

RESEARCH NOTE

Contribution to the Ethnobotany of the Tamangs of
Kathmandu Valley

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INTRODUCTION

Nepal is a multiracial and multilingual country where various linguistic and ethnic groups are knit together by bonds of nationality and cultural harmony. The Tamangs are not only one of the important ethnic minorities but also a major Tibeto-Burman speaking community of Nepal. They maintain a belief that they did originally come from Tibet and as they do speak 'Bhotia' tongue and follow 'Lamaism'; erstwhile they were called as 'Bhote'¹ meaning highlander or Tibetans (Bista, 1980:52). The Tamangs live in the surrounding hill sides of Kathmandu valley as well as 'Lekh'² portion of the Rasuwa, Nuwakot and Sindhupalchok districts lying North, North East and North West of Kathmandu proper. They are seen in the streets of Kathmandu and adjoining towns carrying a large basketload of wild plant products. The men are characteristically dressed in loinclothes and black tunics with short sleeved woolen jackets or 'Bakhoo' in winter and a Khukri tucked in their waistband, while women are dressed in colorful as well spotted blouse and gown and a sickle or Hasiya tucked in their waistband.

The Kathmandu valley which is the political, cultural and commercial centre of Nepal comes under central midland region of Nepal. It enjoys monsoon climate and subtropical and temperate type of vegetation represented by prominent floristic elements like Schima, Chestnut, Chirpine, Oak, Laurel, Rhododendron etc. It consist of three principal towns and several villages inhabited by various ethnic communities including the Tamangs. Of the total population of Nepal, the Tamang constitute about 3% of which the Kathmandu valley consists of nearly 7% comprising 13,619; 13,041 and 7,594 population in Kathmandu, Lalitpur and Bhaktapur districts respectively (HMG, 1987:47). Regarding the circular settlement pattern of Kathmandu valley the central core is inhabited by the Newars which is followed by other ethnic tribes like Brahmins, Chhetris etc. while peripheral forest area is inhabited by the Tamangs.

From long past the Tamangs who are traditionally 'traders' are supplying various domestically essential commodities like bamboo

baskets and carpets, ropes, broons, firewood, timber, woolen blankets and jackets as well as wild edible mushrooms, young bamboo and fern shoots and even goats to the populace of Kathmandu valley (Bista 1977: 48). It indicates that they are 'miner' of the forest area and largely subsist their living on vegetational resources. But in the recent time due to widespread deforestation, governmental control of forest area and the air of modernity in town area; their age long bussiness of selling raw or finished wild plant products is declining as a result they are getting impoverished socio-economically, and however, they have managed to retain their traditional culture.

The Tamangs of Kathmandu valley area commonly practise agro-silvo-pastoral system. Their agricultural production consists of mainly Maize, Millet, Wheat, Barley, Potato and Rice to some extent and they depend upon wild plants for vegetables and other domestic items. Thus local forest plays important role in fulfilling their various basic needs like food, firewood, timber, fertiliser, fodder, fibre, medicines etc. They are efficient craftsmen in making bamboo baskets, woolen blankets and jackets as well as carpentary and religious 'Thangka' paintings (Bista 1977:50). Actually the Tamangs' life gravitates around the forest and retains primeaval forest culture rooted in the old beliefs, taboos, folk lores and traditional attitudes (Khadka et.al, 1982:109).

The Tamangs' villages are situated in the fringe of forest area and are generally out of modern facilities like electricity, motorable roads, safe drinking water, health posts and post offices. Though they lie in the vicinity of capital towns they are virtually in remote area. This physical state of living combined with economic poverty and forest based traditional way of life have enriched them ethnobotanically. But this valuable treasure of ethnobotanical information accumulated through many generations and verified by their self experiences is in jeopardy. The causal problems are like; declining forest area, increasing acculturation process of Tamang boys, and still high rate of illiteracy which rather facilitates oral traditions thereby hindering the documentation of ethnobotanical information. Regarding the previous record of works relevant to present one Manandhar (1980, 1982) carried out ethnobotanical observation on different tribes mainly the Tamangs of Rasuwa and Nuwakot districts and reported 43 medicinal plants from the former and 85 wild plants comprising 46 medicinal plants, 30 food plants, 14 each for fodder and of miscellaneous usage from the latter district. Bhandary and Shrestha (1985) conducted ethnobotanical investigation on various ethnic tribes including the Tamangs of Kathmandu valley and reported 67 poisonous plants. It indicates that ethnobotanical work particularly on the Tamangs of the Kathmandu valley has been minimally carried out. This study in brief tries to fulfil this lacuna.

