



Medicinal Plants Used by The People of Vicinity Kathmandu, Bhaktapur, Lalitpur, Sindhupalchok, Kavre and Ramachhap District of Nepal for The Treatment of Common Diseases

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Article Info

Received: September 06, 2021
Accepted: September 13, 2021
Published: September 22, 2021

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Citation: Shreejana K.C. (2021) "Medicinal Plants Used by The People of Vicinity Kathmandu, Bhaktapur, Lalitpur, Sindhupalchok, Kavre and Ramachhap District of Nepal for The Treatment of Common Diseases.", *Journal of Agricultural Research Pesticides and Biofertilizers*, 2(3); DOI:<http://doi.org/09.2021/1.1041>.

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Abstract

The present work was aimed to identify of animal fauna in Gohayna District, Sohag A aggregate of 75 species of plants belonging to 46 different families have been recorded so far that are used as medicinal plants. These plants are used traditionally as a source of medicine by the people living in the locality of Kathmandu, Lalitpur, Bhaktapur, Kavre, Sindupalchok and Ramachhap district of Nepal. Most of the plants are used to treat the problem like pain, inflammation and gastrointestinal disorders. All the plants parts used for the treatments of common diseases are only limited within the traditional household use and further research is required to broaden the knowledge of medicinal floras.

Key Words: medicinal plants; aromatic plants; traditional medicines; ethno medicine; Nepal

Introduction:

Those plants which are rich in secondary metabolites and are widely used as a source of medicine and drugs are termed as Medicinal plants. Each and every plant consists of number of chemicals which might show defensive action against pest and insects along with some of the higher animals as well. Most of the medicinal plants is being used as traditional medicine purposes from time immorial. Its importance can be highlighted even in today's cinematic film based of medicine. Ayurveda and Traditional medicine are widely recognized as ethno medicine in this global world. From the taste, and experience gained by the early human beings most of the plants are used to treat diseases. Even today's world is also surrounded by the impact of those medicinal plants. In this pandemic as well people living in Bhaktapur identified the plant named epizote shows the positive response to treat the Covid-19. Even though multiples of research are required to predict that terms, but the trial basis done by the individual people as shown the positive effect. The phyto chemicals present in the plants are used to establish the biological activity of the individual. Major biochemical classes include alkaloids, glycosides, polyphenols, and terpenes. Statistical evaluation shows that modern medicine is expensive even out of range of the normal beings than that of the traditional medicine.

The first synthesized substances from medicinal plants is salicylic acid in 1853. In 2002 FAO identified over 50000 medicinal plants all across the world.

Most people in the world depends upon the plant species for their products such as food, medicine, fibers, fuel woods aroma and ornamental products. Products obtained from those plants are utilized to meet the basic requirements of the individual. Despite of this fact also, many medicinal plants are identified and used as a source of medicine since time immorial. In the present days also most of the plants with medicinal property is being used extensively. For the enhancement of the living standard more than 80% people living in developing country depends on these plants.

Rural people largely rely on the use of traditional medicine to fight against the germs and disease even though modern remedy system like allopathic and surgery is also available in the rural areas of Nepal. Even in present to people only visit medical



institute for some communicable diseases and chronic health hazards. For normal illness like diarrhea, dysentery, gastric people still depend on traditional medicinal practices. Even for economic source as well people use medicinal plants. People of Himalayas regions collect Yarshaghumba as a source of income and enhancement of livelihood as well. People collect, processed and trade those medicinal plants which secure their employment opportunity as well and enhance their income. However, increasing demand, unorganized governmental system and haphazard methods of collection ultimately is being the primary cause of the declination of resources. For the effective treatment of diseases scientific investigation on plants of medicine used in ethnic medical system is obligatory (M. S. Mohammad Fahim Kadir 2013). Gastrointestinal diseases are foremost mortality cause in the world and gastrointestinal diseases are proving themselves further intricate to treat among them infectious. This is because of the drug resistancancy by infectious parasites (M Crowther 2009). Traditional drugs are pivotal in health precaution system in most of the countries knowing as developing. (Rômulo RN Alves 2007). Through study in addition with applied research developing countries can take huge profit on indigenous medicinal plants that are being used traditionally against innumerable diseases (Houghton 1995) . WHO Regional Committee for the South-East Asia Region accepted the vital role of traditional drug in health precaution system in 2004 and meeting of WHO Executive Board in 2009 aimed to promote the potential of herbal medicines in national health system in the Region (WHO 2009). The governmental issues, public negligence and millions of reasons have reduced the used of traditional and medicinal plants. And in present days the traditional knowledge regarding the medicinal plants also being reduced due to less academic effort on such kinds of topic.

