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Documentation of Medicinal Plants at the Village Kholabaria of Natore District, Bangladesh

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Abstract: The present study was carried out on medicinal uses of plants by the local people at the village Kholabaria of Natore district, Bangladesh. The study was conducted during February 2016 to March 2017. The information about medicinal uses of rural people was collected through interview. A total of 124 plant species under 112 genera and 59 families have been documented which were used for the treatment of 114 categories ailments. These medicinal plants were used by the rural people for the treatment of various diseases like diabetes, bronchitis, high blood pressure, asthma, passing of semen, gonorrhoea, skin disease, jaundice, headache, diarrhoea, cough, cancer, dysentery, scabies, menstrual disorder, fever, toothache, burning wounds, stomachache, piles, gout, rheumatism, abortion, vomiting, ulcer, anemia, ring worm, tuberculosis, arthritis, heart disease, birth control, diuretic, hypertension, paralysis, constipation, baldness, sore, dyspepsia, chicken pox, pain, eczema, cholera, indigestion, tonic, women nervous and general debility, tetanus, liver disorders, sexual disease in male, worms, wound and injury, menstruation, cold, kidney disease, eye inflammation, boils, high cholesterol, urinary tract infections, sunburns, hepatitis, hair fall and others. The results of the study revealed that the local peoples had rich knowledge of medicinal plants and were using the plants for their primary healthcare. Therefore, it would be important to document the traditional knowledge of medicinal plants for further healing purpose.

Keywords: Medicinal Plants; Herbal Medicinal Practitioners; Kholabaria; Natore; Bangladesh.

1. Introduction

Utilization of medicinal plants is almost as old as the history of mankind. More than 80% of the world's population relies on traditional medicine to meet their daily health requirements [World Health Organization \(WHO\)](#) [1]. Medicinal plants were regularly used by people in prehistoric times for bio-medically curative and psychotherapeutic purposes [2]. Knowledge of medicinal plants has resulted from trial and error methods, and often based on speculation and superstition [3]. Nearly 50,000 species of higher plants have been used for medicinal purposes, and are also used in food, cleaning, personal care and perfumery [4]. Traditional knowledge of medicinal plants is important for modern medicine development [1]. Major pharmaceutical drugs have been derived from biological diversity [5]. For example, Aspirin was discovered independently by residents of both the New and Old worlds as a remedy for aches and fevers [6].

Several medicinal plants and ethno-botanical studies in Bangladesh have been carried out. [Alam](#) [7], [Alam, et al.](#) [8] documented the ethno-botanical information and medicinal plant use by Marma. Several works also done by [9], [10], [11], [12-14] [15], [16], [17], [18-22], [23], [24], [25], [25, 26] [27, 28], [29], [30], [31], [32], [33] [34], [35-42], [43] and [2]. The present study attempts to document medicinal plant knowledge and practices in Kholabaria Village of Natore district, Bangladesh.

2. Materials and Methods

2.1. Study Area

Kholabaria village is situated at between 24°07' to 24°43' north latitudes and between 88°17' to 88°58' east longitudes. The village lies about for 15 Kilometers East of Natore city. It is situated in the North-East side of Dhaka-Natore highway road. The climate of Kholabaria village is characterized by hot, humid summers and generally mild winters and rainfall. The summer season commences from April and continues up to the end of June. The rainy season comes at the end of June and stays up to September. The winter season starts from the middle of November and lasts up to the end of February. In terms of temperature variation it appears that average annual temperature is about 26-36°C. The minimum and maximum mean temperature during winter varies from 9°C to

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14.0°C. During summer the minimum and maximum mean temperature, vary from 25.5°C to 40.7°C. Data on temperature included in this table have been from monthly statistical bulletin of Bangladesh. The soil of village Kholabaria is rich alluvium. The texture of the soil is clayey. The soil pH of the area varies from 5.5 to 6.0 and 6.7 to 7.9 respectively with an average value of 7.22. This is the best soil for the growth of various plants and suitable for agricultural and gardening [44].

2.2. Data Collection

A total of twenty three field trips were made for the documentation of medico-botanical knowledge during February 2016 to March 2017. During the field interview, the information was noted in the documentation data sheet. All the information regarding plant species, biological forms, habitat, local names and uses were documented. Medicinal information was obtained through semi-structured interviews with knowledgeable people such as local Kabiraj and elderly people. A total of 97 informants having an age range 19-68 years were interviewed using semi-structured interviewed method. Professionally they were peasant, day labor, farmer, betel leaf cultivators, house wives, medicine men, small shop keepers etc. Among them 39 were female and rest 58 were male. Regular field studies were made in the study area during the period. Plant specimens were collected with flowers and fruits and processed using standard herbarium techniques [45].

2.3. Identification

The collected specimens were identified studying taxonomic books and booklets from the library of Rajshahi University. The collected materials were identified and described up to species with the help of Hooker [46], Prain [47] and Kirtikar and Basu [48] were consulted. For the current name and up to date nomenclature [49], [50] and Pasha and Uddin [51] were consulted.

3. Results and Discussion

Taxonomic investigation on medicinal plants used by the local people at the village Kholabaria of Natore district was carried out from February 2016 to March 2017. A total of 124 species belonging to 112 genera under 59 families were recorded. Magnoliopsida (Dicotyledones) is represented by 49 families, 99 genera and 109 species, whereas Liliopsida (Monocotyledones) by 10 families, 13 genera and 15 species. These comprise of 50 herbs, 31 trees, 35 shrubs, 7 climbers, 1 undershrub belong to 59 families. Distribution of angiosperm species in the families shows variation. The family Fabaceae is represented by 12 species. The family Euphorbiaceae and Lamiaceae is represented by 7 species in each. Each of Acanthaceae and Zingiberaceae is represented by 5 species. Each of Rutaceae and Solanaceae is represented by 4 species. Each of Malvaceae, Caesalpiniaceae, Combretaceae and Apocynaceae is represented by 3 species. Each of Lauraceae, Moraceae, Nyctaginaceae, Sapotaceae, Crassulaceae, Mimosaceae, Myrtaceae, Oxalidaceae, Asclepiadaceae, Convolvulaceae, Verbenaceae and Liliaceae is represented by 2 species. A single species in each was recorded by 34 families. Of 124 species recorded here, herbs are represented by 40.32%, trees by 25.00%, shrubs by 28.22%, climber by 5.64% and under shrub 0.80% species. For each species scientific name, local name, family, habit, ailments, treatment process and part(s) used are provided. The result of this information showed that these local people of Kholabaria village of Natore still depend on medicinal uses of plants for the treatment of various diseases, i.e. diabetes, bronchitis, lactic increase, weakness, lumbar degeneration, white leprosy, insects and snake bite, high blood pressure, asthma, passing of semen, gonorrhoea, skin diseases, jaundice, dandruff, headache, glandular swelling, diarrhea, astringent, acidity, dry cough, dropsy, cancer, dysentery, scabies, menstrual disorder, ophthalmic, tumors, leucoderma, catarrhal fever, chronic fever, malarial fever, toothache, burning wounds, stomachic, stomachache, piles, fever, influenza fever, epilepsy, gout, rheumatism, traumatic injury, abortion, vomiting, bleeding gums, ulcer, anemia, ring worm, hiccup, pneumonia, gastritis, itches, tuberculosis, elephantiasis, arthritis, heart disease, birth control, hydrophobia, spermatorrhoea, abdominal pain, carminative, diuretic, hypertension, paralysis, constipation, nausea, baldness, sore, dyspepsia, chicken pox, pain, pyorrhoea, eczema, cholera, flatulence, scurvy, febrifuge, indigestion, tonic, women nervous and general debility, biliousness, infection, tetanus, measles, whooping cough, digestive system disorders, nose bleeding, liver disorders, sexual disease in male, intestinal worms, worms, gastrointestinal disorders, alterative and attendant, wound and injury, menstruation, cold, wound healer, sciatica, enlarged spleen, lung infection, bleeding, heavy bleeding, kidney, eye inflammation, boils, mouth freshener, high cholesterol, body stimulant and purified blood, urinary tract infections, sunburns, dry skin, hepatitis, hair fall, cough and many types of diseases.

The most frequently used species for the treatment of different diseases are *Acalypha indica*, *Acorus calamus*, *Abroma augusta*, *Achyranthes aspera*, *Amaranthus spinosus*, *Amomum subulatum*, *Aegle marmelos*, *Aloe vera*, *Averrhoa carambola*, *Allium sativum*, *Artocarpus heterophyllus*, *Bauhinia acuminata*, *Bombax ceiba*, *Butea monosperma*, *Boerhaavia repens*, *Bacopa monnieri*, *Cannabis sativa*, *Cynodon dactylon*, *Cuscuta reflexa*, *Carissa carandus*, *Coccinia cordifolia*, *Coariocalyx motorius*, *Curcuma domestica*, *Cajanus cajan*, *Cinnamomum tamala*, *Corcus sativum*, *Cissus quadrangularis*, *Costus speciosus*, *Curcuma amada*, *Eclipta alba*, *Ficus racemosa*, *Gynura procumbens*, *Hibiscus rosa-sinensis*, *Justicia adhatoda*, *Kalanchoe spathulata*, *Kalanchoe pinatalam*, *Listea glutinosa*, *Musa sapientum*, *Murdannia nudiflora*, *Nigella sativa*, *Nyctanthes arbortristis*, *Ocimum americanum*, *Ocimum sanctum*, *Ocimum basilicum*, *Ocimum gratissimum*, *Mimosa pudica*, *Psoralea corylifolia*, *Phlogacanthus thysiflorus*, *Psidium guajava*, *Polygonum lanatum*, *Plumbago zeylanica*, *Pterocarpus santalinus*, *Punica granatum*,

Phyllanthus reticulatus, *Ricinus communis*, *Swertia chirata*, *Syzygium cumini*, *Smilax zeylanica*, *Saraca indica*, *Terminalia belerica*, *Terminalia arjuna*, *Tragia involucrata*, *Tinospora cordifolia*, *Tagetes erecta*, *Terminalia chebula*, *Tamarindus indica*, *Tridax procumbens*, *Vinca rosea*, *Withania somnifera*, *Zanthoxylum rhetsa* and *Zingiber officinale*. This finding of common medicinal plant families in the study is in agreement with [2], [15], [11], [10], [52], [53], [16], [17], [54] and [12-14].

