropiper (L.) Delarbre (Polygonaceae) Herb, *Barahakranta*, *Jharoshira*; Jodashahi, Odagaon, (CBL-37789) One tea spoon leaf juice with honey is given twice daily for five days to cure blood dysentery.

Phyllanthus emblica L. (Phyllanthaceae) Tree, *Aola*; Sikharpur R.F., Khandapara, (CBL-37613) Fruits are ground, one tea spoonful powder is given twice daily for 14 days to cure indigestion

Phyllanthus fraternus G.L. Webster (Phyllanthaceae), Herb; *Badiaowla*, *Bariawola* Godipada, Panchirid, Sampada, Mahipur, (CBL-37513, 37714) Whole plant with leaves of Ganga seoli (*Nyctanthes arbor-tristis*) (1:3) is ground. One tea spoon powder with rice wash water is given twice daily for seven days to cure leucorrhoea. Whole plant with leaf of Bel (*Aegle marmelos*) is ground. One tea spoonful powder is given once daily in empty stomach for 21 days to reduce blood sugar level of diabetic patient.

Phyllanthus reticulatus Poir. (Phyllanthaceae) Tree, *Jagang*; Mahukana, Gania (CBL-37604) Stem is cut. Sap is coming out from the cut end. It is applied on eyes to cure conjunctivitis.

Phyllodium pulchellum (L.) Desv. (Leguminosae), Herb, *Salaparni*; Sulia R.F., Mahipur, (CBL -37544) Whole plant with leaves of Belo (*Aegle marmelos*) are ground. One tea spoonful powder is given twice daily for 45 days to cure gastric problem.

Piper longum L. (Piperaceae) Climber, *Pipali*; Godipada, Panchirida (CBL-37520) Fruits are ground. One tea spoonful powder with honey is taken to cure cough and cold.

Plumbago zeylanica L. (Plumbaginaceae), Herb, *Dhalachitaparu*; Kespania, Panchirida; Talamahukana, Manibhadra, Gania (CBL -37539, 37742) Two inch long root is boiled in water. Aqueous extract is used for gargling to relieve toothache.

Pongamia pinnata (L.) Pierre (Leguminosae) Tree, *Karanj*; Singapara, Khandapara, (CBL-39903) Seed-oil is used for curing dermatitis.

Pterocarpus marsupium Roxb. (Leguminosae) Tree, *Piyasal*, *Bijasal*; Nihalprasad, Panchirida (CBL-37755) Stem bark is soaked in a glass of water. Extract is given once daily in empty stomach for 15 days to reduce blood sugar level of diabetic patient.

Pterospermum acerifolium (L.) Willd. (Malvaceae), Tree, *Bahal*; Gudupangi, (CBL -39935) Three stipules are moistened in a glass of water. Aqueous extract is prescribed in empty stomach once daily for seven days to cure leucorrhoea.

Punica granatum L. (Lythraceae) Shrub, *Dalimbo*; Range office campus, Odagaon, (CBL-37680) One tea spoon leaf-juice is taken once daily for seven days for deworming.

Rauwolfia serpentina (L.) Benth.ex Kurz (Apocynaceae), Herb, *Patal gorura*; Kespania, Panchirida (CBL-37542) One inch long root with seven peppers (*Piper nigrum*) is ground. Powder is given to snake bite victim to neutralize poison effect.

Rauwolfia tetraphylla L. (Apocynaceae), Undershrub, *Patal garuda*; Datta pokhori, Khandpara (CBL -37631) Root paste is given to the victim of snake bite to neutralize poison effect. It is also given to reduce blood pressure.

Sansevieria cylindrica Bojer ex Hook. (Asparagaceae) Herb, *Bacha*; Jodashahi, Odagaon, (CBL-37792) Rhizome is chewed to cure throat pain (Tonsillitis).

Sapindus emarginatus Vahl. (Sapindaceae) Tree, *Muktamaja*; Rajanpalli, (CBL- 39920) Fruit-powder is mixed in water and given to neutralize poison effect and wash intestine.