Materials and methods:

The learning was mainly grounded on field visit, questionnaire and personal interview with villagers with the main objective of understanding, identifying and analyzing the plants along with its

local names and medicinal values.

Study area:

The study was conducted from April to August 2021 in Bhaktapur, Lalitpur, Kathmandu, Kavrepalanchok, Ramachhap and Sindhupalanchok. Among these, personal interview with villagers are taken from Bhaktapur, Lalitpur and Kathmandu while online survey was conducted from Ramachhap, Kavrepalanchok and Sindhupalanchok where personal interview is not feasible. The geographical region for the sample collection was ranged from Churiya range to Mahabharata range of Tropical zone.

Data collection:

Our entire study was based on the questionnaire and field visit. During the visit individual of all gender, caste, age groups are taken into consideration so that data collected, and information grabbed will be ethical. The major aim of collecting the data is to identify the medicinal value and traditional uses of those medicinal plants. Numbers of sample was also collected during the period and those collected data and specimen were identified using the relevant site like (Malla SB 1986), (Press 2000), (A 1988), (PN 1969). Similarly, The literature like (Hains 1961), (Hooker 1872-97), (Rai 2004), (Mabberley 1987), (Siwakoti M 1996), (Davis 1988), (Grierson 1983), (Hara H 1982)are also used to identify and standardization of their globally identifying name.

Results and discussion:

During the field survey, some 75 species of medicinal plants was collected. These plants belong to 46 different families. Most of the medicinal plants recorded in this study were herb followed by tree and shrub with least number of climbers and grasses as well. Among the reported species, the family poaceae consist of large number of species and it is followed by Leguminosae, Asteraceae, and Ranunculaceae and so on.

S. N	Scientific Name	Local Name	Family	Habit	Part Used	Used in
1	Acacia catechu	Khayar	Leguminosae	Tree	Stem	Fracture, treat sore and diarrhea, leprosy
2	Acacia nilotica	Babul	Leguminosae	Shrub	Stem	Toothpaste, stomachache and diarrhea
3	Acacia rugata	Sikakai	Leguminosae	Shrub	Leaf fruit	Constipation, urinary trouble, malaria, Scabies, to make soap
4	Achyranthus aspera L.	Datiwan	Amaranthaceae	Herb	Root	Typhoid, obstetrics and gynecology
5	Aconitum ferox	Bisma	Ranunculaceae	Herb	Whole plant	Cough, fever, asthma, diarrhea, throat problem, anthelmintic
7	Aconitum heterophyllum	Attis	Ranunculaceae	Herb	Roots	expectorant, febrifuge, anthelmintic
6	Aconitum spicatum	Bikh	Ranunculaceae	Herb	Whole plant	Cough, fever, asthma, diarrhea, throat problem, anthelmintic
8	Acorus calamus L.	Bojho /Biubidanga	Araceae	Herb	Rhizome	Cold & cough, toothache, insecticide, anthelmintic, rheumatism
9	Aegle marmelos (L.)	Bel	Rutaceae	Tree	Bark fruit	To get relief from heat, typhoid, dysentery, diarrhea, jaundice, fever
10	Aloe barbadensis	Gheu Kumari	Liliaceae	Leaf	Leaf	Burns Heat stroke, Joint pain, constipation, piles, rheumatism



