



## Herbal Veterinary Practices by Tamang Community in Central Nepal

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### Abstract

*Herbal veterinary practices survey has been carried out in different areas of central Nepal among the Tamang people. Tamang people have been using the existing plant resources for different ailments to the domestic animals. This paper deals with 44 species of the herbal veterinary practices along with botanical name, Nepali name, Tamang name, family, and its uses. The knowledge of herbal practices is limited to remote areas and is descendent from generation to generation. Consequently, curing of the disease by using herbal plants is one of the most important prevailing systems in central Nepal where the veterinary hospitals are in very poor condition.*

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**Key words:** Medicinal plants, herbal veterinary practices, domestic animal and Tamang people.

### Introduction

Nepal is significantly rich in terms of biodiversity (B), cultural diversity (C) and linguistic diversity (L), called three fold living environment. Every organism is a unique and dependent and there is a casual relationship among BCL while existing in the nature (Grin, 1990). Nepal holds 11th position in Asia and 25th position in the world in terms of spices richness with 2 percent world flowering plant, 3 percent herbal plant, 4 percent mammals, 9 percent birds (Hada, 2007). Similarly, there are 125 ethnic groups and 123 linguistic groups in Nepal (Central Bureau of Statistics [CBS], 2011). Cultural diversity can be transformed from generation to generation through Mother Tongue Language (MTL) that respect nature (Awasthi, 2004). After 1960, MTL has been considered as scientific knowledge that is practicing for natural resource management (Pardhan & Pardhan, 2006). In this context, this paper highlighted how Tamang people are managing ethno medicine or herbal plants from generation to generation. Out of total population 26,494,504 of the country there are 5.8% or 1,539,830 Tamang people in Nepal (CBS, 2011).

Ethno medicine is an integral part of the socio-economic life of the people living in different ecological regions (i.e. Mountain, Hill and Terai). However, practices of ethno medicine vary from one region to another. Majorities of the rural people are dependent on agriculture and animals for livelihood. The people are conscious for the health and have been dependent on the herbal practices for their domestic animals since time memorial (Manandhar, 2002).

There is no mechanism to acquire ethno medicinal knowledge from generation to generation. Owing to that any ethnic groups are compelling to acquire such knowledge and skills partially by trial methods from their ancestors. There was/is minimal investigation efforts done on ethno medicine, although some attempts have been made recently by Chaudhary (1994), Joshi (1979), Shrestha (1998) in Nepal and Pal (1981), Pandey et al., (2000), Reddy and Raju (2000) in India. Therefore, the study was undertaken with a view to explore ethno medicinal practices of Tamang people and suggest preserving their traditional knowledge and skills related to herbal plants.

### Material and Methods

The field study was carried out in Makawanpur, Kathmandu, Lalitpur, Bhaktapur, Sindhupalchowk, Kabhrepalanchowk, Rasuwa, Nuwakot, Dhading, Kaski and Lamjung districts of Central Nepal during the period 1986 to 2013. In the course of field survey, the data was obtained through interviewing with local Tamang communities by visiting house to house. Information on herbal veterinary plants practices for domestic animals were also achieved from traditional healers and other experienced informants. Information of the herbal veterinary plants was recorded in their own Tamang language, includes common vernacular names of the plants; part used, preparation of medicine, mode of application, dosage and duration of treatment and precautions. All the plants were collected in the field and identified in the field and National Herbarium and Plant Laboratories (KATH).

### Results

Explored species are arranged alphabetically according to their botanical names, family, Nepali name, Tamang names and forms and uses of those plants in the table number 1 and 2 as well.