Schleichera oleosa (Lour.) Merr. (Sapindaceae), Tree *Kusum*; Sulia R.F., Mahipur (CBL -37684) Seed-oil is used for massaging whole body to relieve body ache. It is also applied on head to relieve head ache.

Scoparia dulcis L. (Plantaginaceae), Herb, *Dal chini*, *Barijathimadhu*; Manibhadra R.F., Gania; Sampada, Mahipur, (CBL-37568, 37713) Plant paste is made into a drink. One glass of drink is given to cure stomach disorder. Half a tea spoonful leaf juice is given twice daily for 3-5 days to cure diarrhea of child.

Semicarpus anacardium L.f. (Anacardiaceae), Tree; *Valia*; Sulia R.F., Mahipur, (CBL -37563) Seed-oil is applied for curing dermatitis.

Senna occidentalis (L.) Link (Leguminosae), Herb, *Barachakunda*; Masabadi, Dasapala (CBL-37648) Leaf-juice is applied for curing dermatitis.

Senna uniflora (Mill.) H.S. Irwin & Barneby (Leguminosae), Herb, *Barachakunda*; Majhiakhanda, Panchirida (CBL-37528) Leaf-juice is applied on spot of scorpion sting to relieve pain.

Shorea robusta Gaertn. (Dipterocarpaceae) Tree, *Sal*; Sikharpur R.F., Khandapara (CBL-37620) Bark of this plant with that of neem (*Azadirachta indica*) and Aswasth (*Ficus religiosa*) is ground. The ingredients are also boiled in water. Cancerous wound is washed with luke warm aqueous extract then powder is applied for healing wound.

Sida acuta Burm. f. (Malvaceae), Herb, *Pohara*; Godipada, Panchirida (CBL-37502) Root paste is applied on swelling part of body to cure swelling and relieve pain.

Smilax macrophylla Willd. (Smilacaceae), Climber, *Kumbhatua*; Ostiamala, Panchirida, (CBL-37766) Seven inch long root with three black peppers (*Piper nigrum*) is pasted. Paste with one cup of cow milk is given for seven days to reduce blood sugar level of diabetic patient.

Smilax zeylanica Blume (Smilacaceae), Liana, *Muturi*, *Pithal*; Sulia R.F., Mahipur; Kadamjhar, Odagaon (CBL-37550, 37671) Root is ground. One tea spoon powder is given with cow milk in empty stomach for 21 days to cure irregular menstruation and infertility.

Solanum americanum Mill. (Solanaceae), Herb *Kakamachi*; Manibhadra R.F., Gania, (CBL-37574) Leaf-juice is given to stop vomiting.

Solanum torvum Sw. (Solanaceae), Shrub, *Dengabhegi*; Kadamjhar, Odagaon, (CBL-37670) Flowers and fruits are ground. One forth a tea spoon powder with one tea spoon honey is taken twice daily for seven days to cure cough and cold.

Solanum virginianum L. (Solanaceae), Herb, *Vegibaigan*; Pokhorigochha, Dasapala; Jodashahi, Odagaon (CBL-37642, 37797) Whole plant with 'Basang', 'Gulchi' is boiled in water. Two tea spoon aqueous extract is given twice daily for seven days to cure malarial fever. One tea spoonful fruit-powder is given once daily for seven days to treat cough and cold.

Soymida febrifuga (Roxb.) A. Juss. (Meliaceae), Tree, *Rohini*, *Soyamo*; Sikharpur R.F., Khandpara, Sampada, Mahipur (CBL-37638) Bark paste is applied for healing wound. Stem bark powder is moistened in a cup of water. Aqueous extract is prescribed twice daily for seven days to relieve chest pain.

Sphaeranthus indicus L. (Asteraceae), Herb; *Bhuinkadam*; Nihalprasad, Panchirida, (CBL-37770) Whole plant paste is applied on rectum to cure piles.