The field work was carried out in seven selected villages of Kathmandu valley predominated by the Tamangs; Godavary, Lele, Manichur, Panchmane, Sundarijal, Thankot and Tokha (Fig. 1) between April-October 1986.

The present work was carried out to document the ethnobotanical information of the Tamangs of Kathmandu valley area with special reference to the wild plants useful in meeting their various daily basic needs.

METHODOLOGY

The field surveys were carried out from an anthropological field technique involving direct interview and discussion with key informants including the 'Bonpo' or local witch doctors. The gathered ethnobotanical data were authenticated by cross questionings with other Tamangs of the same or other localities by referring the same questionnaire and plant samples as well as by relevant reference and herbaria consultation.

Herbaria of all collected plant samples pledged to be useful were made in a scientific manner and their identification were made by tallying herbaria and citing relevant literature on flora at the "National Herbarium and Plant Laboratories" Godavary, Lalitpur.

As Firewood:

Alnus nepalensis, *Castanopsis indica*, *C. tribuloides*, *Eurya acuminata*, *Lyonia ovalifolia*, *Lithocarpus elegans*, *Myrica esculenta*, *Myrsine capitellata*, *M. semiserrata*, *Pinus roxburghii*, *Pyrus pashia*, *Quercus glauca*, *Quercus semecarpifolia*, *Rhododendron arboreum*, *Sarcococca coriacea*, *Schima wallichii*.

As Fodder:

Alnus nepalensis, *Arundinaria falcata*, *Brassiopsis hainla*, *Buddleja asiatica*, *Castanopsis tribuloides*, *Cleyera ochracea*, *Eurya acuminata*, *Ficus auriculata*, *Ficus clavata*, *Ilex doniana*, *Ligustrum confusum*, *Machilus duthiei*, *Myrsine semiserrata*, *Sarcococca coriacea*, *Saurauia nepaulensis*.

As Timber:

Alnus nepalensis, *Betula alnoides*, *Borassus Sp.*, *Castanopsis indica*, *C. tribuloides*, *Dendrocalamus hamiltonii*, *Lithocarpus elegans*, *Lyonia ovalifolia*, *Myrsine capitellata*, *M. semiserrata*, *Pinus roxburghii*, *Quercus glauca*, *Q. semecarpifolia*, *Schima wallichii*.

As Fibre or Cordage:

Agave americana, *Daphne bholua*, *Eulaliopsis binata*, *Girardinia palmata*, *Hibiscus manihot*, *Wickstroemia canescens*.

As for Miscellaneous use:

- a) Basketry - *Arundinaria falcata*, *Dendrocalamus hamiltonii*
- b) Brooms - *Phyllanthus parvifolius*, *Thysanolaena maxima*
- c) Carpentry - *Quercus glauca*, *Q. semecarpifolia*
- d) Dye - *Rubia manjith*
- e) Fleas repellent - *Boenninghausenia albiflora*
- f) Green manure - *Eupatorium adenophorum*
- g) Incense - *Artemisia vulgaris*
- h) Leech repellent - *Zanthoxylum armatum*
- i) Religious Plants - *Buddleja asiatica*, *Oroxylum indicum*

ENUMERATION

The plants are enumerated in alphabetical order according to their botanical names. The Nepali name of the plants and their corresponding local Tamang names are also provided. The family names are given in brackets.

RESULT AND DISCUSSION

The list of 100 wild plant species pledged to be useful in meeting various basic needs by the Tamangs of Kathmandu valley are presented below.