11	<i>Amomum subulatum</i>	Alainchi	Zingiberaceae	Herb	Fruit	Spice, stomachache, appetizer, indigestion, common cold, mouth Infection
12	<i>Andrograpis paniculata</i>	Kalomegh	Acanthaceae	Herb	Whole plant	To get relief from heat stroke, appetizer, fever, snake bite, diarrhea
13	<i>Asparagus racemosus</i>	Kurilo	Asparagaceae	Shrub	Root	Tonic, laxative, jaundice
14	<i>Astilbe rivularis</i>	Thulo Okhati	Saxifragaceae	Grass	Rhizome	Uterine contraction during birth, dysentery
15	<i>Atropa belladonna L.</i>	Beladona	Solanaceae	Herb	Root Leaf	Hooking cough, urinary disorder, gastritis, ulcer, rheumatism, Sleeplessness
16	<i>Bergenia ciliata</i>	Pakhan Ved	Saxifragaceae	Herb	Whole plant	Cut & wounds, diarrhea, stone, urinary problem, anthelmintic, fever
17	<i>Cannabis sativa</i>	Ganja	Cannabinaceae	Tree	Leaves and seeds	Diarrhea, sedative, narcotize
18	<i>Centella asiatica</i>	Ghod tapre	Apiaceae	Grasses	Shoot	Diuretic, blood purifier, leprosy
19	<i>Chlorophytum borivilianum L.</i>	Seto musli	Liliaceae	Herb	Root	Diarrhea, jaundice, asthma, diabetes, scabies, piles,
21	<i>Cinnamomum glaucescens</i>	Sugandhakokila	Lauraceae	Tree	Pericarp of Fruit	fragrance in soaps, detergents, perfumery demulcent and stimulant
75	<i>Cinnamomum tamala</i>	Tejpat	Lauraceae	Tree	Leaf and Bark	Flavoring agent, stomachache, stimulant
20	<i>Clinopodium umbrasum</i>	Tulsijhar	Lamiaceae	Shrub	Leaves	Astringent, Blood purifier, gastric
22	<i>Curculigo orchioides</i>	Kali musli	Amaryllidaceae	Shrub	Tuberous Roots and Rhizomes	rejuvenating tonic, aphrodisiac drug, and diuretic, debility, cough, jaundice, asthma, and piles.
74	<i>Curculigo orchioides</i>	Syal dhote	Amaryllidaceae	Herbs	Roots	Gastritis, asthma, sexual stimulant, piles, stomach disorder, ulcer, jaundice, itching, to check bleeding
23	<i>Cymbopogon flexuosus</i>	Kagati ghans	Poaceae	Herb	Leaf	Scent, insecticide, tea
24	<i>Cymbopogon winterianus</i>	Citronella	Poaceae	Herb	Leaf	To make soap and scent
26	<i>Dioscorea bulbifera L.</i>	Githa	Dioscoreaceae	Climber	Tuber	Antihelminthic, cough, asthma, leprosy and cancer
25	<i>Dioscorea deltoidea</i>	Ban tarul	Dioscoreaceae	Climber	Fruit	Dysentery, gastritis, constipation, family planning, fish poisoning, to cure louse
67	<i>Eclipta prostrata L.</i>	Vringaraj	Asteraceae	Herb	Leaf	Jaundice, skin disease, blood purifier, high blood pressure, fever, wound
66	<i>Elaeocarpus sphaericus</i>	Rudrakshya	Elaeocarpaceae	Tree	Fruit	Headache, epileptic fits
73	<i>Eulaiopsis binnata</i>	Babiyo	Poaceae	Herbs	Whole plants	Cure pain
27	<i>Holarrhena pubescens</i>	Indra jau	Apocynaceae	Shrub	Bark	diabetes Diarrhea Piles, skin disease, Biliousness, Arthritis, Oestioarthritis
65	<i>Imperata cylindrical</i>	Siru	Poaceae	Grass	Rhizome	Piles, diarrhea, dysentery, gonorrhea
28	<i>Juglans regia L.</i>	Okhar	Juglandaceae	Tree	Fruit, Bark	Pesticide, dyeing hair health, immune system
68	<i>Juniperus indica Bertol.</i>	Dhupi	Cuppresaceae	Shrubs	Woods	Incense
29	<i>Justicia adhatoda L.</i>	Asuro, Vashak	Acanthaceae	Shrub	Leaf	Asthma, rheumatism, malaria, insecticide
30	<i>Matricaria chamomilla L.</i>	Kamomail/ chamomile	Asteraceae	Herb	Flower	Scent, gastritis, muscle spasms, inflammation
31	<i>Mentha arvensis</i>	Mentha/ Peppermint	Lamiaceae	Herb	Leaf	flatulence, indigestion, nausea, vomiting, anorexia, and ulcerative colitis. cooking, in cosmetics