Use of plant parts as medicine shows variation. Leaves (54.03%) are the leading part used in a majority of medicinal plants followed by bark (12.90%), fruit (19.35%), root (25.00%), seed (12.90%), stem (8.87%), whole plant (15.32%), flower (6.45%), leaf stalk (0.80%), rhizome (4.03%), shoot (0.80%), resin (0.80%), gum (3.22%), petiole (1.61%), heart wood (0.80%), carpel (0.80%), tuber (2.41%), spadix (0.80%), bulb (0.80%), stigma (0.80%), latex (1.61%). The survey has also recorded 114 categories of uses of 124 medicinal plants. Among them, 27 species were used to fever, 25 species for dysentery, 14 species for diarrhea, cough and skin diseases, 12 species for rheumatism and diabetes, 10 species for gonorrhoea and bronchitis, 9 species for Jaundice, 7 species for stomachic and piles, 6 species for glandular swelling, menstrual disorder, toothache, vomiting, ulcer and bleeding, 5 species for headache, burning wounds and gout, Thirty six categories of ailments were treated by two to four species and other fifty one categories of ailments were treated by only one species. Distribution of medicinal plant species in the families shows variation. The family Fabaceae is represented by 12 species. The family Euphorbiaceae and Lamiaceae is represented by 7 species in each. Each of Acanthaceae and Zingiberaceae is represented by 5 species. Each of Rutaceae and Solanaceae is represented by 4 species. Each of Malvaceae, Caesalpiniaceae, Combretaceae and Apocynaceae is represented by 3 species. Each of Lauraceae, Moraceae, Nyctaginaceae, Sapotaceae, Crassulaceae, Mimosaceae, Myrtaceae, Oxalidaceae, Asclepiadaceae, Convolvulaceae, Verbenaceae and Liliaceae is represented by 2 species. This finding of common medicinal plant families in the study is in agreement with [2], [15], [11], [10], [52], [53], [16], [17], [54] and [12-14].

4. Conclusion

Documentation of traditional medicinal knowledge could be beneficial activity for human mankind health purpose. The local healers have incredible knowledge of the medicinal properties and uses of their ambient natural resources. It exists in the form of traditions and uses maintained perpetuity through verbal transmission only. Through this effort, the present study have made an attempt to document and explore the traditional medicinal knowledge by the people inhabiting the Kholabaria village have been validated. This study showed that the traditional uses of medicinal plants which might be used as positive indicator for the effectiveness of the reported medicinal plants in treating many human diseases. The present finding is the first record of medico-botanical knowledge in the study area. The information given in the present study will be helpful for the pharmacognosist, botanist and pharmacologist for the collection and identification of the plant for their research work. The survey may create awareness on the importance and conservation of medicinal plants among young budding botanists.

Table-1. Medicinal plants used by the local people at the village Kholabaria of Natore district, Bangladesh

Sl. No	Scientific name	Family	Local Name	Parts Used	Ailments	Formulations
1	<i>Abroma augusta</i>	Sterculiaceae	Ulot kambal	Leaf, petiole	(a) Dysentery (b) Skin disease	(a) Three spoonful of petiole decoction mixed with hot spoon of pepper powder is administered once a daily for 2 days. (b) Leaf juice mixed with pinch of salt is applied on the affected areas till cure.
2	<i>Amomum subulatum</i>	Zingiberaceae	Alach	Seed, fruit pod	(a) Mouth freshener, (b) Nausea, motion sickness (c) Cough	(a) The most common use of <i>Amomum subulatum</i> is as a mouth freshener. The powder of the seeds is chewed to reduce foul breath. (b) The seed of the powder of <i>Amomum subulatum</i> is consumed in a dose of 2-3g to treat nausea, motion sickness. (c) The powder of the seed is given in a dose of 3-5g with

						honey to treat cough.
3	<i>Aloe vera</i>	Liliaceae	Grita kumari	Leaf	(a) Sunburn, dry skin, (b) Hair fall (c) Weight loss diabetes, hepatitis.	(a)The plant inner gel is used to topically treat sunburns and dry skin. (b) For hair fall the leaves inner gel is used daily (c) People take aloe gel by mouth for weight loss, diabetes.
4	<i>Acorus calamus</i>	Acoraceae	Bach	Rhizome	(a) Asthma bronchitis, (b) Dysentery diarrhea	(a) Rhizome is used for asthma, bronchitis. (b) Rhizome is also used for dysentery and diarrhea of children.
5	<i>Allium sativum</i>	Liliaceae	Rosun	Bulb	(a) Cough, fever (b) Eczema, Scabies.(c) Whooping cough	(a) Extracting the juice or pulping the bulb to a paste has been taken to relieve problems such as coughs and fever. (b) Extracting the juice or pulping the bulb to a paste has been applied externally to prevent greying of hair and to improve skin conditions such as Eczema and scabies. (c) Whooping cough in children has been treated by administering a drink made with a hot water extract of the dried bulb mixed with honey.
6	<i>Achyranthes aspera</i>	Amaranthaceae	Apang	Leaf, Petiole	a) Jaundice, (b) Dysentery (c) Chicken-pox	(a) Leaves of <i>Cajanus cajan</i> and <i>Lawsonia inermis</i> are crushed with roots of <i>Achyranthes aspera</i> to obtain juice, which is taken orally with molasses prepared from sugarcane juice once daily for consecutive days. (b) Leaves ground along with 12 seeds of <i>Piper nigrum</i> and a spoonful of honey. A spoonful of this paste administered with a glass of hot water every one hour for one day. (c) Leaf, paste with resin of <i>Shorea robusta</i> and neem applied on the body for one week.
7	<i>Acacia</i>	Mimosaceae	Guibabla	Bark,	(a) Anemia (b)	(a) Bark extracts mixed with 1 teaspoon sugar and

	<i>farnesiana</i>			root	Dysentery	1 glass of milk is taken orally for anemia. (b) 1 gm root extracts mixed with water used in the morning against dysentery.
8	<i>Amaranthus spinosus</i>	Amaranthaceae	Kata notey	Leaf, root	(a) Gonorrhoea (b) Toothache (c) Dysentery (d) Burning wounds	(a) The root extracts mixed with ½ cup cold water and ½ cup sugar is taken to cure gonorrhoea. (b) Decoction of the herb is used as a mouth wash for toothache. (c) Leaves juice is used for dysentery. (d) Leave paste is given to burning wounds.
9	<i>Amaranthus viridis</i>	Amaranthaceae	Shak notey	Whole plant	Stomachic, Leprosy, piles.	The plant juice mixed with water taken orally to cure these diseases once daily 2-3 weeks.
10	<i>Aristolochia indica</i>	Aristolochiaceae	Iswar mul	Leaf, fruit and bark	(a) White leprosy, (b) Insects and snake bite	(a) For white leprosy, the roots are rubbed with honey. (b) The roots of plant are used antibiotic in scorpion sting, bites of poisonous insects and snake bite.
11	<i>Artocarpus heterophyllus</i>	Moraceae	Kathal	Seed, fruit, leaf, latex	(a) Glandular swelling (b) Skin diseases. (c) Diarrhea (d) Astringent	(a) Latex is used for glandular swelling. (b) Young leaves paste is used in skin disease. (c) Decoction of roots is used for diarrhea. (d) Curry made from unripe fruits is used for astringent.
12	<i>Argemone mexicana L</i>	Papaveraceae	Sheyal kata	Root, latex	(a) Skin cracks (b) Jaundice	(a) Root paste is used in Sin disease latex is used for skin cracks. (b) Latex is used for jaundice.
13	<i>Acalypha indica</i>	Euphorbiaceae	Mukta juri	Whole plant	(a) Bronchitis, pneumonia, asthma, tuberculosis. (b) Ringworm	(a) Plants are emetic expectorant, Laxative and diuretic; useful in bronchitis pneumonia, asthma and pulmonary tuberculosis. (b) Leaf paste with lime juice prescribed for ringworm.
14	<i>Azadirachta indica</i>	Meliaceae	Neem	Leaf	(a) Chicken pox, skin diseases. (b) Pains	(a) Leave paste mixed in warm water while bathing used for chicken pox and skin diseases. (b) About

					pyorrhea, (c) Jaundice	250 gm of leaves are boiled in 1 liter of water until reduced to 250 ml and is used as gargle which cures swollen gums pain and pyorrhea. (c) The leaf juice is taken orally to cure jaundice.
15	<i>Aegle marmelos</i>	Rutaceae	Bel	Root, leaf	(a) Heart diseases, (b) Diarrhea and dysentery	a) 4gm fresh root mixed with a few of water then crushed them is used for heart diseases daily 2 time. (b) Root extracts ½ cup, mixed with sugar 1 teaspoon and cow milk 3 teaspoon used against for diarrhea and dysentery of children.
16	<i>Averrhoa carambola</i>	Oxalidaceae	Kam ranga	Fruit, Leaf	(a) Influenza fever, (b) Dysentery, Hepatic colic, (c) Scabies	(a) Fruits are prescribed in influenza fever, (b) Decoction of fruits is taken orally to cure dysentery and hepatic colic once daily 3-4 days. (c) Leaves paste is used for scabies.
17	<i>Andrographis paniculata</i>	Acanthaceae	Kalo megh	Leaf	(a) Liver disorders, (b) Lung infections, (c) Leprosy	(a) For liver disorders, juice obtained from macerated leaves is mixed with water and taken 2-3 times daily. (b) Leaves are boiled in water and the water taken for lung infections. (c) Leaf paste is applied externally or infected area until cured leprosy.
18	<i>Boerhaavia repens</i>	Nyctaginaceae	Punar nova	Leaf, root	(a) Dropsy, Dysentery (b) Cancer	(a) Root and leaf juice is effective in dropsy dysentery. (b) Plant powder is useful against cancer.
19	<i>Bombax ceiba</i>	Bombacaceae	Shimul	Root, gum, bark	(a) Burning sensation (b) Male weakness (c) Rheumatism	(a) A gum paste is used for burning sensation of body. (b) Root extracts mixed with boiled water are given for sexual weakness in males. (c) Grinding decoction of root bark is taken orally for Rheumatism.
20	<i>Bauhinia</i>	Fabaceae	Shet	Leaf, root and	(a) Burns (b) Asthma (c)	(a) Its roots cooked in oil is used to treat burns (b) The