As food items:

- a. Food: *Dioscorea alta*, *D. bulbifera*, *D. deltoidea*
D. esculenta.
- b. Vegetable: *Agaricus campestris*, *Amaranthus spinosus*,
Arundinaria falcata, *Aconogonum molle*, *Chenopodium album*,
Colocasia Sp., *Dendrocalamus hamiltonii*, *Diplazium stolickiae*,
Dryopteris cochleata, *Dryotharium boryanum*, *Ficus lacor*,
Galansoga parviflora, *Girardinia palmata*, *Houttuynia cordata*,
Lecanthus peduncularis, *Marasmius Sp.*, *Ophioglossum reticulatum*,
Pleurotus circinatus, *Russula vesca*, *Smilax menispermoides*.
- c. Fruit: *Ardisia macrocarpa*, *Berberis asiatica*, *Castanopsis*
indica, *Cleistocalyx operculatus*, *Coriaria nepalensis*, *Eleagnus*
infundibularis, *Eriobotrya dubia*, *Ficus sarmentosa*, *Fragaria*
vesca, *Gaultheria fragrantissima*, *Ligustrum confusum*, *Mahonia*
napaulensis, *Morus alba*, *Myrica esculenta*, *Myrsine semiserrata*,
Osbeckia nepalensis, *Pinus roxburghii*, *Pyracantha crenulata*,
Rubus ellipticus, *Saurauia nepaulensis*, *Scurulla elata*, *Rubus*
ellipticus, *Saurauia nepalensis*, *Scurulla elata*, *Syzygium*
cumini, *Viburnum mullaha*, *Zizyphus incurva*.
- d.d. Curry or Pickle: *Bauhinia variegata*, *Elsholtzia flava*,
Rhododendron arboreum, *Zanthoxytum armatum*.
- e. Tea preparation: *Osyris wightiana*.

As Medicine:

- Anthelmintic - *Melia azadirach*
 Antidiarrhoeal - *Bergenia ciliata*
 Antidysentric - *Rhus javanica*
 Antidandruff - *Gonostegia hirta*
 Antipyretic - *Swertia angustifolia*
 Analgesic - a) Headache - *Solanum nigrum*
 b) Toothache - *Solanum torvum*
 c) Stomachache - *Tinospora cordifolia*,
 Zanthoxylum armatum
 Blood coagulant - *Ageratum conyzoides*, *Scutellaria scandens*
 Disinfectants - *Equisetum arvense*, *Melothria Sp.*,
 Oroxylum indicum
 Diuretic - *Opuntia dillenii*
 Eczema - *Rumex nepalensis*
 Jaundice - *Cuscuta reflexa*
 Scabies - *Lyonia ovalifolia*
 Sprains - *Gonostegia hirta*

Acomogonum molle (D. Don.) Hara (Polygonaceae)

N. (Nepali name) Thotne, T. (Tamang name) Panguun.
Young shoots are consumed as vegetable or pickle
and are also used to sell in markets.

Agaricus campartris L. ex Fries (Agaricaceae)

N. Gobre chyau, T. Kaparsyamo
The fructification or whole plant is cooked and eaten as vegetable
as well as used to sell in markets.

Agave americana (Amaryllidaceae)

N. Kettuke, T. Kettuke.
Fibres extracted from leaves are used in making
ropes and strings.

Ageratum conyzoides L. (Compositae)

N. Gandhe Jhar, T. Ghyusi
Paste of leaves is used in clotting blood from
fresh cuts and wounds.

Alnus nepalensis D. Don. (Betulaceae)

N. Uttis, T. Kyangsing
Wood is used as timber and firewood while leaves
as fodder.

Amaranthus spinosus L. (Amaranthaceae)

N. Lunde, T Bhangam
Young shoot is taken as vegetable after proper
boiling.

Ardisia macrocarpa Wall. (Myrsinaceae)

N. Damaiphool, T. Paralparmi
Ripe berries are eaten raw.

Artemisia vulgaris L. (Compositae)

N. Titepati, T. Chenjen
Dried shoots are commonly used as incense during
Shamanism and death rites.

Arundinaria falcata Nees (Gramineae)

N. Nigalo Tusa, T. Maa
Young shoots are consumed as well sell in market as vegetable while
stems are used in basketry and leaves as fodder.

Bauhinia variegata L. (Leguminosae)

N. Koiralo, T. Koiralomendo

Flowers are used as pickle as well as sold in Markets.

Berberis asiatica Roxb. ex DC. (Berberidiaceae)

N. Chutro, T. Pijar

Ripe fruits are eaten fresh.