Sphagneticola calendulacea (L.) Pruski (Asteraceae), Herb, *Bhringaraj*; Dhipamal, Nayagarh, (CBL-39927) Leaves are boiled in Rashi (*Sesamum indicum*) oil. Oil is applied on head to cure insanity and vertigo till cure.

Stephania japonica (Thunb.) Miers (Menispermaceae) Climber, *Akanadi*; Gudupangi, Nayagarh (CBL-39939) Root paste is applied on rectum to cure piles.

Streblus asper Lour. (Moraceae) Small tree, *Sahada*; Sikharpur R.F., Khandapara (CBL-37612) Young stem is used as tooth brush to cure tooth-ache.

Strychnos nux-vomica L. (*Loganiaceae*) Small tree, *Kuchila*; Kespania, Panchirida, (CBL-37538) Seeds are rubbed on stone. Paste is applied in rectum at night to cure piles. Leaves are boiled in mustard (*Brassica nigra*) oil. Luke warm oil is applied on joint to relieve pain.

Syzygium cumini (L.) Skeels (Myrtaceae) Tree, *Barajamun*; Dasapala, (CBL-39909) One tea spoonful seed-powder is prescribed once daily in empty stomach for 15 days to reduce blood sugar level of diabetic patient. Seed-powder with leaf powder of Gudmari (*Gymnema sylvestri*) is mixed 2:1 ratio. One tea spoonful mixed powder is prescribed once daily for 15 days to reduce blood sugar level of diabetic patient.

Tamarindus indica L. (Leguminosae); Tree, *Tentuli*; Masabadi, Dasapala, (CBL-37651) Bark is burned, one tea spoon ash is given twice daily for 15 days to cure acidity and stomach-ache.

Tephrosia purpurea (L.) Pers. (Leguminosae) Herb; *Kulothia*, *Bankuloth*; Kespania, Nihalprasad, Panchirida, (CBL-37530, 37757) Root bark with five to seven black peppers (*Piper nigrum*) is ground. It is given twice daily for three days to cure blood dysentery. One tea spoonful root powder with three tea spoon water is given once daily in empty stomach for seven days to dissolve kidney stone or any other stone.

Terminalia arjuna (Roxb. ex DC.) Wight & Arn. (Combretaceae); Tree, *Arjun*; Dhipamal, Nayagarh, (CBL-39930) Stem bark is boiled in water (1:3). Extract is mixed with cow ghee. One tea spoon mixture is given twice daily for 30 days to cure cardiac problem.

Terminalia bellirica (Gaertn.) Roxb. (Combretaceae); Tree, *Bahada*; Masabadi, Dasapala, (CBL-37655) Fruit with that of Awola (*Phyllanthus emblica*), Harida (*Terminalia chebula*) is ground. One tea spoonful powder is given twice daily for seven days to cure stomach disorder.

Thespesia populnea (L.) Sol. ex Correa (Malvaceae); Small tree, *Sthalpadma*; Dasapala, (CBL-39907) Seed-oil is massaged on joint to relieve pain.

Tinospora sinensis (Lour.) Merr. (Menispermaceae), Climber, *Gulich*, *Guluchi*; Masabadi, Dasapala, (CBL-37654) One tea spoonful leaf-powder is given thrice daily for seven days to cure fever. Quarter a tea spoon fruit-powder is taken twice daily for seven days to relieve asthma.

Trachyspermum ammi (L.) Sprague (Apiaceae), Herb; *Ajomoda*, *Banajowani*; Sulia R.F., Mahipur, (CBL-37557) Seeds with Fennel seeds (*Foeniculum vulgare*) are ground. Two gm powder is prescribed twice daily for 15 days with cold water to cure loss of appetite.

Tragia involucrata L. (Euphorbiaceae), Herb, *Bichuati*; Kespania, Panchirida (CBL-37537) Leaves with 21 peppers (*Piper nigrum*) are pasted. It is applied on swelling part of filarial patient for curing swelling.