	<i>acuminata</i>		kanchon	flower	Gonorrhea	mixture prepared from its leaves and bark is a good herbal remedy for treating Asthma. (c) Decoction of its leaves has beneficial effects on Gonorrhea
21	<i>Butea monosperma</i>	Fabaceae	Palash	Flower, leaf, seed	(a) Dhobis itch (b) Diarrhea	(a) The seeds when ground with lemon juice have powerful rubefacient action and are used for treating Dhobi's itch. (b) In diarrhea flower infusion is given.
22	<i>Bacopa monnieri</i>	Plantaginaceae	Brahmi	Leaf	(a) Gonorrhea, (b) Jaundice, fever (c) Asthma, bronchitis	(a) Dry leaf powder of Brahmi mixed with milk is helpful in the treatment of gonorrhea. (b) The extract from the leaves is helpful for curing jaundice and fever. (c) The extract from Brahmi leaves cure asthma and bronchitis.
23	<i>Barleria lupulina</i>	Acanthaceae	A	Leaf, root	(a) Toothache, (b) Snake bite	(a) The leaves and roots are chewed to bring relief from toothache. (b) The leaves are anti-inflammatory a poultice is put on the bites of snakes.
24	<i>Cannabis sativa</i>	Cannabaceae	Ganja	Leaf, resin	(a) Dandruff (b) Headache, asthma	(a) Leaves make a good sunff for deterging the brain; juice removes dandruff (b) The resin called charas is used prevents and cures headache, asthma.
25	<i>Cinnamomum tamala</i>	Lauraceae	Tejpata	Leaf, bark	(a) Diabetes, (b) Bronchitis	(a) <i>Cinnamomum tamala</i> leaves Fed at 10 mg/Kg for 15 days results in significant reduction in blood glucose level. (b) Take 2 or 3drops of oil of cinnamon leaf dissolved in a glass of warm water sweetened with a teaspoon of honey three times a day.
26	<i>Curcuma amada</i>	Zingiberaceae	Am-ada	Leaf, Rhizome	(a) Cough, (b) Bruises, (c) High cholesterol	(a) Crush some fresh leaves warm the paste add honey, take one teaspoon twice a day for 3 days is used for cough, (b) For bruises, make a pate of rhizomes,

						apply on the affected part twice a day to get complete cure from bruises. (c) For high cholesterol, crush some rhizomes, boil in a glass of milk, drink it at night.
27	<i>Crocus sativum</i>	Iridaceae	Jafran	Stigma	Cough, common cold, fever, stomach upsets, smallpox, asthma	Saffron is used for cough, common cold, fever, stomach upsets, small pox and asthma.
28	<i>Curcuma zedoria</i>	Zingiberaceae	Sothi	Whole plant	(a) Body stimulant and purifies blood, (b) Menstruation, (c) Urinary tract infections	(a) The herb serves as a body stimulant and purifies blood. (b) The herb, when taken in powdered form, helps in regularizing menstruation. (c) In the juice form, it is used to treat urine-related disorders and urinary tract infections.
29	<i>Cassia occidentalis</i>	Caesalpiaceae	Kalka sunde	Leaf	Ringworm, Hiccup	A crushed Leaf juice is given for these disease once daily for 10-12 days.
30	<i>Cassia fistula</i>	Caesalpiaceae	Badar lathi	Young Leaf, Fruit.	(a) Ringworm (b) Gout	(a) Juice of the young leaves is used to cure ringworms once daily 10-12 days in the morning. (b) Fruits pulp is considered good application for gout, taken daily in few days.
31	<i>Cajanus cajan</i>	Fabaceae	Arhar	Leaf, Seed	(a) Jaundice and Penumonia (b) Piles (c) Cough	(a) Juice of leaves is laxative; given in jaundice and pneumonia. Leaf juice is prescribed in jaundice. (b) Leaves are used in disease of the mouth and piles (c) Leaves and seeds are also used in cough.
32	<i>Carica papaya</i>	Caricaceae	Pepe	Fruit	Abortion, stomachic	Fruits pulp with bellam is used for these diseases.
33	<i>Coccinia cordifolia</i>	Cucurbitaceae	Tela kucha	Leaf	(a) Diabetes (b) Fever and vomiting	(a) 2-3 teaspoonful of juice obtained from crushed leaves is slightly warmed and taken for everyday on an empty stomach for

						diabetes. (b) Crushed leaves juice mixed with water are used for fever and vomiting.
34	<i>Clitoria ternatea</i>	Fabaceae	Oporajita	Root	Tuberculosis glands, Elephantiasis and headache.	Decoction of the root is taken orally to cure for these diseases.
35	<i>Codariocalyx motorius</i>	Fabaceae	Nageswar, ban chandal	Leaf, stem, root, seed	Snake poison, heart diseases, wound healer, rheumatic problems, diabetes, Skin disorders.	This plant is used in snake poison, heart diseases, wound healer, rheumatic problems, diabetes, and skin disorders.
36	<i>Curcuma domestica</i>	Zingiberaceae	Holud	Rhizome	(a) Scabies, Itches, boils, eczema, (b) Diabetes, (c) Intestinal worm	(a) Rhizome paste is used externally in the treatment of scabies, itches, boils, eczema etc. disease. (b) Paste of the rhizome along with <i>Azadirachta indica</i> leaf taken every morning in empty stomach is good for diabetes. (c) Fresh rhizome juice along with salt is prescribed for intestinal worms.
37	<i>Cissus quadrangularis</i>	Vitaceae	Harjora	Stem	(a) scurvy and irregular menstruation (b) Asthma stomachic (c) Dyspepsia	(a) Stem juice is used in scurvy and irregular menstruation. (b) Paste of stem is given in asthma stem boiling in limewater is a useful stomachic (c) Burnt of ashes of the young shoots administered in dyspepsia.
38	<i>Citrus aurantifolia</i>	Rutaceae	Lebu	Fruit	(a) Catarrhal fever, (b) Skin irritation and nausea	(a) A glass of worm water with 2 teaspoonful of honey and juice of fruit is taken as a remedy of catarrhal fever, (b) Fruits juice is taken orally to cure skin irritation and nausea.
39	<i>Centella asiatica</i>	Apiaceae	Than kuni	Whole plant	(a) Flatulence,	(a) Juice made from whole plant taken 4 tea spoonful's twice a daily for two days

					Tuberculosis	for the treatment of flatulence and tuberculosis.
40	<i>Carissa carandus</i>	Apocynaceae	Karam cha	Fruits	Diabetes	The fruit has been used remedy for diabetes.
41	<i>Calotropis procera</i>	Asclepiadaceae	Akhanda	Leaf, root, bark, Gum	(a) Dyspepsia, Indigestion, (b) Paralyzes (c) Rheumatism	(a) Decoction of root bark is useful for treating chronic cases of dyspepsia and indigestion. (b) Leaf paste heated and applied paralyzes part. (c) Plant mucus or gums mixed with <i>Brassica napus</i> oil used for rheumatism in every night.
42	<i>Calotropis gigantea</i>	Asclepiadaceae	Boro Akanda	Leaf, Fruit	(a) Dropsy, (b) Ringworm (c) Fever	(a) Decoction and also aqueous extract of the leaves is very useful in dropsy for its diuretic action. (b) Paste of the green fruit is applied to ringworm. (c) Syrup of the fruit is expectorant and diaphoretic; used as a cooling drink in fevers.
43	<i>Cuscuta reflexa</i>	Cuscutaceae	Shorno lota	Whole plant	(a) Cough, fever, (b) Stomach pain, (c) Infection	(a) Decoction of fruit is used for cough and fever. (b) Crushed stem juice, taken orally to cure stomach pain. (c) 10-12 pieces of whole plants are macerated and placed upon the infected area.
44	<i>Costus speciosus</i>	Costaceae	Keumol	Rhizome, stem, tuber	(a) Menstrual disorder, urinary inflammations, (b) Dysentery and other digestive troubles. (c) Eye inflammation	(a) Rhizome is used for menstrual disorder and urinary inflammations; paste is taken internally when urine contains blood. (b) Chutney made from the burnt tuber, sugar and tamarind taken for dysentery and other digestive troubles. (c) Rhizome juice with sugar is administered for eye inflammation.
45	<i>Cyperus rotundus</i>	Cyperaceae	Mutha	Tuber, root	(a) Fever, vomiting (b) Wounds, Sores	(a) Grinding, decoction of the tubers is given to cure fever and vomiting. (b) Macerated root paste is used to cure wounds and

						sores.
46	<i>Cynodon dactylon</i>	Poaceae	Durba ghas	Whole plant	(a) Cuts and wounds (b) Cold cough, hiccup (c) Eczema	(a) Macerated fresh juice is used in fresh cuts and wounds to stop bleeding. (b) Grinding decoction of whole plant is taken orally to cure cold, cough and hiccup. (c) plant paste is used in eczema.
47	<i>Datura metel</i>	Solanaceae	Dhutra	Flower, leaf	(a) Ulcers, pain, (b) Skin diseases	(a) Pound and applied on the affected area for ulcer and pains. (b) Leaf paste with neem leaf paste applied externally daily, twice for 1 week against skin diseases.
48	<i>Enhydra fluctuans</i>	Asteraceae	Helencha	Whole plant	Malaria, fever	Plant juice is used for this disease in 3-4 days.
49	<i>Euphorbia hirta</i>	Euphorbiaceae	Dudhia	Whole plant	Ulcers, oedemas and plegmons	The plant is astringent and haemostatic; as poultice applied topically to abscesses inflamed glands, ulcers, oedemas and phlegmons.
50	<i>Eupatorium odoratum</i>	Asteraceae	Assam lata	Leaf	Fever and Influenza	The leaves of the herb are used as tea to break up the common cold and for intermittent fevers and influenza.
51	<i>Ecbolium viride</i>	Acanthaceae	Nilkanta	Whole plant	(a) Gout, dysuria, (b) Stricture (c) Jaundice, menorrhagia and Rheumatism (d) Tumor	(a) All parts of the plant are used for gout and dysuria. (b) Decoction of the leaves is given for stricture. (c) Roots are used for jaundice, menorrhagia and Rheumatism. (d) Roots and eaves together are used against tumors.
52	<i>Eclipta alba</i>	Asteraceae	Kalo keshi	Whole plant	(a) Infantile diarrhea, Bleeding, (b) Constipation	(a) Grinding, decoction; taken orally for infantile diarrhea, bleeding. (b) Pounded leaves mixed with cold water are drunk to cure constipation
53	<i>Ficus racemosa</i>	Moraceae	Jag dumur	Fruit, Gum	(a) Acidity, diabetes, asthma, Diarrhea,	(a) Gum is used mixed with water for treatment of acidity, anti-diabetic, anti-asthmatic. (b) Fruits extract