32	<i>Morchella conica</i>	Guchchhi chyau	Helvellaceae	Herb	Fruit	Tonic, fever cooking
33	<i>Mucuna pruriens</i> (L.)	Kauso	Leguminosae	Herb	Fruit	Dysentery, paralysis, urinary problem, tonic, scorpion bite
34	<i>Nardostachys jatamansi</i>	Jatamashi	Caprifoliaceae	Shrub	Root and Rhizomes	Sedative, herbal medicine, Insomnia, Birth difficulties, Ailments
35	<i>Neopicrorhiza scrophulariiflora</i>	Kutki	Scrophulariaceae	Herb	Rhizomes	fever, jaundice, hemorrhoids, and dysentery
72	<i>Nyctanthes arbor-tristis</i>	Parijat	Oleaceae	Shrubs	Leaf and Flower	Pneumonia
36	<i>Ocimum basilicum</i> L.	Babari	Lamiaceae	Herb	Leaf	Asthma, common cold, urinary problem, gastritis, wound
37	<i>Operculina turpethum</i> (L.)	Nisodh	Convolvulaceae	Climber	Fruit	Piles, jaundice, fever, tumor
38	<i>Ophiocordyceps sinensis</i>	Yarsagumba	<u>Ophiocordycipitaceae</u>	Caterpillar-fungus fusion	Fungal part	drowsiness, prolonged cough and asthma, debility, impotence, anemia, to build the bone patient receiving Radiotherapy, Chemotherapy
39	<i>Paris polyphylla</i>	Satuwa	Liliaceae	Herb	Rhizome	Anthelmintic, cut & wound, dysentery, diarrhea, tonic
40	<i>Phyllanthus emblica</i> L.	Amala	Euphorbiaceae	Tree	Fruit	Cough, dysentery, to aid vitamin 'c'
41	<i>Piper longum</i> L.	Pipla	Piperaceae	Climber	Fruit	Asthma, jaundice, pails, sleeplessness, stomach pain
42	<i>Piper nigrum</i>	Marich	Piperaceae	Climbers	Fruits	Common cold, fever
43	<i>Pistacia chinensis</i>	Kakarsingi	<u>Anacardiaceae</u>	Tree	Whole plant	analgesic, antitussive, expectorant and sedative dye and timber.
44	<i>Plumbago zeylanica</i> L.	Chitu	Plumbaginaceae	Shrub	Whole plant	Rheumatism, nasal catarrh
45	<i>Pogostemon Bengalensis</i>	Rudilo	Lamiaceae	Shrub	Root, leaves	Haemorrhage
46	<i>Rauvolfia serpentina</i>	Sarpagandha	Apocynaceae	Herb	Root	High blood pressure, diarrhea, fever, snake & snake & another insect bite
47	<i>Rheum australe</i>	Himalayan Rhubarb/padamchal	Polygonaceae	Herb	Rhizomes and petioles	vascular, respiratory, digestive, endocrine, and skeletal systems along with to infectious diseases
60	<i>Rhododendron Arboretum</i>	Laligurans	Ericaceae	Herbs	Flower	Diarrhea, dysentery
48	Saffron crocus	Keshar	<u>Iridaceae</u>	Trees and shrubs	Stigma	asthma, cough, whooping cough (pertussis), Alzheimer's disease, loosenphlegm, insomnia, cancer, atherosclerosis, flatulence, melancholy, fright, tremor, spittingup blood (hemoptysis), ache, heartburn, and parched skin.
58	<i>Sapindus cytheria</i>	Amaro	Sapindaceae	Tree	Flower and Fruit	Pneumonia
49	<i>Sapindus mukorossi</i>	Rittha	Sapindaceae	Tree	Fruit	Cleanser/insecticide Surfactant
61	<i>Schima wallichii</i>	Chilaune	Theaceae	Trees	Leaves and Bark	Rubefacient, Fever
62	<i>Scoparia dulcis</i>	Chini Jhar	Scrophulariaceae	Herbs	Leaves and roots	Fever, cough, bronchitis, menstruation disorder
64	<i>Spilanthes calva</i>	Pur-pure jhar	Asteraceae	Shrubs	Flower	Toothache, throat pain, headache
50	<i>Swertia angustifolia</i>	Chiraito	Gentianaceae	Herb	Whole plant	Anthelmintic, severe fever, jaundice, wound, high blood pressure, to make wine
69	<i>Syzygium cumini</i>	Jamuna	Myrtaceae	Tree	Bark	Massage in pain, toothache, dysentery