Bergenia ciliata (Haw.) Sternb. (Saxifragaceae)

N. Pakhanbed T. Pakhanbed

Decoction of root is used as an antidiarrhoeal.

Betula alnoides D. Don (Betulaceae)

N. Saur, T. Bhirsing

Wood is used as timber.

Boenninghausenia albiflora (Hk.f.) Meisn. (Rutaceae)

N. Dampate, T. Niburjhe

Fresh shoot is employed as fleas repellent

Borassus Sp. (Palmae)

N. Jagar, T. Dholchhing

Stem is used as poles in hedgerow, 'Tagaaro' or bar making but not used in house construction.

Brassiopsis hoinla (Buch.-Ham.) Seem. (Araliaceae)

N. Seto Chuletro, T. Ghenglamdo

Leaves are used as fodder.

Buddleja asiatica Lour. (Loganiaceae)

N. Bhimsenpati, T. Phabasing

Leaves are used as fodder as well as in religious worships.

Castanopsis indica (Roxb.) A. DC. (Fagaceae)

N. Dhale Katus, T. Chingar

Wood is used as timber and firewood while seeds are consumed raw as well as used to sell in markets.

Castanopsis tribuloides, (Smith) A. DC. (Fagaceae)

N. Musure Katus, T. Kyarbar

Wood is used as timber and firewood while leaves as fodder.

Chenopodium album L. (Chenopodiaceae)

N. Bethe, T. Bethu

Young plant is cooked as vegetable.

Cleistocalyx operculatus (Roxb.) Merr. and Perry. (Myrtaceae)

N. Kyamuno, T. Sernemerne

Ripe fruits are eaten fresh and also sold in markets.

Colocasia Sp. (Araceae)

N. Jaluko, Ban Karkalo, T. Taya

Leaves and inflorescence are used as vegetable after proper boiling.

Coriaria nepalensis Wall. (Coirariaceae)

N. Machhaino, T. Bhojinsi, Jakubaku

Ripe fruits are eaten but in excess causes dizziness.

Cuscuta reflexa Roxb. (Cuscutaceae)

N. Aakash beli, T. Taarghey

Infusion of stem is taken internally to cure Jaundice.

Daphne bholua B. - H. ex D. Don. (Thymelaeaceae)

N. Kagajpate, Lokta, T. Kagajpate

Bark of stem is used in making ropes and strings.

Dendrocalamus hamiltonii Nees and Arn. ex Munro (Gramineae)

N. Tamabaans, T. Krin

Young shoots are used as vegetable. Wood is largely used in house construction as rafters, beams and poles as well as baskets, mats and also used as firewood. Leaf is used as fodder avoiding pregnant livestock.

Dioscorea alata L. (Dioscoreaceae)

N. Ghar Tarul, T. Ghimteme

Its tubers which are consumed after thorough roasting or boiling to supplement the food are cultivated and are also used to sell in markets.

Dioscorea bulbifera L. (Dioscoreaceae)

N. Gittha, T. Pemegittha

Tubers are consumed after thorough roasting or boiling.

Dioscorea deltoidea Wall. ex Kunth. (Dioscoreaceae)

N. Vyakur, T. Ridme

Tubers are consumed as substitute of food after through roasting, boiling or cooking.

Dioscorea esculenta (Lour.) Burkill (Dioscoreaceae)

N. Suthani Tarul, T. Temsur

Tubers are consumed as food after through roasting or boiling.

Diplazium stolickzae Bedd. (Aspidiaceae)

N. Kalo Nyuro, T. Bhandhengan

Tender shoots which are commonly eaten as delicious vegetable after boiling are also used to sell in markets.

Dryopteris cochleata (Don.) C. Chr. (Aspidiaceae)

N. Kuthurke, T. Dhengan

Tender shoots are consumed as vegetable after boiling and are used to sell in markets.

Dryotharium boryanum (Willd.) Ching (Aspidiaceae)

N. Dauthe, T. Dhengan

Tender shoots are consumed as vegetable after boiling and are used to sell in markets.

Eleagnus infundibularis Momiyama (Elaeagnaceae)

N. Madilo, T. Rangeltingo

Ripe fruits are edible.