					(b) Dry cough	or cooked vegetable are taken orally for dry cough.
54	<i>Glycyrrhiza glabra</i>	Fabaceae	Yashtimadhu	Root	Ulcers of stomach, intestine and mouth	The potent antioxidant and anti-inflammatory properties of licorice makes it the best natural medicinal aid to treat ulcers of stomach, intestine and mouth.
55	<i>Gynura procumbens</i>	Asteraceae		Whole plant, leaf, shoot	(a) Kidney problems, (c) Diabetes	(a) <i>Gynura procumbens</i> is used for the treatment of kidney problems and dysentery. (b) Two fresh leaves treated everyday with empty stomach for diabetes.
56	<i>Glycosmis pentaphylla</i>	Rutaceae	Datmajan, Matmati	Leaf	(a) Ascariasis (b) Eczema and skin affection	(a) Young leaves along with the leaf juice of <i>Ananas sativus</i> is also given in the treatment of ascariasis. (b) Paste of leaves with ginger is used in eczema and skin affections.
57	<i>Hibiscus rosa-sinensis</i>	Malvaceae	Jaba	Flower	(a) Cooling and astringent, seminal weakness (b) Burning wound	(a) Crushed flowers bud mixed with water making them juice is taken orally for cooling and astringent, seminal weakness. (b) Flowers paste is used for burning wounds.
58	<i>Hemidesmus indicus</i>	Asclepiadaceae	Anantamul	Root	(a) Piles (b) Indigestion, stomachic Problem	(a) Firstly crushed root juice and cow milk boiled them. Then after the day it is taken orally for piles. (b) Root powder (1/2 teaspoon) mixed with cold water is used for indigestion and stomach (an empty stomach continue 10-15 days).
59	<i>Heliotropium indicum</i>	Boraginaceae	Hatisur	Leaf	(a) Dog bite, (b) Insect bite	(a) 10 gm macerated leaves juice is used for mad dog bite. (b) 5 gm leaves juice mixed with 5 gm Ricinus communis oil are applied honey bee and poisonous insects bite area.
60	<i>Indigofera</i>	Fabaceae	Nil	Leaf, root,	(a) Hydrophobia	(a) Leaf juice is given as a

	<i>tinctoria</i>			stem	a, (b) Heart disease, (c) Difficult micturition	cure for hydrophobia. (b) The root and stem are laxative, expectorant, alexipharmac and anthelmintic, used in heart diseases. (c) Roots are macerated in water and drunk for difficult micturition.
61	<i>Ipomoea batatas</i>	Convolvulaceae	Mistialo	Tuber	Skin disease	Tuber juice or pate is used for skin disease at one week.
62	<i>Ipomoea aquatica</i>	Convolvulaceae	Kalmi	Leaf, stem	(a) Jaundice, Biliousness, liver complaints (b) Women nervous and general debility	(a) Plant leaves paste are dried in the sun and then 1 tea spoonful powder mixed with cold water orally for jaundice, biliousness and liver complaints. (b) Stem and young leaf juice 2 tea spoonful mixed with 1 cup of cold milk and 1 spoon mirchi powers cone kind of sugar used for females who suffer from nervous and general disability.
63	<i>Jatropha curcas</i>	Euphorbiaceae	Jamal kota	Leaf, seed	(a) Sore, (b) Fever, (c) worm	(a) Leaves of <i>jatropha curcas</i> are pounded, olive oil or lard added and used as a poultice to heal sores. (b) For fever three leaves cut in three pieces are boiled with a small siton (<i>Citrus aurantifolia</i>) Poked full of holes and one soursop leaf (<i>Annona muricata</i>) cut in three pieces. (c) The seeds are roasted or preached and eaten like nuts to destroy all worms in the body.
64	<i>Justicia adhatoda</i>	Acanthaceae	Basak	Whole plant specially leaf	Cough, Fever	Leaf juice is taken orally by mixing with salt in empty stomach during morning for three consecutive days.
65	<i>Kalanchoe pinnata</i>	Crassulaceae	Pathor kuchi	Leaf	(a) Blood dysentery (b) Stomachic and titbut.	(a) Lea juice is prescribed once daily 5-6 days for blood dysentery. (b) Crushed leaves mixed salt used for stomachic and

						tibut.
66	<i>Kalanchoe spathulate</i>	Crassulaceae	Him sagor	Leaf	(a) Cough (b) blood dysentery (c) Gonorrhoea	(a) Juice of the warmed leaves is drunk for cough (b) Pounded leaves, soaked in water overnight and the mucilaginous water thus obtained is taken in the next morning in empty stomach for blood dysentery. (c) Juice of the leaves along with sugar is given in gonorrhoea.
67	<i>Litsea glutinosa</i>	Lauraceae	Pepulte	Leaf, Bark	a) furunculosis, (b) diarrhea, dysentery	(a) The root bark and leaves are used for treating furunculosis (b) The bark also acts as a dimulcent and mild astringent in the treatment of diarrhea and dysentery.
68	<i>Leea macrophylla</i>	Fabaceae	Hasti karna polas	Root, leaf	(a) Brith control, (b) Sexual disease in male (c) Cancer	(a) The root paste is consumed with a glass of milk as a single monthly dose for birth control. (b) The powdered tuber is used as a treatment for sexual debility in males. (c) The powdered leaves, mixed with honey, are used in the treatment of cancer.
69	<i>Lawsonia inermis</i>	Lythraceae	Mehedi	Leaf	(a) Headache, (b) Spermatorrhoea	(a) Leaves paste is a valuable external application in headache, skin diseases, eczema, leprosy, dandruff and burring of the feet at an emollient poultice. (b) The leaf juice mixed with water and sugar is given as a remedy for spermatorrhoea.
70	<i>Lantana camara</i>	Verbenaceae	Chotra	Leaf	(a) Tetanus, rheumatism and malaria (b) Measles	(a) The plant is considered vulnerary, diaphoretic, Carminative and antispasmodic; decoction is given in tetanus, rheumatism and malaria. (b) Leaves are used for the treatment of measles.
71	<i>Leucas lavendulaefol</i>	Lamiaceae	Setodron	Leaf, root	(a) Snake-bite, (b) Chronic	(a) The snake-bitten patient is orally administered macerated leaves of <i>Leucas</i>

	<i>ia</i>				rheumatism	<i>aspera</i> (wild) link. At the same time macerated roots of the plant are applied to the bitten area. (b) The leaves juice are also useful in chronic rheumatism.
72	<i>Leonurus sibiricus</i>	Lamiaceae	Rokto dron	Whole plant	(a) Febrifuge, (a) Tonic, Menstrual diseases	(a) Grinding, decoction of root and leaves are taken orally for febrifuge. (b) The dried plant powder is prescribed as a tonic and menstrual diseases.
73	<i>Mirabilis jalapa</i>	Nyctaginaceae	Sandhamoni	Root	(a) Swelling and scabies (b) Menstrual disorders	(a) A paste of the root is applied as a poultice to treat muscular swelling and scabies. (b) The powdered root, mixed with corn flour is baked and used in the treatment of menstrual disorders.
74	<i>Musa sapientum</i>	Musaceae	Kola	Bark, stem, spadix	(a) Snake bite, (b) Bleeding (c) Diabetes	(a) Bark juice is used snake bite. (b) Stem juice is used to stop bleeding. (c) Spandex is taken as curry to control diabetes.
75	<i>Murdannia nudiflora</i>	Commelinaceae	Kundali, Kurulla	Leaf	Heavy bleeding	The leaves to be grinded and add some water in order to make it past. The paste then to be applied to wounded area.
76	<i>Moringa oleifera</i>	Moringaceae	Sajna	Leaf, Root, Fruit, Seed	(a) Wormicidal, Abortion (b) Fever, Abdomen pain (c) Rheumatism	(a) Root bark made a paste with water is used for homicidal and abortion. (b) Root extracts is taken orally once daily for 2-3 days against fever and abdomen pain, (c) Seed oil is given for rheumatism.
77	<i>Mimosa pudica</i>	Mimosaceae	Lajjaboti	Root	(a) Diarrhea (b) Piles (c) Snakebites	(a) Paste prepared from root is taken for the treatment of diarrhea. (b) Extract prepared from root is taken twice a day for one month to treat piles. (c) Roots of the plant soaked in raw cow milk then the milk is taken in the morning for 2-3 days for snake bites.