Tribulus terrestris L. (Zygophyllaceae), Herb, *Gokhura*; Masabadi, Dasapala, (CBL-37658) Whole plant is ground. One tea spoonful powder is given twice daily for 10 days to reduce blood sugar level of diabetic patient.

Trichodesma indicum (L.) Lehm. (Boraginaceae); Herb; *Churnavegri*; Talamahukana, Manibhadra, Gania (CBL-37752) Leaf is used as carminative. Half tea spoon root paste is diluted with water and prescribed twice daily for three days to cure diarrhoea of baby.

Trichosanthes tricuspidata Lour. (Cucurbitaceae) Climber, *Mahakal*, *Brahmakedar*; Masabadi, Dasapala (CBL-37649) Leaves and root paste are given half a tea spoon to the victim of snake and dog bite to neutralize poison effect.

Tridax procumbens (L.) L. (Asteraceae), Herb; *Bisalyakarani*; Godipada, Panchirida (CBL-37506) Leaves 15–20 are ground and mixed with sour curd. It is given twice daily for 15 days to cure leucorrhoea.

Vanda tessellata (Roxb.) Hook. ex G. Don (Orchidaceae), Herb, *Rasna*; Masabadi, Dasapala (CBL-37657) Leaf juice is applied on ear to cure earache. One tea spoonful root powder is given twice daily for seven days to relieve joint pain.

Ventilago denticulata Willd. (Rhamnaceae), Liana, *Pichuli*; Kalapata, Manibhadra, Gania, (CBL-37731) Two inch long root with two black peppers (*Piper nigrum*) is ground. It is given twice daily for five days to relieve rheumatic or joint pain.

Vitex negundo L. (Lamiaceae), Shrub; *Begonia*; Kespania, Panchirida (CBL-37529) Leaf-juice with one teaspoon honey is given once daily for four days to cure cough and cold. Leaves are boiled in Jara (*Ricinus communis*) oil and applied on joint to relieve pain.

Zingiber officinalis Roscoe (Zingiberaceae), Herb, *Ada*, *Adrak*; Masabadi, Dasapala (CBL-37656) Rhizome with Cumin (*Cuminum cyminum*) seeds is ground. One tea spoonful powder is given once daily to cure stomach-ache. Rhizome is chewed to cure throat pain.

Discussion

A total number of 198 ethnomedicinal information on 159 plant species belonging to 63 families and 142 genera have been collected from the tribal and rural people of Nayagarh District of Odisha during the study. Of these, it is analysed that these plants are used for 65 diseases/ disorders/ ailments like Acidity and gastric problem-4, Asthma-2, Bleeding from nostril-1, Blood dysentery-3, Body ache of baby-2, Bone joint-5, Cough and cold, -7, Boosting memory-2, Bursting boil and healing wound-3, Cardiac problem-1, Cancerous wound-1, Chest pain-1, Conjunctivitis-1, Constipation-2, Deworming-6, Diabetes-10, Diarrhoea-6, Dissolve blood clot -1, Dissolve stone-2, Dysentery-1, Earache-2, Epilepsy-1, Fever-3, Filarial (Swelling and pain)-2, Headache-3, Healing old wound-1, Healthy growth of hair-1, Hydrocele-1, Impotency-3, Increase sperm count-1, Increase vitality-3, Indigestion-5, Insomnia-1, Jaundice-1, Joint pain-15, Leprosy-1, Leucorrhoea-5, Lice repel-2, Loss of appetite-2, Malarial fever-2, Menstrual disorder-3, Mouth sores-1, Piles-5, Reddishness of breast-1, Reduce Blood pressure-1, Relieve pain (Hurt)-4, Rheumatic pain-4, Scorpion sting-2, Skin diseases-16, Sleepiness of baby-1, Small pox-1, Snake bite-5, Snake repel-1, Spermatorrhoea-5, Stomachache-4, Stomachache during menstrual period-1, Stomach disorder-2, Stop bleeding and healing wound-8, Suppress boil-1, Throat pain-1, Tonsillitis-1, Toothache-10, Vertigo-4, vomiting-1, Wart-1 etc. were observed dominant in the area. The above analysis reveals that tribal and rural people of this district are using highest number of plant species for Skin diseases (16 species) followed by joint pain

(15 species), diabetes (10 species), toothache (10 species), bleeding and healing wound- (8 species) (Fig.2).