Elsholtzia flava Benth. (Labiatae)

N. Ban Silam, T. Mranja

Dry powdered seeds are used as curry and the oil extracted from the seeds is said to be edible.

Eriobotrya dubia Decne. (Rosaceae)

N. Jurekaphal, T. Hadekarbijar

Ripe fruits are eaten fresh.

Equisetum arvense L. (Equisetaceae)

N. Kurkure, T. Middho

Paste of root is applied in wounds caused by thorns so as to expel the pus formation.

Eulaliopsis binata (Retz.) C.E. Hubbard (Gramineae)

N. Babiyo, T. Salki

Long needle like leaves are used in making ropes and strings.

Eupatorium adenophorum Spreng. (Compositae)

N. Banmarajhar, T. Tirimna

Leaves which are not generally browsed by livestock are used in mulching or in making green manure.

Eurya acuminata DC. (Theaceae)

N. Jhingane, T. Tengar

Leaves are used as fodder.

Ficus auriculata Lour. (Moraceae)

N. Timila, T. Mago

Leaves are used as fodder.

Ficus clavata (Moraceae)

N. Bedulo, T. Lamogo

Leaves are used as fodder.

Ficus lacor Buch.-Ham. (Moraceae)

N. Kabro, T. Nakkali

Foliar buds are used in making curry.

Ficus sarmentosa B.-H. ex. I.E. Smith (Moraceae)

N. Ban Timila, T. Nogu, Mogo.

Ripe fruits are said to be edible

Fragaria vesca Hook. f. (Rosaceae)

N. Bhuikaphal, T. Pokhrepolong

Ripe fruits are eaten.

Galansoga parviflora Cav. (Compositae)

N. Chitlange ghans, T. Naulina

Tender shoot is cooked and consumed as vegetable.

Gaultheria fragrantissima Wall. (Ericaceae)

N. Dhasingare, T. Chyanjun

Ripe fruits are eaten.

Girardinia palmata (Forsk.) Gaud. (Urticaceae)

N. Allo, T. Pachher

Fibres extracted from bark of stem is used in making threads, ropes and strings while young shoot is eaten as vegetable, after thorough boiling.

Gonostegia hirta (Bl.) Miq. (Urticaceae)

N. Mas lahare, T. Pingur

The paste of root is used as antidandruff shampoo. The sticky substance oozing from cut stems is mixed up with red soil and used in smearing winnowing tray or 'Nanglo' as an adhesive. The mixture of its root with those of Nettle and *Osyris wightiana* is applied to relieve sprained bones of man and livestock preferably young ones.

Hibiscus manihot L. (Malvaceae)

N. Ban Nalu, T. Nalo

Fibres extracted from stem barks is used in making cordage.

Houttuynia cordata Thumb. (Saururaceae)

N. Gande, T. Kaalmo

Young shoots are cooked as vegetable.

Ilex doniana DC. (Aquifoliaceae)

N. Puale, T. Puhale

Leaves are used as fodder.

Leacanthus peduncularis (Royle) Wedd. (Urticaceae)

N. Khole Saag, T. Syodhap

The whole shoot is cooked and eaten as vegetable.

Ligustrum confusum Dcene. (Oleaceae)

N. Kanike, T. Kurunga

Leaves are used as fodder.

Lithocarpus elegans (Blume) Hatus (Fagaceae)

N. Arkhoula, T. Bhalbung

Wood is used as timber while leaves as fodder.

Lyonia ovalifolia (Wall.) Drude (Ericaceae)

N. Angeri, T. Dhomsin

Wood is used as timber and firewood as well as in charcoal

making. Leaves are said to be highly poisonous to livestock and infusion of leaves is applied on skin to cure scabies.

Machilus duthiei King ex. Hook. (Lauraceae)

N. Kaulo, T. Loba
Leaves are used as fodder.

Mahonia napaulensis DC. (Berberidaceae)

N. Jamanemandro, T. Kerpa, Kerpai
Ripe fruits are eaten.

Marasmius sp. (Agaricaceae)

N. Thokrechyau, T. Gharsyamo
Whole plant or fructification is cooked and eaten as vegetable and also used to sell in markets.