78	<i>Mimuspos elengi</i>	Sapotaceae	Bokul	Stem-bark	Bleeding gums, swelling	A decoction of stem bark is popularly used as an antidote to bleeding gums and swelling of the mouth and tongue.
79	<i>Madhuca indica</i>	Sapotaceae	Mahua	Flower, seed	(a) piles, (b) Skin disease, rheumatism, headache (c) ulcers	(a) The flowers fried in ghee are given to persons suffering from piles. (b) Seed oil is emollient, emetic and laxative, useful in skin diseases, rheumatism, and headache. (c) Decoction of bark is astringent and tonic; heals ulcers.
80	<i>Mucuna pruriens</i>	Fabaceae	Alkushi	Seed	Snakebite	The plant and its extracts are used as a toxin antagonist for various snakebites.
81	<i>Mangifera indica</i>	Anacardiaceae	Am	Leaf, gum	(a) Fever, toothache (b) skin diseases	(a) Decoction of the leaves is given to cure fever and toothache once daily for 6-7 days. (c) Gums paste is used in skin diseases.
82	<i>Mentha viridis</i>	Lamiaceae	Pudina	Leaf, root	(a) Gonorrhea, strangury, (b) Rheumatic and other pains	(a) A saturated tincture of the rash herb with gin has been found serviceable in gonorrhoea, strangury. (b) The oil is diuretic, stimulant, antispasmodic and rubefacient and is used externally in rheumatic and other pains.
83	<i>Nigella sativa</i>	Ranunculaceae	Kalijeeri	Seed	(a) High blood pressure (b) Asthma	(a) Extract from black seed to cause a significant decrease in blood pressure. (b) To eat <i>Nigella sativa</i> seed decreasing asthma.
84	<i>Nyctanthes arbor-tristis</i>	Oleaceae	Sheuli	Bark, Leaf, root, flower	(a) Chronic fever, (b) Sciatica, (c) Bronchitis. (d) Diuresis and enlarged spleen	(a) Juice is a safe purgative for infants; given to children for the expulsion of round and thread worms; with honey the juice is given chronic fever. (b) Decoction of the leaves is given for sciatica, bronchitis. (c) Bark of the plant is expectorant; cures bronchitis (d) A decoction of bark leaves roots and flowers is given in

						excessive diuresis an in enlarged spleen.
85	<i>Opuntia dilleni</i>	Cactaceae	Fani monsha	Leaf, fruit	(a) Gonorrhoea (b) Ophthalmia (c) Tumors and leucoderma	(a) The ripe fruits, when eaten are useful in gonorrhoea. (b) The leaf made into a pulp is applied to the eyes in the case of ophthalmia. (c) The juice of the plant is heating, cures tumors and leucoderma.
86	<i>Oxalis corniculata</i>	Oxalidaceae	Amrul	Whole plant	(a) Scurvy, Intoxication (b) Wounds, Injury	(a) Juice of the plant taken orally to cures scurvy and also relieves the intoxication produced by Dhutura flowers. (b) Pound fresh part applied on the affected area, treating for wounds, injury.
87	<i>Ocimum sanctum</i>	Lamiaceae	Tulshi	Leaf	(a) Cough, (b) Itch (c) Bronchitis	(a) Extract of leaf is taken one to two spoonfuls twice daily until cured to treat cough. (b) Leaf paste mixed with salt applied externally for iteh (c) Slightly warmed leaf juice is used to treat cold, cough and bronchitis.
88	<i>Ocimum basilicum</i>	Lamiaceae	Babui tulshi	Leaf	(a) Digestive system disorders, (b) Cough, fever	(a) <i>Ocimum basilicum</i> is used for treating digestive system disorders, such as stomachache and diarrhea, kidney complaints and infections. (b) The leaves are used for treating whooping cough and various types of fever.
89	<i>Ocimum americanum</i>	Lamiaceae	Tulshi	Leaf	(a) Dysentery toothache, (b) Nose bleeding, malarial fever (c) Skin diseases	(a) Leaf juice is used for dysentery and as a mouth wash for relieving toothache. (b) Decoction of the leaf is used for checking nose bleeding and malarial fever (b) Leaf paste is used as a cure for parasitical skin diseases.
90	<i>Ocimum gratissimum</i>	Lamiaceae	Ramtulsi	Leaf, seed	(a) Cough, (b) Gonorrhoea,	(a) The plant is stimulant, styptic, demulcent, diuretic, carminative, anti-emetic

					Headache, fever, influenza (c) Seminal weakness	and digestive; generally combined with expectorants used in cough mixture. (b) Leaf juice and seeds are useful in gonorrhoea, headache, fever and influenza (c) Decoction of the leaves is useful in seminal weakness.
91	<i>Piper longum</i>	Piperaceae	Pipul	Leaf Fruit and bark	(a) Lactic increase (b) Weakness, lumbar	(a) Cooked green leaves and dried or fresh fruits mixed with vegetables are used for female lactic increasing the lactation state. (b) Bark extract mixed with water is used in the marinade for body weakness and lumbar muscle degeneration.
92	<i>Polygonum lanatum</i>	Polygonaceae	Biskatali	Whole plant	(a) Epilepsy (b) dysentery, gout	(a) In combination with tonics and gum myrrh, it is said to have cured epilepsy. (b) The infusion in cold water, which may be has been found serviceable in dysentery, gout.
93	<i>Paederia foetida</i>	Rubiaceae	Gandhav aduli	Leaf	(a) Piles, (b) Paralysis	(a) For piles, 2 teaspoonful of juice obtained from fresh leaves of the plant is taken with macerated rhizomes of <i>Curcuma longa</i> L. (b) 4 tea spoonfuls of juice obtained from macerated leaves of the plant is taken twice daily for paralysis.
94	<i>Plumbago zeylanica</i>	Plumbaginaceae	Shet chita	Root	(a) Jaundice (b) Stomachache (c) Dysentery	(a) Root paste is given for jaundice (b) The root along with <i>calotropis gigantea</i> and black pepper is given in stomachache. (b) The juice of root bark along with a little ginger is given in blood dysentery.
95	<i>Psoralea corylifolia</i>	Fabaceae	Lata kasturi	Seed, leaf	(a) Leucoderma, leprosy (b) Skin streptococci (c) Diarrhea	(a) Oleo resinous extract of the seeds are especially recommended in leucoderma, leprosy. (b) The leaves is useful in diarrhea.

96	<i>Pterocarpus santalinus</i>	Fabaceae	Rakto chandan	Heart wood, fruits	(a) Burns and scalds, (b) Wound healing, (c) Vomiting	(a) The mixture of Rakta Chandana, guduci, vamsalocana and gairika (Hematite or Red lumbar); mixed with ghee, is applied on burns and scalds. (b) The decoction of its heartwood promotes the wound healing. (c) The decoction prepared of rakta chandana guiduci, Pad makastha, minba and dhanyaka is a valuable panacea for vomiting.
97	<i>Punica granatum</i>	Punicaceae	Dalim	Fruit, stem	(a) Stomachache, dysentery, (b) Abdominal pain	(a) A decoction of the dried fruit rind is drunk for the relief of stomachache and dysentery. (b) Young stem is used for abdominal pain
98	<i>Psidium guajava</i>	Myrtaceae	Piyara	Root, flower, fruit, leaf	(a) Diarrhea, (b) Dysentery (c) Bronchitis (d) Colic, bleeding gums, (e) Ulcers, Worms	(a) Decoction of the root bark is astringent and employed in diarrhea; root paste mixed with water is also used to treat diarrhea. (b) Root paste mixed with water is used to treat dysentery, (c) Flowers are used in bronchitis and eye sores. (d) Fruits are tonic, cooling and laxative, good for colic and bleeding gums. (e) Leaves are used for wounds, ulcers, and worms and as an astringent to bowels; said to relieve toothache when chewed.
99	<i>Phyllanthus embelica</i>	Euphorbiaceae	Amloki	Fruit, Bark	(a) Stomach problem, (b) Skin diseases, Mouth wash toothache problem	(a) Fruit powder, bark juice is taken orally 3 times daily till cure against for stomach problem. (b) Fruits are used for many skin diseases, mouth-wash and toothache problem.
100	<i>Phyllanthus reticulatus</i>	Euphorbiaceae	Chitki	Bark, Leaves	(a) Diarrhea (b) Alterative and attenuant	(a) Leaves juice with water is taken orally for diarrhea of infants. (b) Decoction of the bark is considered alterative and attenuant.
101	<i>Phlogacanthu</i>	Acanthaceae	Baghatita or Am	Leaf,	(a) Fever, (b) Cough,	(a) Fruit and leaves are taken after burning as a

	<i>s thysiflorus</i>		basak	Fruit	bronchitis and asthma	specific for fevers. (b) Leaves are used as an expectorant in cough, bronchitis and asthma.
102	<i>Ricinus communis</i>	Euphorbiaceae	Bherenda	Leaf, seed, root	(a) Rheumatic pains, joint pain, paralysis (b) Constipation (c) Rheumatism (d) Dysentery	(a) Seed oil is a strong purgatives used externally as a message for rheumatic pains joint pains, paralysis. (b) Seed oil is a strong purgative; used internally for the treatment of constipation. (c) Root bark and leaf have purgative properties; decoction is used for rheumatism. (d) Juice of tender leaves is given with sugar or sugar candy in dysentery.
103	<i>Rauwolfia serpentina</i>	Apocynaceae	Sarpagan dha	Root	Blood pressure, sedative, Febrifuge	Grinding decoction of roots is used once daily for blood pressure, sedative and febrifuge.
104	<i>Sida cordifolia</i>	Malvaceae	Berela	Whole plant	Traumatic injury	(a) Pound fresh part applied on the affected area, treating for traumatic injury.
105	<i>Sesbania grandiflora</i>	Fabaceae	Bokful	Leaf, bark, flower	(a) Epilepsy (b) oral problem (c) Arthritis and gout	(a) Juice extract o the leaves can be used for epilepsy. (b) Leaf paste can be applied to treat oral problems. (c) Root bark is applied externally to reduce pain and inflammation in arthritis and gout.
106	<i>Syzygium cumini</i>	Myrtaceae	Jam	Bark, leaf, fruit, seed.	(a) stomach pain, (b) dysentery (c) Carminative, diuretic (d) diabetes, Jaundice	(a) The fresh bark juice is taken for stomach pain, (b) Leaves are astringent; juice along with other astringents cures dysentery (c) Juice of the ripe fruit is general carminative and diuretic. (d) Seeds are astringent to the bowels and diuretic, good for diabetes it is also used for jaundice
107	<i>Swertia chirata</i>	Gentianaceae	Chirata	Whole plant	(a) Fever, (b) Hiccups and vomiting	(a) The chirayata is an effective remedy for reducing fever. It is beneficial in for relieving high malarial fever as well.