As far as families are concern family Leguminosae is represented by maximum number of plants (21 species) followed by Apocynaceae (12 species), Lamiaceae (09 species), Malvaceae (09 species) (Fig. 3). Habit-wise analysis revealed that herbs are dominated with 68 species followed by trees (42 species) and shrub (22 species) (Fig.4).

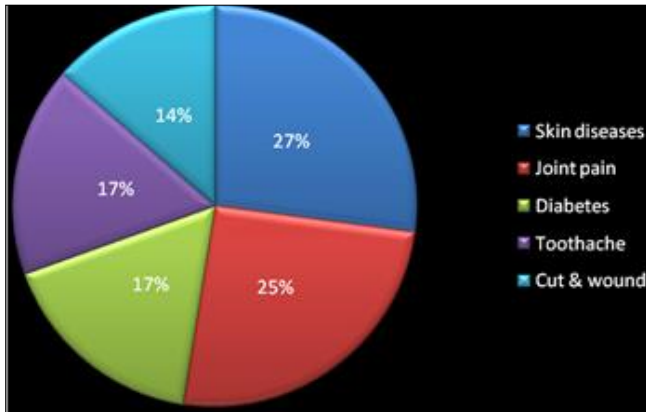


Fig 2: Disease wise analysis

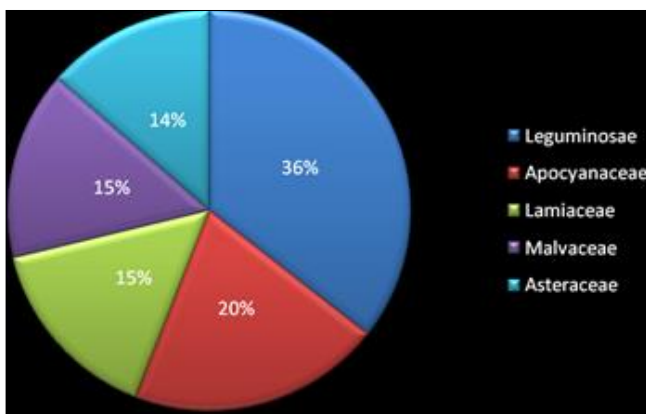


Fig 3: Dominant families of ethnomedicinal plants

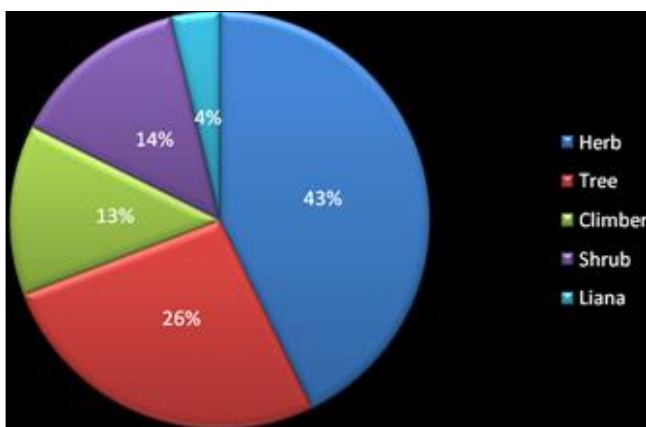


Fig 4: Habit wise analysis

Conclusion

Due to less interest of young generation towards traditional knowledge, urbanization and unscientific exploitation of natural forests, these valuable knowledge as well as plant species are getting depleted leading to their extinction. Therefore, it is necessary to collect and document such

precious knowledge from the tribal and remote areas before their complete depletion and also increase awareness among the tribal communities for sustainable use of plant wealth and their conservation.

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