51	Taxus wallichiana	Lauth sallo	Taxaceae	Tree	Leaf	Cancer, cough, asthma
70	Terminalia bellirica	Barro	Combretaceae	Tree	Fruit	Cough, gastritis, fever, skin problem, stimulant, diarrhea
71	Terminalia chebula	Harro	Combretaceae	Tree	Fruit	Cough, constipation, jaundice, stone & theca problem, high blood pressure
52	Thysanolaena maxima	Amriso	Poaceae	Herb	Root	Typhoid, wound
53	Tinospora sinensis	Gurjo	Menispermaceae	Climber	Root	Jaundice, constipation, to check abortion
54	Trichosanthes tricuspidata	Indreni	Cucurbitaceae	Climber	Seed	Abortion, to check bleeding, asthma, rheumatism, jaundice, ear pain, constipation
63	Urtica dioica	Sisno	Euphorbiaceae	Shrubs	Whole plant	Diuretic, diarrhea, expectorant
55	Valeriana jatamansi	Sugandhawal	Valerianaceae	Herb	Dried roots and rhizome	epilepsy, hysteria, hypochondriasis, nervous unrest, and skin diseases cooling, stimulant, hypotensive, and sedative
56	Withania somnifera	Ashwogandha	Solanaceae	Herb	Root	Tonic, joint pain, scabies, sleeplessness
57	Zanthoxylum armatum	Timur	Rutaceae	Shrub	Fruit	Gastritis, toothache, fever
58	Zingiber officinale	Aduwa	Zingiberaceae	Herb	Rhizome	Common cold, asthma, indigestion

Table 1: Medicinal plants found in different parts of Nepal.

