

Ethnomedical uses of plants from Salyan District, Nepal

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In an attempt to record the local peoples' knowledge on traditional use of plants for medicine, this study was conducted at various places of Salyan district. The local residents, especially traditional healers who have accumulated knowledge on medical use of plants from their forefathers are the principal source of information of this paper. Since time immemorial, the people of Salyan district have used plants for curing various health ailments. However, with the growing awareness on immediate benefit of modern medicines, the knowledge on use of plants has been reported decreasing at a fast pace, and the time is not very far when the rest of the knowledge is suspected to deplete completely. In the present study, 77 species belonging to 60 families have been identified on use in the district for curing various health ailments. According to key informants, the number of species is far too low than before.

Keywords: Ethnomedicine, traditional knowledge, ailments, Salyan District, Nepal

Historically plants used in traditional medicine by the indigenous populations across the world have produced some of the most useful modern day pharmaceuticals (Medora 2001 in Joshi and Joshi 2001). Of the 75,000 plants used in different systems of medicine, more than 20,000 species of higher plants are used in the traditional treatment practices of indigenous cultures living around the world (Ved Prakash 1998). Over 15,000 species are identified in Asia as drug yielding plants, of which about 8000 in India and 7000 in China are being used in different system of health care (Chaudhary *et al* 2004). It is estimated that various communities in Nepal use approximately 1000 species of wild plants in traditional medicinal practice (Chaudhary 1998), a substantial number still await documentation.

Review of literatures indicate that the botanical exploration of 1803 AD by Buchanan-a French medical professional could be called as the first ethnobotanical work in Nepal, however the first paper on this subject in Nepal was published by Pandey (1955), followed by more works from the mid 70s to till date. Rajbhandari (2001) has compiled majorities of such publications followed by an excellent book on Nepal's ethnobotany by Manandhar (2002).

Many traditional systems of medicine are now being gradually documented in Nepal. This is particularly true for folk and ethnomedicines using plant species, which pass from one generation to other simply by words. Documentation of indigenous knowledge on

uses of plants among the people is being welcomed these days. It not only helps conserve such plants but also for using them as future prospects of therapeutic development. The World Health Organisation has estimated that about 80 percent of the populations in developing countries depend on traditional medicine for their primary health care needs. Many such plants also have other domestic uses. It is therefore very important that studies in ethnobotany and ethnopharmacology continue so as to preserve traditional knowledge.

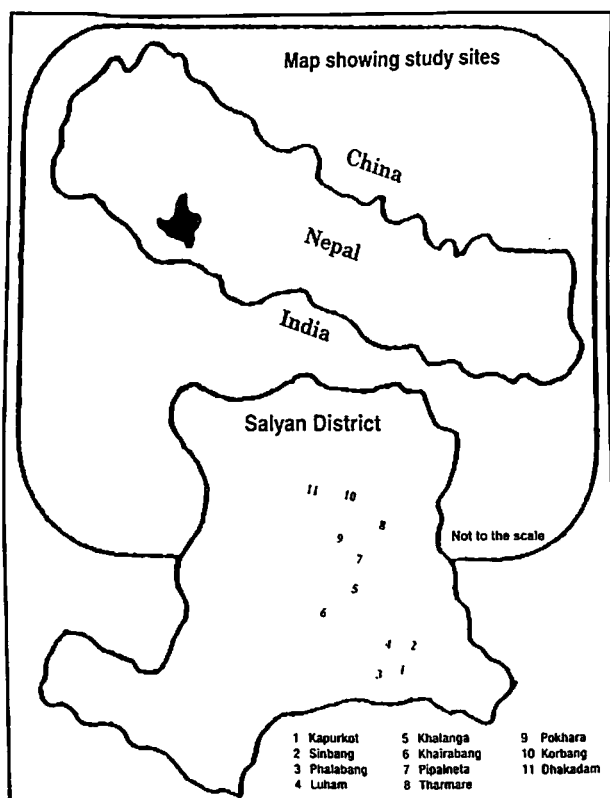
The present study is one such attempt. It documents traditional knowledge on use of plants for curing various ailments by the local residents of Salyan District. The information accumulated here will be of use to the readers, and related researchers in future.

Methods

The present research was conducted at various places throughout Salyan District (see map). Plants occurring at an altitude ranging from 1000 to 2000 m have been included in this research. The survey and recording of ethnomedicinal uses of plants was carried out for about two months in fields. Immediately after the collection of plants, their morphological features were noted right on fields. Key informants such as local elderly people and traditional healers were identified and consulted for recording of medicinal uses of these plants in the locality. The collected species were brought to the National Herbarium and Plant Laboratories,

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Godawari for detailed taxonomical identification. Upon preserving them in standard herbarium, they have been housed there for future use.