						(b) The root of the plant is used with honey to relieve hiccups and vomiting.
108	<i>Solanum nigrum</i>	Solanaceae	Titbegun	Leaf, fruit	(a) Dropsy, (b) Ringworm (c) Fever	(a) Decoction and also aqueous extract of the leaves is very useful in dropsy for its diuretic action. (b) Paste of the green fruit is applied to ringworm. (c) Syrup of the fruit is expectorant and diaphoretic; used as a cooling drink in fevers.
109	<i>Solanum xanthocarpum</i>	Solanaceae	Kantakari	Whole plant, fruit	(a) Body temperature, (b) Pain (c) Women diseases (d) Hair fall, dandruff	(a) The root of <i>Solanum xanthocarpum</i> helps in maintaining body temperature. (b) The plant reduces the pain from the body and joints while taken with black pepper. (c) The plant regularizes menstruation in women and gives easy delivery during pregnancy. (d) The fresh juice of kantakari leaves applied and head prevents hair fall and removes dandruff.
110	<i>Smilax zeylanica</i>	Smilacaceae	Kumari lata	Root, leaf	(a) Sore, dysentery, (b) Ulcer, gonorrhoea, (c) Toothache, pyorrhoea. (d) Boil	(a) Decoction of the bulbous root is given for sores and dysentery. (b) Leaves are used for ulcer and gonorrhoea. (c) Root is taken as masticatory substance for the remedy of toothache and pyorrhoea. (d) The crushed roots of <i>Mimosa Pudica</i> and <i>Smilax Zeylanica</i> are applied to boils.
111	<i>Tinospora cordifolia</i>	Menispermaceae	Gulon cho	Stem, leaf stalk	(a) Passing of semen, Gonorrhoea (b) Diabetes	(a) For gonorrhoea, passing of semen 8-12 ml of juice obtained from fresh stems of the plant is mixed with cold water or oiled with cow milk taken orally three times a day (b) Leaf stalk powder mixed with neem paste is taken orally for diabetes.

112	<i>Tridax procumbens</i>	Asteraceae	Tridhara	Leaf	(a) Bronchitis, Dysentery, (b) Bleeding	(a) Crushed leaf juice mixed with 1 cup of water is taken orally for bronchitis, dysentery. (b) The crushed leaves are applied arrest bleeding in bruises and cuts.
113	<i>Tamarindus indica</i>	Fabaceae	Tetul	Fruit	Fever, Gastritis, Dysentery and Diarrhea	Pulp of the ripe fruit is a household remedy for fever, gastritis, dysentery and diarrhea taken daily 1-7 days.
114	<i>Terminalia arjuna</i>	Combretaceae	Arjun	Stem, bark	(a) Heart disease, (b) Anemia, dysentery asthma, hypertension	(a) Stem used for prevention of heart disease (b) Bark is cardiac tonic, astringent, diuretic and febrifuge; useful in diseases of the heart anemia, excessive perspiration dysentery asthma, hypertension.
115	<i>Terminalia chebula</i>	Combretaceae	Haritaki	Seed	(a) Vomiting, (b) Gastrointestinal disorders, (c) Dysentery	(a) Powdered seeds mixed with honey are used in curing vomiting. (b) Powdered seed with amla and bahera (Trifla churna) useful in gastrointestinal disorders. (c) Powdered seed mixed with ghee and honey is beneficial in dysentery.
116	<i>Terminalia belerica</i>	Combretaceae	Bahera	Green fruit	Cough	Decoction of green fruit taken orally to cure cough.
117	<i>Tragia involucrata</i>	Euphorbiaceae	Bichuti	Roots, fruits, leaf	(a) Bronchitis and the attendant fever (b) Baldness (c) Jaundice	(a) Decoction of the root is useful in relieving bronchitis and the attendant fever.. (b) The fruits are rubbed on head with little water to cure baldness. (c) Leaf juice is given for jaundice.
118	<i>Tagetes erecta</i>	Asteraceae	Genda phul	Whole plant	(a) Bleeding, (b) Rheumatism, cold	(a) Pounded leaves are applied over fresh cuts to stop bleeding. (b) Infusion of the plant is used against rheumatism and cold.
119	<i>Vinca rosea</i>	Apocynaceae	Nayan tara	Leaf, root,	(a) Anti-tumor, anticancer,	(a) The leaves and stems are a source of alkaloids that have anti-tumor and anti-

				stem.	(b) Diabetes and blood pressure	cancer properties. (b) The leaves are used to control diabetes and high blood pressure.
120	<i>Vitex negundo</i>	Verbenaceae	Nisinda	Leaf, Dry fruit	(a) Sinuses, scrofulous sores, (b) Catarrhal fever, (c) worm	(a) Leaf juice mixed with oil is applied to sinuses and scrofulous sores. (b) A decoction of the leaves along with long peeper is given in catarrhal fever with heaviness of head and dullness of hearing. (c) Dry fruit powder mixed with 1 teaspoonful cold water is used for worms at night.
121	<i>Wedelia chinensis</i>	Asteraceae	Maha vringoraj	Leaf	(a) Edema, (b) Vomiting	(a) Juice obtained from 4-5 macerated leaves of the plant is taken every morning mixed with cow milk for edema. (b) The leaf juice with salt is given to stop vomiting.
122	<i>Withania somnifera</i>	Solanaceae	Aswa gandha	Leaf, Root	(a) Diarrhea, (b) Asthma and hiccup	(a) Infusion powder 2-3 leaves mixed with water once per day (1-3 days) used for diarrhea. (b) Decoction of root is used for asthma and hiccup.
123	<i>Zanthoxylum rhetsa</i>	Rutaceae	Tejbol	Fruit stem-bark, seed carpel	(a) Urinary diseases, dyspepsia, diarrhea, (b) Cholera	(a) The fruit and stem-bark are aromatic, stimulant, astringent, stomachic and digestive; prescribed in ordinary diseases, dyspepsia, and diarrhea and with honey in rheumatism. (b) The carpel's yield an essential oil which is given in cholera.
124	<i>Zingiber officinale</i>	Zingiberaceae	Ada	Rhizome	(a) Cold, cough, Asthma (b) Cattarhal fever	(a) Decoction of dried ginger is used to cure cold, cough and asthma. (b) A mixture of ginger juice, leaf juice of <i>Ocimum Sanctum</i> and honey is taken orally to infantile cough and catarrhal fever.

