

Indigenous use of mistletoes in tropical and temperate region of Nepal

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Eleven species of mistletoes are widely used by different ethnic groups of Nepal for various purposes. The local people of the present study areas (one each at tropical and temperate region) were found using eight species of mistletoes for food, fodder and medicine. Noticeable use of the mistletoes is for healing bone fractures, dislocation and sprain.

Keywords: Indigenous use, mistletoes, Nepal.

Mistletoes are one of the important components of biodiversity. They play a vital role in natural plant communities by interacting with other hosts, herbivores and dispersers. In many cultures, mistletoes have been a source for many concepts, symbols, and rituals. Since early days, they have been one of the most magical, mysterious and scared plants of folklore. Probably due to their parasitic nature, elusive method of dispersal, and strange growth habit, many cultures have revered, feared, or thought them to have magical properties. The species not only adorn festive as portrait of friendship, but are still respected palliative for the most feared diseases including cancer, with their connotations in sympathetic medicines of abnormal growth (Polhill and Wiens 1998).

In Nepal, mistletoes have traditionally been used since long. However, they have remained unused by the modern pharmacological practices. The indigenous use of mistletoes such as *Dendrophthoe falcata*, *Viscum album* and *V. articulatum* was first documented in Nepal in 'Medicinal Plants of Nepal' (HMGN 1970) marking the beginning of ethnobotanical studies on mistletoes. Nonetheless the works on indigenous uses still remained unattained. Present study, therefore, aimed to collate and enumerate the indigenous uses of mistletoes.

Methods

Primary data on indigenous uses of mistletoes were collected from participatory observations and informal discussions with the locals at Hattikhal, Chepangghat, Deurali and Mulghat area (250-700 m; tropical zone) of Bardia district in April 2003 and in

Godawari-Phulchoki area (1500-2700 m; subtropical and temperate zone) of Lalitpur district in July 2003 to June 2004. Literatures briefing the indigenous use of mistletoes were also reviewed and analyzed.

Results

Of the eight species found to be used indigenously *Dendrophthoe falcata*, *Scurrula elata*, *S. pulverulenta* and *Viscum articulatum* were used in Bardia district and *Helixanthera lignustrina*, *Loranthus odoratus*, *Scurrula elata*, *S. parasitica*, *S. pulverulenta*, *Viscum album* and *V. articulatum* in Godawari-Phulchoki area of Lalitpur district. Most of the species were used for healing and curing the bone fractures, dislocation and sprain. Very few were reported as fodder and edible (Table 1). Local people from both areas denied using mistletoes for fuelwood/firewood because they believed that such uses cause them debt in home and eye problems. The use of mistletoes for trapping bird was also important. Tamang ethnic groups of Phulchoki area believed that the use of mistletoes infected *Urtica dioica* wood brings good luck during gambling.

Discussion

To date, total of 19 species of the mistletoes are found in Nepal (Devkota 2005). Though the species are few in number, their uses have been practiced indigenously for centuries. Of the 19 species, 11 species are being indigenously used for various purposes.

Most of the existing ethnobotanical reports of Nepal have recorded the importance of mistletoes for rural life. Such importances include medicine, fodder and

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Table 1. Indigenous Use of Mistletoes in Nepal

SNo	Species Name	Local Name	Indigenous Use
1	<i>Dendrophthoe falcata</i> (L.f.) Etting.* { <i>Loranthus bicolor</i> Roxb., <i>L. falcatus</i> L.f., <i>L. longiflorus</i> Desr.}	Rhiniya-M, Ainjeru-N, Mandargon banda-S, Nih-T	Edible, medicinal
2	<i>Helixanthera ligustrina</i> (Wall.) Danser* { <i>Loranthus ligustrinus</i> Wall.}	Bhringe-G, Ainjheru-Mg, Ainjeru, Lisso-N	Edible, medicinal
3	<i>Loranthus odoratus</i> Wall.* { <i>Hyphaer odoratum</i> (Wall.) Danser}	Ainjeru-N, Khik-R, Donglanais- T	Fodder, medicinal
4	<i>Macrosolen cochinchinensis</i> Tiegh. { <i>Loranthus cochinchinensis</i> Tiegh., <i>L. globosus</i> Roxb., <i>L. viridiflorus</i> Wall.}	Ainjeru-N	Medicinal
5	<i>Scurrula elata</i> (Edgew.) Danser* { <i>Loranthus elatus</i> Edgew.}	Bhringe-G, Ainjeru-N, Ainjera, Che-S, Nai-T	Edible, fodder, medicinal
6	<i>Scurrula parasitica</i> L.* { <i>Loranthus scurrula</i> L.}	Ainjeru, Lisso-N	Edible, fodder
7	<i>Scurrula pulverulenta</i> (Wall) G. Don* { <i>Loranthus carnosus</i> Wall., <i>L. pulverulentus</i> Wall.}	Bhringe-G, Ainjeru-N	Edible, fodder, medicinal
8	<i>Taxillus vestitus</i> (Wall.) Danser { <i>Loranthus vestitus</i> (Wall.) Danser}	Lisso-N	Edible, medicinal
9	<i>Viscum album</i> L.* { <i>Viscum costatum</i> , <i>V. stellatum</i> D. Don}	Ainjeru-C, Mistletoes, Devil's fuge, Birdlime-E, Harjor-G, Ainjeru, Harchur, Hadjoda, Sanohatchur-N, Harchu-Ne, Gandhamadini, Jiwantika-Sa, Nai-T, Bang-Th	Edible, medicinal
10	<i>Viscum articulatum</i> Burm. f.* { <i>Viscum dichotomum</i> D. Don, <i>V. liquidambaricolum</i> (Hayata) R.S. Rao}	Hadachur, Hadjod-N, Harchu-Ne, Bojha-R, Kathkomunja-S, Gandhmadini-Sa	Fodder, medicinal
11	<i>Viscum</i> sp.	Lisso-N	Medicinal