Melia azadirach L. (Meliaceae)

N. Bakaino, T. Jugu
Ripe fruits are taken internally to expel roundworms.

Melothria sp. (Cucurbitaceae)

N. Ban kakro, Kukur karno, T. Langai
Fruit pulp is taken internally to cure boils of tongue.

Myrica esculenta Buch.-Ham. ex. D. Don (Myricaceae)

N. Kaphal, T. Bhaikarbijar
Ripe fruits are eaten and used to sell in markets.

Myrsine capitellata Wall. in Roxb. (Myrsinaceae)

N. Setikath, T. Syungan
Wood is used as timber and firewood.

Myrsine semiserrata Wall. in Roxb. (Myrsinaceae)

N. Kalikath, T. Kramo
Ripe fruits are edible, wood is used as timber as well firewood and leaves are used as fodder.

Ophioglossum reticulatum L. (Ophioglossaceae)

N. Jibre sag, T. Jibre dhap
Leaf is cooked as vegetable.

Opuntia dillenii Haw. (Cactaceae)

N. Nagphani, T. Bhoksepucho
Half of the seeds of the fruit is grinded and
taken internally as a diuretic.

Oroxylum indicum (L.) Vent (Bignoniaceae)

N. Tatelo, T. Lamendo
Paste of seed is applied to cure boils of lips
and tongues while flowers are commonly used in
worships as well in Shamanism.

Osbeckia nepalensis Hook. (Melastomaceae)

N. Rato Chulsi, T. Lemblang
Ripe fruits are eaten.

Osyris wightiana Wall. ex. Wigh (Santalaceae)

N. Nundhiki, T. Jhyalala
Young leaves are boiled, dried and powdered
so as to use as substitute of tea leaves.

Phyllanthus parvifolius B.-H. ex D. Don (Euphorbiaceae)

N. Khareto, T. Chhetrephya
The dried stick is bundled and used
as a broom.

Pinus roxburghii Sarg. (Pinaceae)

N. Rani Salla, Khote Salla T. Thamsingdong
Wood is used as timber while seeds are edible after
through roasting and the needle leaves are
used in making green manure.

Pleurotus circinatus Fr. (Agaricaceae)

N. Kanne chyau, T. Ghusyasyamo
The whole fructification is eaten as a vegetable
after thorough washing and cooking with traces of
Nepalese pepper or 'Timmur'. It is also used to sell in
markets.

Potentilla fulgens Wall. (Rosaceae)

N. Bajradanti, T. Ghobarchhe
Paste of root is used to cure toothache.

Pyracantha crenulata (D. Don) Roemer (Rosaceae)

N. Ghangharu, T. Baderu
Ripe fruits are eaten.

Pyrus pashia Benth.-Hook. ex D. Don (Rosaceae)

N. Mayel, T. Pana
Ripe fruits are eaten.

Quercus glauca Thunb. (Fagaceae)

N. Banjh, T. Sulsing
Wood is used as timber, firewood and in making
agricultural implements like 'Halo'. Leaves
are used as fodder.

Quercus semecarpifolia Smith (Fagaceae)

N. Khasru, T. Bhena
Wood is used as firewood and in making
charcoals as well as in carpentry and in
making handle of knives. Leaves are extensively
lopped for fodder.

Rhododendron arboreum Sm. (Ericaceae)

N. Lali Guras, T. Paramendo
Wood is used as firewood as well as in making
good charcoals. Flowers are sucked for honey
and also pickled.

Rhus javanica L. (Anacardiaceae)

N. Bhaki Amilo, T. Tibra
Powdered seed is taken with curd as
an antidiarrhoeal.

Rubia manjith Roxb. ex Fl. (Rubiaceae)

N. Majitho, T. Yathabchhe
The dye extracted from its root is used in
dying wools.

Rubus ellipticus Smith (Rosaceae)

N. Ainselu, T. Polong

Ripe fruits are eaten as well as used to sell in markets.

Rumex nepalensis Spreng. (Polygonaceae)

N. Halhale, T. Haledo

The paste of the basal portion of the stem, which is yellowish is applied on skin to cure eczema.

Russula vesca Fr. (Lactariaceae)

N. Bhut chyau, T. Kasyamo.

The whole fructification is used as vegetable after cooking properly spiced with the powder of Nepalese pepper.