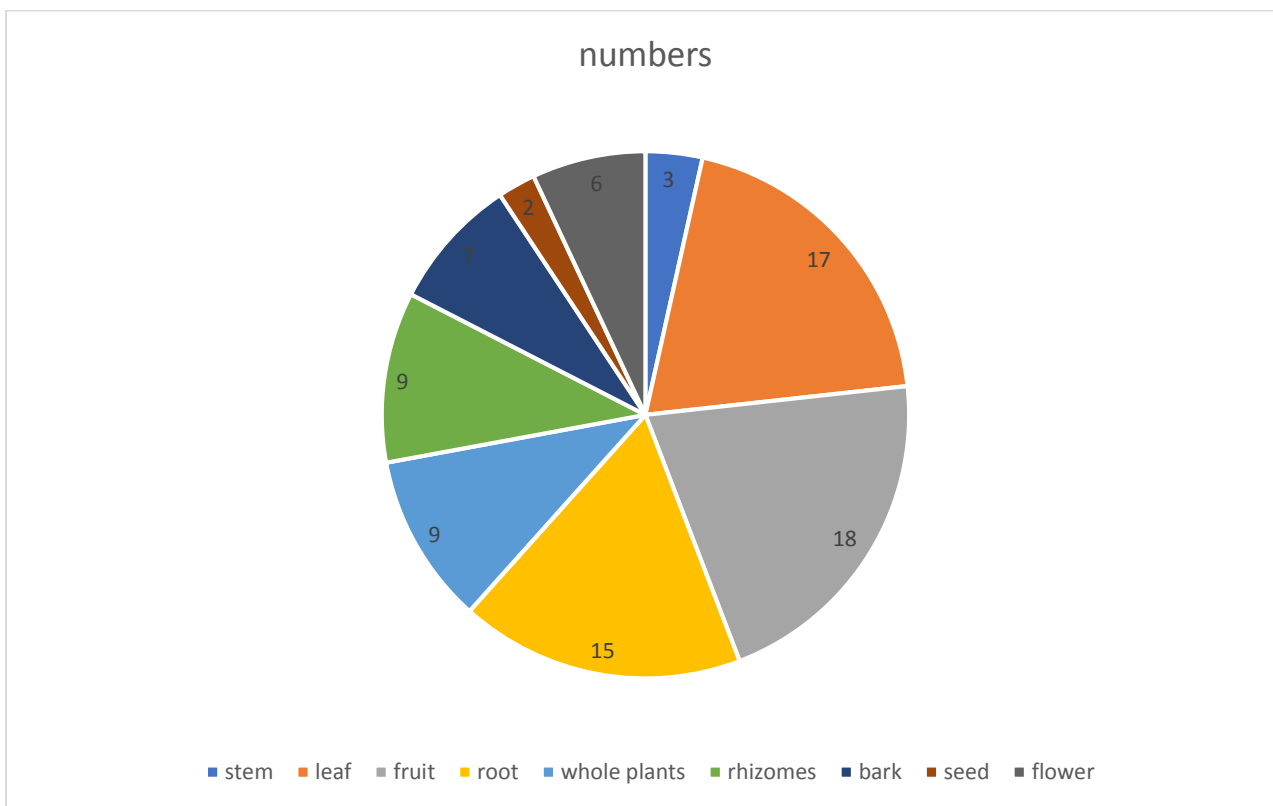


Figure 1: pie-chart showing parts used for medicinal purposes.

The pie chart shows that among the most used plants parts fruit and leaves are widely used as a source of medicine followed by root, entire plants, rhizomes and so on.

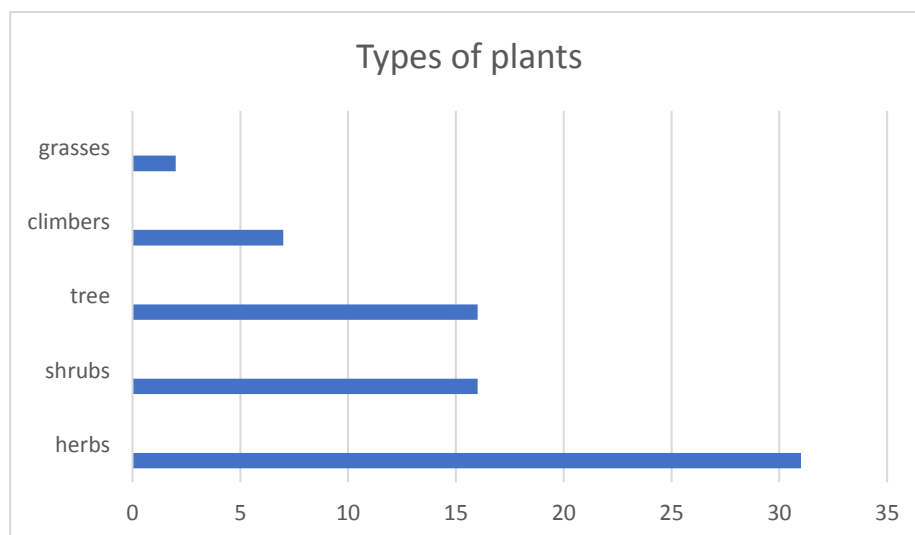


Figure 2: Bar graph showing types of plants identified.

The bar chart shows that among the plants identified most of the plants fall under the heading herbs, followed by shrubs, trees, climbers and grasses respectively.

Conclusion:

Most of the medicinal plants identified are used as source of traditional medicine by most of the individual living in the rural areas. Even though their used is being increasing day by day their uses are limited only in the traditional way in villages only. If these important herbs can be made identifiable for those of present generation individual and research is conducted on the topic, medicinal plants can lead to golden era of the medicine.

Conflict of interest:

The author affirmed no conflict of interest.

Acknowledgement:

The author provides immense gratitude towards the helping hands including friends, family members, participants throughout the period of data collection.

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