Figure-1. Habit of the recorded plant species in the study area

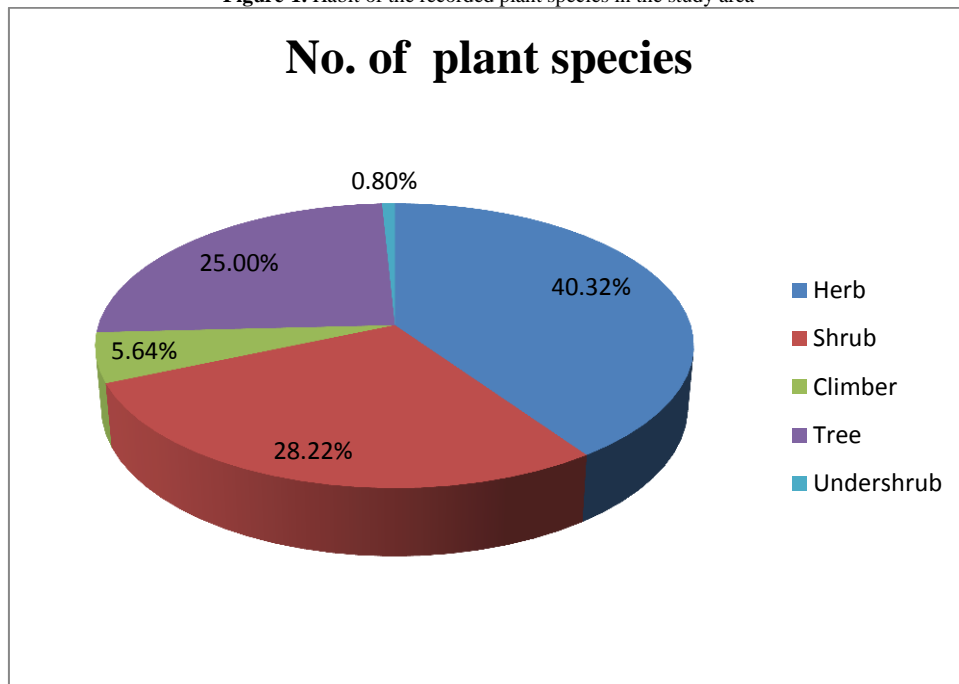


Figure-2. Recorded plant parts used in different diseases

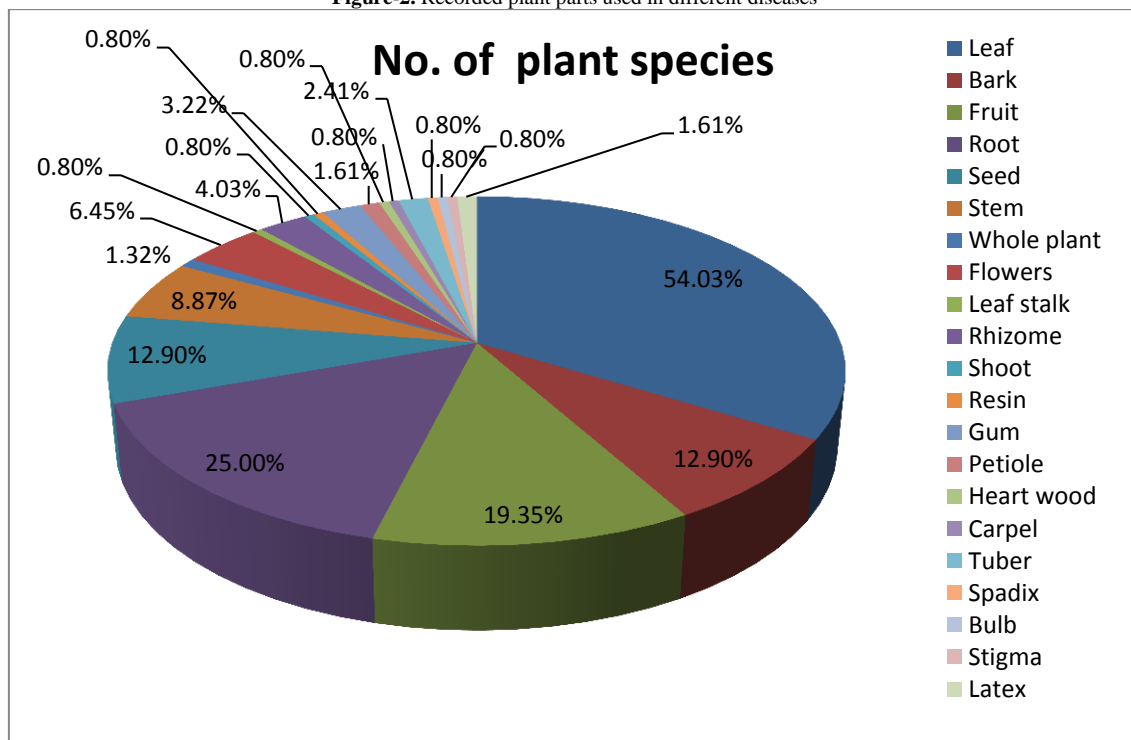


Figure-3. Recorded dominant families in the study area

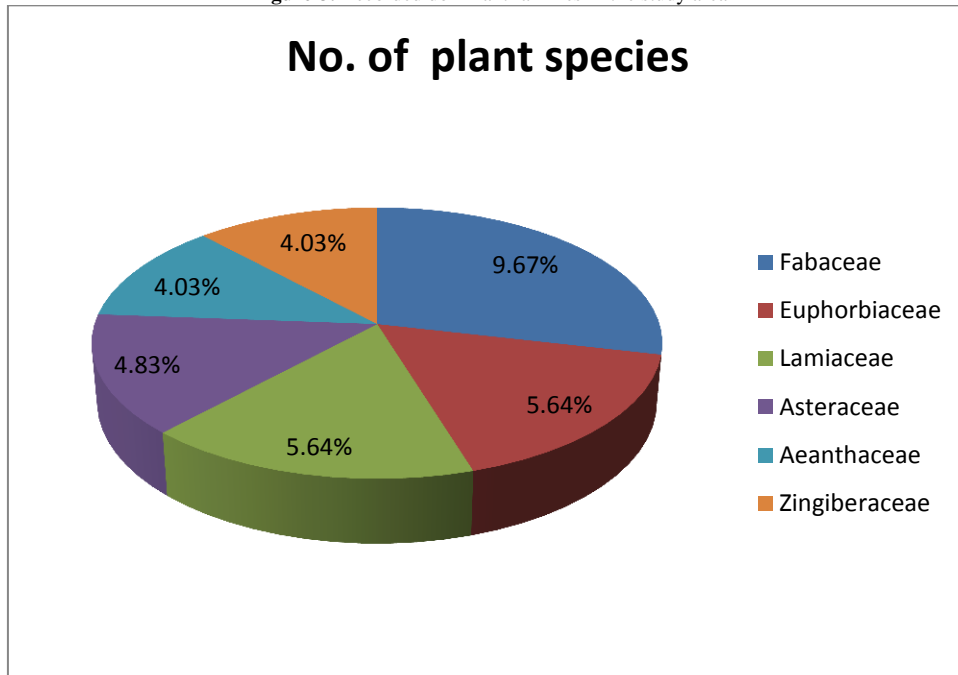
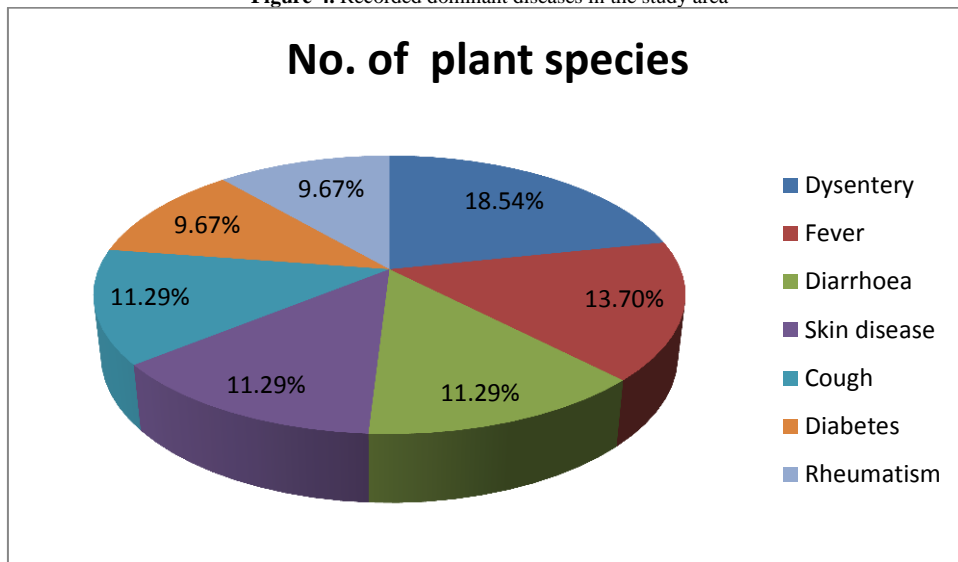


Figure-4. Recorded dominant diseases in the study area



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References

- [1] World Health Organization (WHO), 2001. "Legal status of traditional medicine and complementary/Alternative Medicine" A World Wide Review, Geneva.
- [2] Anisuzzaman, M., Rahman, A. H. M. M., Rashid, M. H., Naderuzzaman, A. T. M., and Islam, A. K. M. R., 2007. "An Ethnobotanical Study of Madhupur, Tangail." *Journal of Applied Sciences Research*, vol. 3, pp. 519-530.
- [3] Hamayun, M. S., A., K., Kim, H. Y., and Leechae, I. J., 2006. "Traditional knowledge and ex-situ conservation of some threatened medicinal plants of Swat Kohistan." *Pak. J. Bot.*, vol. 38, pp. 205-209.
- [4] Barboza, G. E., Cantero, J. J., Núñez, C., Pacciaroni, A., and Espinar, L. A., 2009. "Medicinal plants: A general review and a phytochemical and ethnopharmacological screening of the native Argentine Flora." *Kurtziana*, vol. 34, pp. 1-2.
- [5] Bisset, N., 1994. *Herbal drugs and phytopharmaceuticals. A handbook for practice on a scientific basis* Ed. Boca Raton: Medpharm. Sc. Publishers, Stuttgart -CRC Press.