**Table 1. Descriptions of Herbal Plants**

SN	Botanical Name	Family	Nepali Name	Tamang Name	Forms and Uses
1	<i>Adiantum venustum</i> D.Don	Pteridaceae	Sinke	Bhasipsip	Leaves and rhizome juice are poured externally in the cuts and septic wounds particularly yak and nak.
2	<i>Atylosia scarabaeoides</i> (L.) Benth.	Leguminosae	Bhatmase ghans	Sakino	Fresh plant is given to the cattle in diarrhoea.
3	<i>Bistorta milletii</i> Lev.	Polygonaceae	Mhykure	Rangrung	Fresh plant is given as nutritious food and to enhance the secretion of milk particularly nak.
4	<i>Bistorta vacciniifolia</i> (Wall. ex Meisn.) Greene	Polygonaceae	Phulunge jhar	Tolowang	About 100 ml of extracted root juice is given orally to relief the fever.
5	<i>Boenninghausenia albiflora</i> (Hook.) Rehb.ex Meisn.	Rutaceae	Dampate	Urmen	Plant powder is applied all over the body externally to remove the parasitic insect.
6	<i>Bombax ceiba</i> L.	Bombacaceae	Simal	Kakdhong	Bark is boiled with water and extract is applied for the boils.
7	<i>Campylotropis speciosa</i> (Royle ex Schindl.) Schindl.	Leguminosae	Sakino	Mena	Leaves paste is applied over the dislocated bones to hasten up the process of healing particularly for the cows.

(Continued...)

(Table 1. continued...)

8	<i>Cannabis sativa</i> L.	Cannabaceae	Bhang	Sima	Fresh leaves and inflorescence are fed with corn flour to treat the diarrhoea.
9	<i>Cassiope fastigiata</i> (Wall.) D. Don	Ericaceae	Phursan	Nyamlu	The plant powder is applied all over the swellings of the limb which are believed to be due to ghost Plants are also given to cattles for lactation.
10	<i>Centella asiatica</i> (L.) Urb.	Umbelliferae	Ghodtapre	Ghodtapre	Fresh plants are fed to the horses in case of the urinary problems.
11	<i>Cirium argyranthus</i> DC.	Compositae	Thakal kanda	Pongjugale	About 100 ml of extracted root juice is given at one time to yaks and naks in cases of constipation and urinary problem.
12	<i>Clematis buchananiana</i> DC.	Ranunculaceae	Junge lahara	Nasarpelandu	Pounded leaves are applied all over the burns and fed to the yaks for the inflammation during the burn.
13	<i>Colebrookia oppositifolia</i> Sm.	Labiatae	Dhasure	Dhursel	About 200 ml of the leaf juice is fed mixed with cattle's food to the cows as an anthelmintic
14	<i>Cuscuta reflexa</i> Roxb.	Cuscutaceae	Nurbusi	Akashbeli,	About 200 ml of extracted plant juice is given once a day for one week in case of stomach disorders.
15	<i>Cymbopogon flexuosus</i> (Nees ex Steud) W. Watson.	Gramineae	Chel	Yukpa	Leaves are given as good fodder to naks and cows to enhance the secretion of milk.
16	<i>Daphne bholua</i> Buch.-Ham ex D. Don	Thymelaeaceae	Kagatpate	Syukudhumbu	Extracted flower juice is put into the nostrils of the Yaks to remove the leech during the rainy season.
17	<i>Drynaria propinqua</i> (Wall. ex Mett.) J.Sm. apud Bedd.	Polypodiaceae	Kamari	Nakabhyak	Paste of the rhizome is applied on bone fracture.
18	<i>Edgaria darjeelingensis</i> C. B. Clarke	Cucurbitaceae	Jangali karela	Tangsarkato	Pounded seeds are mixed with corn flour and are fed to the cattle to relieve the fever.
19	<i>Ephedra gerardiana</i> Wall. Ex Stapf.	Ephedraceae	Somlata	Kre	The leaves crushed with the roots of the <i>Rumex nepalensis</i> are prepared into paste and the paste is applied over the area of dislocated bone.
20	<i>Equestum debile</i> Roxb.	Equisetaceae	Kurkureghans	Migolja	A paste is made from the plant and is applied over the dislocated bones of the cattle for the favorable results.