Enumeration

For the benefit of the readers, the identified plants have been arranged alphabetically in a tabular form with families in parenthesis, followed by Nepali names, and ethnomedical uses.

Results and discussions

Altogether 76 species of higher plants belonging to 54 families have been recorded here having different traditional medicinal properties. These species have been used to treat various ailments at the local-level. It includes the treatment of dislocated bones, migraine, cough and cold, diarrhoea, indigestion, anthelmintic, dyspepsia, skin diseases, ophthalmic troubles, antidotes, etc. Brief descriptions of ethnomedical uses of the plants have been presented in Table 1.

Table 1: Ethnomedical uses of Plants in Salyan district

SN	Species	Local name	Ethnomedical uses
1	<i>Pinus roxburghii</i> Sargent (Pinaceae)	Sallo	Root of <i>Rumes nepalensis</i> , root of <i>Rheum australe</i> , stem of <i>Coelogyne</i> sp. and fresh needles of <i>Pinus roxburghii</i> are crushed and boiled in water and the solution is applied to set dislocated bone and to reduce body pain.
2	<i>Clematis buchananiana</i> (Ranunculaceae)	Bagha junge	The leaf juice is externally applied to skin diseases. Fine powder from the fresh leaves is snuffed for treating migraine.
3	<i>Cissampelos pareira</i> L. (Menispermaceae)	Batulpate	The root past is given in case of colic, dyspepsia and diarrhoea.
4	<i>Tiliacora acuminata</i> (Menispermaceae)	Gane gurjo	The power of the underground part of the plant is given with grain to the cattle as a tonic and in diarrhoea.
5	<i>Berberis aristata</i> DC (Berberidaceae)	Chutro	A concentrated decoction of bark is used in conjunctivitis.
6	<i>Berberis asiatica</i> Roxb. ex DC. (Berberidaceae)	Chutro	Same as <i>Berberis aristata</i> .
7	<i>Argemone mexicana</i> L. (Papaveraceae)	Pahel phoole	The yellow latex of the plant is applied to cure conjunctivitis and white spot in eye.
8	<i>Rorippa nasturtium-aquaticum</i> (L.) Hayek (Cruciferae)	Simsag	The young leaves and shoots are taken as green vegetable to treat dysentery; also believed to be useful in goiter.
9	<i>Drymaria diandra</i> Bl. (Caryophyllaceae)	Avijalo	The juice of leaves is taken in indigestion, and the leaves are smoldered over fire and inhaled through nose in case of headache.
10	<i>Schima wallichii</i> (DC.) Korth. (Theaceae)	Chilaune	The fruit past is applied as an antidote for scorpion sting. The stem bark is given with grain to the cattle against liver flukes and intestinal worms. The wood is used for making ploughs.
11	<i>Shorea robusta</i> Gaertn. (Dipterocarpaceae)	Sal	The powdered resin is taken with curd in dysentery.
12	<i>Sida rhombifolia</i> L. (Malvaceae)	Balijhar	Paste of leaves is applied on the ulcer to draw out pus from wound.
13	<i>Oxalis corniculata</i> L. (Oxalidaceae)	Chriaamilo	The juice of the plant is applied in conjunctivitis and white spot in eyes.