Sarcococca coriacea (Hook.f.) Sweet (Buxaceae)

N. Phitiphiya, T. Phitiphiya

Wood is used as firewood and leaves as fodder.

Saurauia nepaulensis DC. (Saurauiaceae)

N. Gogan, T. Angyur

Ripe fruits are edible and leaves are used as fodder.

Schima wallichii (DC.) Korth. (Theaceae)

N. Chilaune, T. Kyasing

Wood is used as timber and firewood.

Scurulla elata (Edgew). Danser (Loranthaceae)

N. Ainjeru, T. Ainjera

Ripe fruits are eaten.

Scutellaria scandens D. Don (Labiatae)

N. Charpate, T. Charpatedhyago

The juice extracted from leaves is used in fresh cuts and wounds to clot the blood.

Smilax menispermoides A. DC (Smilacaceae)

N. Kukur daino, T. Naigre
Young shoots are eaten raw or cooked as
vegetable.

Solanum nigrum L. (Solanaceae)

N. Jangali Bihin, T. Ghodejhe
Pulp of ripe fruits is applied on forehead
and temples to relieve from headache.

Solanum torvum Swartz (Solanaceae)

N. Thulo Bihin, T. Ghyagarpuchho
Dried fruits are burnt with mustard oil on a
spoon placed inside a 'Chilim' of smoking 'Hookah' and the
resulting vapour is allowed to direct towards the infected or
aching tooth and a little smoke is said to cure the toothache.

Syzygium cumini (L.) Skeels (Myrtaceae)

N. Jamun, T. Jhambu
Ripe fruits are edible and also used to sell
in markets.

Swertia angustifolia B.-H. ex D. Don (Gentianaceae)

Decoction of root is commonly used as
antipyretic. Due to this property the plant is
collected and sold in markets.

Thysanolaena maxima (Roxb.) Kuntze (Gramineae)

N. Amriso, T. Thyabgo
Bundle of inflorescence is used to make broom which
are used in sweeping purposes and are also used
to sell in markets.

Tinospora cordifolia Miers (Menispermaceae)

N. Gurjo, T. Gurju
Infusion of stem is used as a stomachic and also
to check blood mixed urination.

Urtica dioica L. (Urticaceae)

N. Sisnu, T. Polo

Tender shoots are collected by means of tongues and is used as vegetable after thorough boiling. The mixing of its boiled shoot with livestock feed or 'Kudo' is said to increase lactation of livestock.

Viburnum mullaha B.-H. ex D. Don (Caprifoliaceae)

N. Molo, T. Asyangpolo

Ripe fruits are edible.

Wickstroemia canescens (Meisn.) C. A. Meyer (Thymelaceae)

N. Phurkepat, T. Pat

The fibres extracted from the bark of stem is used in making cordage.

Zanthoxylum armatum DC. (Rutaceae)

N. Timmur, T. Prumo

Powdered fruits is taken internally as stomachic and also used as curry as well as an antimicrobial spice in mushroom cooking. The paste of fruit is applied in feet as a leech repellent.

Zizyphus incurva Roxb. (Rhamnaceae)

N. Hadebayer, T. Namun

Ripe fruits are eaten fresh.

The result indicated that out of total 100 species recorded, altogether 53 spp. are found to be used as food items, while 19 spp. as medicine, 16 spp. as firewood, 15 spp. as fodder, 14 spp. as timber, 6 spp. as fibre or cordage and 13 spp. for miscellaneous use like green manure; carpentry, religious plants, etc. The highest proportion of recorded species i.e. 53% are treated as food plants, comprising 25 spp. as fruits, 24 spp. as vegetable, 4 spp. each as food and pickle or curry and 1 sp. as local substitute for market tea. In total raw or finished products of 54 wild plants comprising 16 different species of vegetables and fruits including 3 spp. each of mushroom and ferns along with firewoods, bamboo baskets and mats are used to sell frequently at markets of Kathmandu and Patan as a source of income. The use of 4 spp. of *Dioscorea* in supplementing the main dish and use of some less known spp. like: *Galansoga parviflora*, *Lecanthus peduncularis* as vegetable and *Ligustrum confusum*, *Myrsine semiserrata*, and *Scurulla elata* as a source of wild edible fruits are notable. The application of many weedy species including the spiny *Amaranthus spinosus*, *Girardinia palmata* and