**(Field Observation, 1986 to 2013).**

**Table 2. Descriptions of Herbal Plants**

SN	Botanical Name	Family	Nepali Name	Tamang Name	Forms and Uses
21	<i>Euphorbia royleana</i> Boiss.	Euphorbiaceae	Seudi	Desya	About 100 ml of the plant juice is fed mixed with cattle's food to get rid of intestinal worms.
22	<i>Fraxinus floribunda</i> Wall.	Oleaceae	Lakure	Lakure	About 100 ml of the juice extracted from the bark is given to treat the stomachache for the cattle.
23	<i>Gaultheria trichophylla</i> Royle	Ericaceae	Nilo bhuikaphal	Dabrami	Dried leaf powder is applied over the old wounds and to remove the worms from the wound.
24	<i>Ilex dipyrrena</i> Wall.	Aquifoliaceae	Seto khasru	Bomsi	Fresh leaves are fed to the cattle to enhance the secretion of milk and to increase strength and vigor.
25	<i>Lecanthus peduncularis</i> (Royle) Wedd.	Urticaceae	Gakaleti	Tilo	Fresh plant is fed to cattle to stimulate the secretion of milk.
26	<i>Luculia gratissima</i> (Wall.) Sweet.	Rubiaceae	Ban Kangiyo	Somrati	About 100 ml. of the bark juice is given once as an anthelmintic.
27	<i>Lindera neesiana</i> (Wall. ex Nees) Kurz.	Lauraceae	Siltimur	About	About 100 gm of powdered seeds are given with liquid cattle's food once a day for three days to check diarrhoea and dysentery.
28	<i>Osbeckia stellata</i> Buch.-Ham. Ex D. Don	Melastomataceae	Seto chulesi	Mendorumrum	The paste is prepared from the roots and flowers and is applied over the swellings of the dislocated bone.
29	<i>Oxalis corniculata</i> L	Oxalidaceae	Chariamilo	Nakhrupang	Extract of the fresh leaves is applied over the boils of the domestic cattle.
30	<i>Paris polyphylla</i> Sm.	Liliaceae	Satuwa		About 100 ml of root juice is given as an anthelmintic.
31	<i>Persicaria polystachya</i> (Wall. Ex Meisn.) H.Gross	Polygoniaceae	Ratnaule	Yapenguin.	Fresh tender parts are given to cattle to enhance the secretion of milk.
32	<i>Plantago erosa</i> Wall.	Plantaginaceae	Isabgol	Aitanjhar	The extract of whole plant is used for antiseptic dressings.
33	<i>Ricinus communis</i> L.	Euphorbiaceae	Adher	Dandarobi	Paste is made from the seeds and is applied over the swollen parts due to cold.
34	<i>Rumex nepalensis</i> Spreng.	Polygonaceae	Halhale	Alpipi	Paste of the root is applied over the dislocated bone and is also applied with frame of bamboo stick at the bone fracture segment until relief.

(Continued...)

(Table 2. continued...)