- [6] Raskin, I., Ribnicky, D. M., Komarnytsky, S., Ilic, N., Poulev, A., Borisjuk, N., Brinker, A., Moreno, D. A., Ripoll, C., *et al.*, 2002. "Plants and human health in the twenty-first century." *Trends Biotechnol*, vol. 20, pp. 522-531.
- [7] Alam, M. K., 1992. "Medical ethno-botany of the Marma tribe of Bangladesh." *Economic Botany*, vol. 46, pp. 330-335.
- [8] Alam, M. K., Choudhury, J., and Hassan, M. A., 1996. "Some folk formularies from Bangladesh." *Bangladesh J. Life Sci.*, vol. 8, pp. 49-63.
- [9] Chakma, S., Hossain, M. K., Khan, B. M., and Kabir, M. A., 2003. "Ethno-botanical knowledge of chakma community in the use of medicinal plants in chittagong hill tracts, Bangladesh." *MFP News*, vol. 13, pp. 3-7.
- [10] Khan, M. S., 1998. *Prospects of ethnobotany and ethnobotanical research in Bangladesh*. In: R.L. Banik, M.K. Alam, S.J. Pei and A. Rastogi (eds.). Bangladesh: Applied Ethnobotany, BFRI, Chittagong. pp. 24-27.
- [11] Khan, M. S. and Huq, A. M., 1975. "Medicinal Plants of Bangladesh, BARC, Dhaka, Bangladesh."
- [12] Yusuf, M., Begum, J., Hoque, M. N., and Choudhury, J. U., 2009. "Medicinal plants of bangladesh-revised and enlarged." *Bangladesh Coun. Sci. Ind. Res. Lab. Chittagong, Bangladesh*,
- [13] Yusuf, M., Choudhury, J. U., Wahab, M. A., and Begum, J., 1994. "Medicinal plants of bangladesh. Bangladesh council of scientific and industrial research. Dhaka, Bangladesh." pp. 1-340.
- [14] Yusuf, M., Wahab, M. A., Choudhury, J. U., and Begum, J., 2006. "Ethno-medico-botanical knowledge from Kaukhali proper and Betunia of Rangamati district." *Bangladesh J. Plant Taxon.*, vol. 13, pp. 55-61.
- [15] Ghani, A., 2003. *Medicinal plants of Bangladesh*. Dhaka: Asiatic Society of Bangladesh.
- [16] Choudhury, A. R. and Rahmatullah, M., 2012. "Ethnobotanical study of wound healing plants among the folk medicinal practioners several district in Bangladesh." *American-Eurasian Journal of Sustainable Development*, vol. 6, pp. 371-377.
- [17] Faruque, M. O. and Uddin, S. B., 2014. "Ethnomedicinal study of the marma community of bandarban district of Bangladesh." *Academia Journal of Medicinal Plants*, vol. 2, pp. 014-025.
- [18] Uddin, M., Roy, S., Hassan, M. A., and Rahman, M. M., 2008. "Medicobotanical report on the chakma people of Bangladesh." *Bangladesh J. Plant Taxon.*, vol. 15, pp. 67-72.
- [19] Uddin, M. Z., Hassan, M. A., Rahman, M., and Arefin, K., 2012. "Ethno-medico-botanical study in Lawachara National Park, Bangladesh." *Bangladesh J. Bot.*, vol. 41, pp. 97-104.
- [20] Uddin, M. Z., Hassan, M. A., and Sultana, M., 2006. "Ethnobotanical survey of medicinal plants in Phulbari Upazilla of Dinajpur District, Bangladesh." *Bangladesh J. Plant Taxon*, vol. 12, pp. 63-68.
- [21] Uddin, M. Z., Khan, M. S., and Hassan, M. A., 2001. "Ethno medical plants records of Kalenga forest range (Habiganj), Bangladesh for malaria, jaundice, diarrhea and dysentery." *Bangladesh J. Plant Taxon*, vol. 8, pp. 101-104.
- [22] Uddin, S. N., Uddin, M. Z., Hassan, M. A., and Rahman, M. M., 2004. "Preliminary ethno-medicinal plant survey in Khagrachari district, Bangladesh." *Bangladesh J. Plant Taxon.*, vol. 11, pp. 39-48.
- [23] Khisha, B., 1996. *Chakma talik chikitsa*. Rajban Bihar, Rajbari, Rangamati: Herbal Medicine Centre Committee. pp. 1-136.
- [24] Rahman, A. H. M. M., Gulsan, J. E., Alam, M. S., Ahmad, S., Naderuzzaman, A. T. M., and Islam, A. K. M. R., 2012. "An ethnobotanical portrait of a village: Koikuri, dinajpur with reference to medicinal plants." *Int. Jour. Biosci.*, vol. 2, pp. 1-10.
- [25] Rahman, A. H. M. M., Kabir, E. Z. M. F., Sima, S. N., Sultana, R. S., Nasiruddin, M., and Naderuzzaman, A. T. M., 2010. "Study of an ethnobotany at the village Dohanagar, Naogaon." *Journal of Applied Sciences Research*, vol. 6, pp. 1466-1473.
- [26] Rahman, A. H. M. M., Anisuzzaman, M., Haider, S. A., Ahmed, F., Islam, A. K. M. R., and Naderuzzaman, A. T. M., 2008. "Study of medicinal plants in the graveyards of rajshahi city." *Res. Jour. Agri. Bio. Sci.*, vol. 4, pp. 70-74.
- [27] Rahman, A. H. M. M., 2013. "An Ethno-botanical investigation on Asteraceae family at Rajshahi, Bangladesh." *Academia Journal of Medicinal Plants*, vol. 1, pp. 92-100.
- [28] Rahman, A. H. M. M., 2013. "Assessment of Angiosperm Weeds of Rajshahi, Bangladesh with emphasis on medicinal plants." *Research in Plant Sciences*, vol. 1, pp. 62-67.
- [29] Rahman, A. H. M. M. and Akter, M., 2013. "Taxonomy and medicinal uses of euphorbiaceae (Spurge) Family of Rajshahi, Bangladesh." *Research in Plant Sciences*, vol. 1, pp. 74-80.
- [30] Rahman, A. H. M. M. and Gulshana, M. F. A., 2014. "Taxonomy and medicinal uses on amaranthaceae family of Rajshahi, Bangladesh." *Applied Ecology and Environmental Sciences*, vol. 2, pp. 54-59.
- [31] Rahman, A. H. M. M. and Khanom, A., 2013. "Taxonomic and ethno-medicinal study of species from moraceae (Mulberry) Family in Bangladesh Flora." *Research in Plant Sciences*, vol. 1, pp. 53-57.
- [32] Rahman, A. H. M. M. and Parvin, I. A., 2014. "Study of medicinal uses on fabaceae family at Rajshahi, Bangladesh." *Research in Plant Sciences*, vol. 2, pp. 6-8.
- [33] Rahman, A. H. M. M. and Rojonigondha, 2014. "Taxonomy and traditional medicine practices on malvaceae (Mallow Family) of Rajshahi, Bangladesh." *Open Journal of Botany*, vol. 1, pp. 19-24.

- [34] Rahman, A. H. M. M. and Rahman, M. M., 2014. "An enumeration of angiosperm weeds in the paddy field of rajshahi, bangladesh with emphasis on medicinal plants." *Journal of Applied Science And Research*, vol. 2, pp. 36-42.
- [35] Rahman, A. H. M. M., Afsana, M. W., and Islam, A. K. M. R., 2014. "Taxonomy and medicinal uses on acanthaceae family of Rajshahi, Bangladesh." *Journal of Applied Science And Research*, vol. 2, pp. 82-93.
- [36] Rahman, A. H. M. M., Anisuzzaman, M., Ahmed, F., Islam, A. K. M. R., and Naderuzzaman, A. T. M., 2008. "Study of nutritive value and medicinal uses of cultivated cucurbits " *Journal of Applied Sciences Research*, vol. 4, pp. 555-558.
- [37] Rahman, A. H. M. M., Biswas, M. C., Islam, A. K. M. R., and Zaman, A. T. M. N., 2013. "Assessment of traditional medicinal plants used by local people of monirampur thana under jessore district of Bangladesh." *Wudpecker Journal of Medicinal Plants*, vol. 2, pp. 099-109.
- [38] Rahman, A. H. M. M., Hossain, M. M., and Islam, A. K. M. R., 2014. "Taxonomy and medicinal uses of angiosperm weeds in the wheat field of Rajshahi, Bangladesh." *Frontiers of Biological and Life Sciences*, vol. 2, pp. 8-11.
- [39] Rahman, A. H. M. M., Jahan-E-Gulsan, S. M., and Naderuzzaman, A. T. M., 2014. "Ethno-gynecological disorders of folk medicinal plants used by santhals of Dinajpur District, Bangladesh." *Frontiers of Biological & Life Sciences*, vol. 2, pp. 62-66.
- [40] Rahman, A. H. M. M., Kabir, E. Z. M. F., Islam, A. K. M. R., and Zaman, A. T. M. N., 2013. "Medico-botanical investigation by the tribal people of Naogaon district, Bangladesh." *Journal of Medicinal Plants Studies*, vol. 1, pp. 136-147.
- [41] Rahman, A. H. M. M., Nitu, S. K., Ferdows, Z., and Islam, A. K. M. R., 2013. "Medico-botany on herbaceous plants of Rajshahi, Bangladesh." *American Journal of Life Sciences*, vol. 1, pp. 136-144.
- [42] Rahman, A. H. M. M., Sultana, N., Islam, A. K. M. R., and Zaman, A. T. M. N., 2013. "Study of medical ethno-botany of traditional medicinal plants used by local people at the village genda under savar upazilla of district Dhaka, Bangladesh." *Online International Journal of Medicinal Plants Research*, vol. 2, pp. 18-31.
- [43] Rahman, A. H. M. M., 2014. "Ethno-gynecological study of traditional medicinal plants used by santals of joypurhat district, Bangladesh." *Biomedicine and Biotechnology*, vol. 2, pp. 10-13.
- [44] BBS (Bangladesh Bureau of Statistics), 2013-2014. *Statistical year book of bangladesh*. 23rd ed. Dhaka: Bangladesh Bureau of Statistics, Planning Division, Ministry of Planning Government of Peoples Republic of Bangladesh.
- [45] Alexiades, M. N., 1996. *Selected guidelines for ethno botanical research: A field manual*. New York: The New York Botanical Garden.
- [46] Hooker, J. D., 1961. *Flora of British India* vol. 1-7. London, U.K: L. Reeve and Co. Ltd.
- [47] Prain, D., 1963. *Bengal plants* vol. 1-2. Botanical Survey of India. Calcutta, India.
- [48] Kirtikar, K. R. and Basu, B. D., 1987. *Indian medicinal plants* vol. 1-4. New Delhi, India: Lalit Mohan Basu, Allahabad, Jayyed Press.
- [49] Huq, A. M., 1986. *Plant names of Bangladesh*. Dhaka, Bangladesh: Bangladesh National Herbarium, BARC.
- [50] Ahmed, Z. U., Begum, Z. N. T., Hassan, M. A., Khondker, M., Kabir, S. M. H., Ahmad, M., Ahmed, A. T. A., Rahman, A. K. A., and Haque, E. U., 2008-2009. "Encyclopedia of flora and fauna of Bangladesh. 6-10." Angiosperms; Dicotyledons. *Asiat. Soc. Bangladesh*, Dhaka.
- [51] Pasha, M. K. and Uddin, S. B., 2013. *Dictionary of plant names of Bangladesh (Vascular Plants)*. Chittagong, Dhaka, Bangladesh: Janokalyan Prokashani.
- [52] Jamila, M. and Rahman, A. H. M. M., 2016. "Ethnobotanical study of traditional medicinal plants used by the santal tribal practitioners at the village Jamtala of Chapai Nawabganj District, Bangladesh." *Journal of Progressive Research in Biology*, vol. 3, pp. 142-159.
- [53] Shahnaj, S., Asha, U., Mim, T., Khatun, A., Akter, S., Haque, N. S., Malek, I., and Rahmatullah, M., 2016. "Home remedies used in some villages of Manikganj District, Bangladesh." *World Journal of Pharmacy and Pharmaceutical Sciences*, vol. 5, pp. 183-192.
- [54] Nahar, J., Kona, S., Rani, R., Rahman, A. H. M. M., and Islam, A. K. M. R., 2016. "Indigenous medicinal plants used by the local people at sadar upazila of naogaon district, Bangladesh." *International Journal of Advanced Research*, vol. 4, pp. 1100-1113.