Urtica dioica imply the degree of extreme poverty on the one hand and rational utilisation of vegetational resources on the other. As for the medicinal plants, most Tamangs still have strong belief in healing property of vegetable drugs and words of 'bonpo', or witch doctors. They use 19 different plants species as a remedy to 15 types of common diseases like diarrhoea, dysentery, toothache, jaundice as well as in frequent cuts and wounds. The usage of *Bergenia ciliata*, *Swertia angustifolia* are well known in other tribes also while the remedial application of *Ageratum conyzoides*, *Cuscuta reflexa*, *Opuntia dillenii* and *Solanum torvum* by the Tamangs is rather uncommon but promising. The treatment pattern of *Solanum torvum* seeds in curing toothache practised by the Tamangs coincides with the Khasi and Jaintia tribes of Meghalaya, India (Kharkongor and Joseph, 1982). The possible medicinal use of many such less known but promising wild plant species warrant detail chemical analyses and subsequent standardisation for their greater mass utility. As for firewood, fodder and timber the local people use virtually every sort of easily accessible wild plants however they emphasize on easily chopable, quickly drying and large diametered spp. for firewood, 'galactogogus' or high milk yielding fodder spp. and strong, tall cylindrical tree spp. for timber. The species like *Alnus nepalensis*, *Castanopsis tribuloides*, *Lyonia oralifolia*, *Myrsine capitellata*, *Pinus roxburghii*, *Quercus glauca*, *Q. semecarpifolia*, are highly sought after for the above purposes. In miscellaneous usage the application of *Eupatorium adenophorum* a noxious weed, and wasteful needles of *Pinus roxburghii* in making green manures is an illustrative traditional practice towards sustaining the productivity of soil and less dependence upon imported chemical fertiliser by proper utilisation of local vegetational resources. The prevalence of Tamang terminology like 'Jhe' for herbs, 'Sing' or 'Dong' for trees, 'Mendo', for flowers, 'Dhap' for semi-aquatic plants, 'Syamo' for mushrooms and 'Dhengan' for ferns, indicate the close tie of Tamangs' life style and culture with the local vegetational resources.

As the Tamangs are heavily dependant upon the forest products, so they are liable to greater destruction of forest as they do not practice afforestation, display myopic behaviour and think the forest products as free gift of nature like soil and water. In this background the saying that "A Tamang is happy with an axe, a pot and a wife" appear relevant (Khadka et al 1982:409). This stresses to the urgency of providing environmental education and techniques of forest management to the local Tamangs accompanied by rise in village economy by more forest and agro based cottage industries, more off-farm employment and income generating activities.

CONCLUSION

The documentation of ethnobotanical information on 100 wild plant species in the present work indicate that the Tamangs of Kathmandu Valley are ethnobotanically rich and they have close

affinity with the local vegetational resources in order to meet their various daily basic needs like; food, fodder, medicine, timber, fire-wood, fibre etc. as well as in earning money by selling raw or finished wild plant products. It sheds light on the considerable impact of local forest in the socio-economic and cultural spheres of the Tamngs' community and vice versa. The ethnobotanical observation shows that the Tamngs use some less known but potential plants species like *Galansoga parviflora*, *Lecanthus peduncularis*, *Scurulla elata* for food while *Cuscuta reflexa*, *Opuntia dillenii*, *Solanum torvum* for medicine and these species require necessary chemical analyses for their proper exploitation. In this context, the crude ethnobotanical information assists in the crucial task of evaluating rural science and technology and tapping the economic potentialities of vegetational resources as well forest based traditional cottage industries thereby contributing to fulfill the basic needs of rural people in a substantial way at the same time maintaining the environmental balance.

NOTES

1. In local dialect 'Bhot' indicates northern Trans-Himalayan zone generally between 3000m-4000m: in the inward and outward side of greater-Himalayan range.
2. In local dialect 'Lekh' indicates the upper reaches of the Mahabharat hill range of Midland Nepal generally between 2000m-3000m. In the middle hills Nepal most population resides between 1000m-2000m and the altitudes of about 3500m and 4000m are regarded as the upper limit of arable agriculture and forest zone respectively.

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