35	<i>Sarcococca coriacea</i> (Hook.) Sweet	Buxaceae	Phitphiya,	Gherpati	About 100 gms of powdered seeds are mixed with corn flour to feed orally to treat the stomachache.
36	<i>Saussurea fastuosa</i> (Decne.) Sch. Bip.	Compositae	Bhukur	Jhya	About 100 ml leaf extract is given to control the fever; the plant is tied around the tail to stimulate the milk secretion and is practiced to Naks in high altitude.
37	<i>Schima wallichii</i> (DC.) Korth.	Theaceae	Chilauni	Kyasing	About 200 ml of bark juice is given once as an anthelmintic.
38	<i>Swertia ciliata</i> (D. Don ex G. Don) B.L. Burtt.	Gentianaceae	Chiraito	Hoba.	Whole plant is cut into pieces and mixed with water and about 200 ml of the solution is given once a day to yaks and sheep to relieve the fever.
39	<i>Symplocos paniculata</i> (Thunb.) Miq.	Symplocaceae	Lodh	Syungen	Fresh leaves are given to cattle to enhance the secretion of milk.
40	<i>Taraxacum officinale</i> Wigg.	Compositae	Tukiphool	Bhutil mendo	Paste of the plant is applied over the dislocated bones and also bound in fractured bones and fixed with bamboo sticks instead of plaster until relief. Root and leaf used for the cough.
41	<i>Thalictrum chelidonii</i> DC.	Ranunculaceae	Dampate	Urmen	About 100 ml. of root juice is given to cows to control the fever.
42	<i>Uraria lagopus</i> DC.	Leguminosae	Sano bhatte	Tewalapte	Root crushed with turmeric is applied over dislocated bones and bound in fractured bone, bandaged and wrapped with bamboo sticks for one month; it is usually practiced to the cows.
43	<i>Urtica dioica</i> L.	Urticaceae	Sisnu,	Polo	Fresh tender parts are given to the cows to increase the secretion of milk.
44	<i>Verbascum thapsus</i> L.	Scrophulariaceae	Bandar puchhre	Pangjalu	Roots of the plant are mixed with the roots of <i>Urtica dioica</i> and are prepared in the form of paste and applied over dislocated bones. Paste of the root is also applied on the muscular swelling in cases of phantom effect.

**(Field Observation, 1986 to 2013).****Discussions and Conclusion**

The indigenous knowledge of Tamang people on herbal plants ultimately helped to document 44 species as outcomes of three fold living environment. Those species are belonging to 33 families of veterinary medicinal plants which have been used to cure different diseases prevailing in livestock of

central Nepal. No doubt, cultural and linguistic status of Tamang people became resources for documenting various species. Hence, government must realize provision of UNESCO 2005 that committed to ensure promotion of diversity in cultural expression, and must establish ethnic, linguistic and geographical identity of the indigenous people based determinants of new federal democratic state mechanism (Constitution, 2015). At the same time, government must develop certain mechanism to preserve and diffuse traditional knowledge related to ethno medicine of Tamang people. All in all, nineteen types of diseases occurred and cured by these wild plants especially in cows, buffaloes, yaks, naks, sheep, goats and dogs. The maximum number of plants including *Bistorta milletii*, *Cassiope fastigiata*, *Cymbopogon flexuosus*, *Ilex dipyrrena*, *Lecanthus peduncularis*, *Persicaria polystachya*, *Symplocos paniculata* and *Urtica dioica* are used to stimulate the secretion of milk. *Clematis buchananiana*, *Ricinus communis* and *Centella asiatica* are reported to treat burn, gout and urinary problem respectively. In this paper, among the 44 plants, were identified for lactation and fever. Bone fracture includes 8 plants each, whereas 6 plants for anthelmintic, 3 plants for cuts and wounds, stomach disorder, diarrhoea and dysentery, boils and as an insecticide embraces 2 plants each and burn, gout, and urinary problem contains 1 plant each. Plants such as *Adiantum venustum*, *Bistorta milletii*, *Bistorta vacciniifolia*, *Campylotropis speciosa*, *Cassiope fastigiata*, *Cirsium argyranthum*, *Clematis buchananiana*, *Cymbopogon flexuosus*, *Daphne bholua*, *Edgaria darjeelingensis*, *Ephedra gerardiana*, *Equestum debile*, *Euphorbia royleana*, *Gaultheria trichophylla*, *Ilex dipyrrena*, *Lecanthus peduncularis*, *Luculia gratissima*, *Paris polyphylla*, *Persicaria polystachya*, *Plantago erosa*, *Ricinus communis*, *Sarcococca coriacea*, *Saussurea fastuosa*, *Swertia ciliata*, *Symplocos paniculata*, *Taraxacum officinale*, *Thalictrum chelidonium*, *Urtica dioica*, *Verbascum thapsus* are used in veterinary medicine. The ethno botanical information for veterinary medicine of these species are not mentioned in Manandhar, (1989, 2001), Chaudhary (1994) and other published literatures in Nepal. Therefore, detailed phytochemical and pharmacological studies are required for positive exploitation and wider application.

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