14	<i>Zanthoxylum armatum</i> DC. (Rutaceae)	Timur	Decoction of fruit with salt and powdered turmeric is taken to treat cough and cold.
15	<i>Garuga pinnata</i> Roxb. (Bursaceae)	Dabdabe	The bark paste is applied on fresh wounds to stop bleeding and to heal wounds quickly. The bark of <i>Garuga pinnata</i> , root of <i>Rumex nepalensis</i> , fresh needle of <i>Pinus roxburghii</i> and red soil are boiled in water and the liquid used for setting bones and reducing body pain.
16	<i>Melia azedarach</i> L. (Meliaceae)	Bakaino	The leaves juice is used as antiscorbutic.
17	<i>Vitis lanata</i> Roxb. (Vitaceae)	Purena	The watery juice of the stem is used to cure white spot in the eye.
18	<i>Mangifera indica</i> L. (Anacardiaceae)	Amre	A paste of dried unripe fruit is given to cattle as an antidote.
19	<i>Semecarpus anacardium</i> L.f.	Bhalayo	The oily seed is rubbed to cure chilblains.
20	<i>Coriaria nepalensis</i> Wall. (Coriariaceae)	Machaeno	The ripe fruits if eaten in large dose cause vomiting and intoxication.
21	<i>Bauhinia vablii</i> Wight et Arn. (Leguminosae)	Malu	The bark juice is given in dysentery.
22	<i>Butea buteiformis</i> (Voigt) Grierson (Leguminosae)	Bhoojetro	Power of one seed is given once a day for a day as an anthelmintic.
23	<i>Prunus persica</i> (L.) Batsch. (Rosaceae)	Aaru	A pest of the tender leaves is applied in wounds with maggots.
24	<i>Pyrus paschia</i> Buch.- Ham. ex D. Don (Rosaceae)	Mayal	The ripe fruits are eaten raw to treat diarrhoea. The filtered juice of unripe fruit is used in cattle eye to cure white spot.
25	<i>Rhus javanica</i> L. (Anacardaceae)	Bhakiamilo	The powder fruits are taken with curd in diarrhoea and dysentery. The powder is applied on wounds between toes caused due to prolonged walking in mud.
26	<i>Rubus ellipticus</i> Sm. (Rubiaceae)	Ainselu	The ripe fruits are eaten raw and the past is applied to treat wounds.
27	<i>Bergenia ciliata</i> (Haw.) Sternb. (Saxifragaceae)	Silpho	The rhizome is used to treat urinary troubles and dysentery.
28	<i>Psidium guajava</i> L. (Myrtaceae)	Belauti	The warm leaves decoction of <i>Psidium guajava</i> with <i>Pogostemon bengalensis</i> is taken in catarrh. A past of seven tender tips is given in dysentery.
29	<i>Syzygium cumini</i> (L.) Skeels (Myrtaceae)	Jamun	The bark juice is given in diarrhoea and dysentery.
30	<i>Osbeckia stellata</i> Buch.- Ham, ex D. Don (Melastomaceae)	Kurkure	The finely crushed root is taken with water in diarrhoea and colic.
31	<i>Woodfordia fruticosa</i> (L.) Kurz (Lythraceae)	Dhayaro	The dried flowers are given with curd in diarrhoea and dysentery.
32	<i>Punica granatum</i> L. (Punicaceae)	Anaar	A paste of rind with water is given in diarrhoea and dysentery.
33	<i>Carica papaya</i> L. (Caricaceae)	Mewa	The ripe fruits are eaten and the latex of the plant is used on the ringworm, and also applied in aching tooth and gums.
34	<i>Centella asiatica</i> (L.) Urban (Umbelliferae)	Ghortapre	The juice of leaves is taken in fever and also improving memory. It is also taken as refrigerant with sugar-candy.
35	<i>Ageratum conyzoides</i> L. (Compositae)	Ramanpa	The juice of the leaves is applied to stop bleeding on cuts wounds.
36	<i>Artemisia indica</i> Willd. (Compositae)	Pati	The juice of the leaves is applied to stop bleeding on cuts and wounds.
37	<i>Centipeda minima</i> (L.) A. Br. & Aschers. (Compositae)	Chhyunke	A powder of the flowers is snuffed in cold and headache.
38	<i>Lyonia ovalifolia</i> (Wall.) Drude (Ericaceae)	Angeri	The young leaves and buds are poisonous to livestock. Also they are used as antiscorbutic.
39	<i>Rhododendron arboreum</i> Sm. (Ericaceae)	Laliguras	The young leaves are poisonous to livestock. The wood is collected for fuel.

40	<i>Aesandra butyracea</i> (Roxb.) Baehni (Sapotaceae)	Chiuri	An edible butter obtained from seeds is externally applied in case of rheumatism and chilblains.
41	<i>Calotropis gigantea</i> (L.) Dryand. (Asclepiadaceae)	Aak	The milky latex of the plant is externally applied in case of rheumatism.
42	<i>Cuscuta reflexa</i> Roxb. (Cuscutaceae)	Aakash beli	The juice of the plant is given with crushed garlic to the cattle in case of indigestion. Powder of the roasted stem is used externally to cure scabies.
43	<i>Solanum aculeatissimum</i> Jaq. (Solanaceae)	Kantkari, Beehi	The ripe fruits are smoldered over fire and smoke is inhaled through mouth to treat maggots teeth.
44	<i>Solanum americanum</i> Mill. (Solanaceae)	Koei	The past of the leaves is applied to relieve headache.
45	<i>Solanum tuberosum</i> L. (Solanaceae)	Aalu	The past of tuber is applied externally on burn.
46	<i>Justicia adhatoda</i> L. (Acanthaceae)	Aasuro	A decoction of leaves is taken in fever, asthma, cough and cold. The twigs are also used as toothbrush.
47	<i>Callicarpa macrophylla</i> Vahl (Verbenaceae)	Bhatesiti	The plant bark is chewed to treat rashes on tongue.
48	<i>Vitex negundo</i> L. (Verbenaceae)	Sevali	The twigs are kept between the tooth to relieve toothache.
49	<i>Colebrookea oppositifolia</i> Sm. (Labiatae)	Dhurseto	The plant part is kept between the teeth to treat toothache.
50	<i>Mentha spicata</i> L. (Labiatae)	Paadena, Basmati	The juice of the leaves and onion is taken in vomiting.
51	<i>Scutellaria discolor</i> (Labiatae)	Neelpate	The filtered leaf juice is taken in fever and catarrh.
52	<i>Mirabilis jalapa</i> L. (Nyctaginaceae)	Malti	The root is taken as purgative. A hot poultice of leaves is applied on sores.
53	<i>Achyranthes aspera</i> L. (Amaranthaceae)	Jamjeete, Dation	The roots are tied around the waist of the pregnant women during labor pain to ease delivery.
54	<i>Amaranthus spinosus</i> L. (Amaranthaceae)	Kademate	The watery solution of the root is taken in burning sensation during urination. The leaf past is applied on the ulcer.
55	<i>Chenopodium album</i> L. (Chenopodiaceae)	Bethe	The tender parts of the plant and seeds are used to treat abdominal disorders.
56	<i>Rumex nepalensis</i> Spreng. (Polygonaceae)	Halhale	Root of <i>Rumex nepalensis</i> , stem of <i>Coelogyne</i> sp., fresh needles of <i>Pinus roxburghii</i> and the rhizome of <i>Rheum australe</i> all are crushed and boiled in water, the solution is applied to set dislocated bone and in injured parts to reduce pain.
57	<i>Ocotelea wightiana</i> Wall. ex Wight (Santalaceae)	Nune, Nundhiki	The leaves are used as tea in case of urinary disorder and to relieve body pain.
58	<i>Chamaesyce birta</i> (L.) Millsp. (Euphorbiaceae)	Doodhajhar	The milky latex is applied to stop bleeding from cuts. And also applied in eye to cure white spot.
59	<i>Euphorbia royleana</i> Boiss. (Euphorbiaceae)	Shihudi	The roasted pith is taken in case of stomach trouble and the milky latex is used as fish poison.
60	<i>Jatropha curcas</i> L. (Euphorbiaceae)	Sahijan	The twigs are used as toothbrush to cure discharge of blood from the gums.
61	<i>Sapium insigne</i> (Royel) Benth. ex Hook. f. (Euphorbiaceae)	Khirro	The milky latex of the plant is used as fish poison.
62	<i>Urtica dioica</i> L. (Urticaceae)	Sisnoo	The young leaves are used as glactogogue. The past of leaves is applied on the cuts, and dog bite.
63	<i>Cannabis sativa</i> L. (Cannabinaceae)	Bhang	The roasted seeds are taken in mild doses as a tension reliever.
64	<i>Ficus semicordata</i> Buch.-Ham. ex Sm. (Moraceae)	Khanayo	The milky latex is applied to the children navel in case of constipation.
65	<i>Engelhardia spicata</i> Leschen. ex Blume (Juglandaceae)	Mauwa	A juice of bark is used as fish poison.
66	<i>Juglans regia</i> L. (Juglandaceae)	Okhar	The twigs are used as toothbrush to cure discharge of blood from the gums.

67	<i>Alnus nepalensis</i> D. Don (Betulaceae)	Utis	The concentrated decoction of mature bark is applied on the wounds. A powder of the bark is applied to cure scabies.
68	<i>Zingiber officinale</i> Rose. (Zingiberaceae)	Aduwa	The rhizome is chewed in cold and catarrhal affection.
69	<i>Aloe vera</i> (L.) Burm. f. (Liliaceae)	Gheckumari	The pulp of the roasted leaf is applied to burn and ulcer. Ten gram each of roasted pulp and root are given in constipation.
70	<i>Asparagus racemosus</i> Willd. (Liliaceae)	Kurilo	The tuberous are used as glactagogue.
71	<i>Acorus calamus</i> L. (Araceae)	Bojho	The rhizomes are chewed to cure cough and cold. The crushed rhizome is used to cure indigestion
72	<i>Agave cantula</i> Roxb. (Amaryllidaceae)	Ketuki	The juice of the leaves is used as fish poison.
73	<i>Allium cepa</i> L. (Amaryllidaceae)	Piyaz	The juice of onion bulb and <i>Mentha spicata</i> is given in vomiting.
74	<i>Dendrocalamus hamiltonii</i> Nees & Arn. ex Munro (Gramineae)	Bans	Intake of green leaves for some days causes miscarriage, and the leaves are said to cause sharp reduction in lactation.
75	<i>Imperata cylindrical</i> (L.) Beauv. (Gramineae)	Siru	Fine past of under ground stem of the plant is given as anthelmintic.
76	<i>Thysanolaena latifolia</i> (Roxb. ex Hornem.) Honda (Gramineae)	Amriso	A filtered juice of the root is taken in stomach pain.

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