Source: Field survey (2003 and 2004) * species used in study area, species given in {} are synonyms

C = Chepang, E = English, G = Gurung, M = Moosahar, Mg = Magar, N = Nepali, Ne = Newari, R = Rai, S = Satar, Sa = Sanskrit, Sh = Sherpa, T = Tamang, Th = Tharu

food. Besides these, few species are used in trapping birds and few others are for food for birds and butterflies. Mistletoes are extensively applied for curing muscular swelling, sprains, fractures, dislocations, etc. A detailed review of indigenous use of 11 mistletoes species has been presented below for the readers. Their synonyms and local names are given in table 1.

1. *Dendrophthoe falcata* (L.f.) Etting (**Loranthaceae**)

Leaf paste is used in skin diseases. It is taken in abortion (Bhattarai 1991; Siwakoti and Siwakoti 2000). Bark juice/decoction is employed for menstrual problems and asthma (Bohora 1998; Sapkota 2000; Pandey 2001; Bhattarai 2002). Its paste is applied on boils, setting dislocated bones and extracting pus (Manandhar 2002). Fruit is taken as flavor, edible (HMGN 1982; Panthi and Chaudhary 2002; Shrestha and Kunwar 2003), astringent, narcotics, and for curing wounds (Siwakoti and Varma 1996, 1999), and its paste is applied on fractures for setting bones (Manandhar 1986,

1990) and other medicinal purposes (Sah *et al* 2002). Nectar is food for Hair Crested Drungo and Sunbirds (BPP 1995). Leaf along with *Urtica doica* (Sisnu) are made into paste and used to treat bone fractures (Bhattarai 1993).

2. *Helixanthera ligustrina* (Wall.) Danser (**Loranthaceae**)

Fruits are edible (Manandhar 2002) and whole plant is used as medicine (Panthi and Chaudhary 2002; Shrestha and Kunwar 2003).

3. *Loranthus odoratus* Wall. (**Loranthaceae**)

Plant is used as fodder (Gurung 2003). Ripen fruits are taken by Tamang people for indigestion (Manandhar 1991, 2002). In winter, fruits are collected, boiled with equal volume of water and the viscous gel is applied over the tree branches for bird trapping (Devkota 1995; Nepal 1999).

4. *Macrosolen cochinchinensis* (Lour.) van Tiegh. (**Loranthaceae**)

Plant is taken to cure headache (Devkota 1997).

5. *Scurrula elata* (Edgew.) Danser (**Loranthaceae**)
Leaves are used as fodder. Fruits are edible and used for bird trapping (Shrestha 1988a; Shrestha 1988b; Nepal 1999; Duwadee and Kunwar 2001, Manandhar 2002).
6. *Scurrula parasitica* L. (**Loranthaceae**)
Leaves are used as fodder. Fruits are edible (Manandhar 2002; Shrestha and Kunwar 2003). If taken, the tender shoots cause loss of appetite and vomiting to livestock (Shrestha 1985).
7. *Scurrula pulverulenta* (Wall.) G. Don (**Loranthaceae**)
Leaves are used as fodder. Fruits are edible and used for bird trapping. Stem bark is boiled in water and used as a treatment of jaundice.
8. *Taxillus vestitus* (Wall.) Danser (**Loranthaceae**)
Plant is boiled and its extract is applied on sprain (Manandhar 1993). It is also used as a wild food plant (Manandhar 1997).
9. *Viscum album* Linn. (**Viscaceae**)
Fruits are edible, laxative, tonic, aphrodisiac, cardiogenic (HMGN 1970; IUCN 2004); used for tumor, mixed with egg and eaten to cure fracture (Devkota 1997); food for butterfly *Delais aglaia* (Red base Jazebel), *Delais belladonna* (Hill Jazebel); twigs are used by witch doctors (Khanal and Bhandary 1982). Plant is used as diuretic; applied in wounds, earache, and enlargement of spleen (Malla 1994; Khan 1997; Joshi and Joshi 2001; Panthi and Chaudhary 2002; IUCN 2004). Root extract is taken to cure tinitus (Dangol 2002) and bark paste is applied on muscular swelling, boils, wounds, sprains, fractures (Manandhar 1992; Shrestha and Dhillion 2003; Panthi and Chaudhary 2004; Poudel and Uprety 2004). Plant paste is applied on curing dislocated bones (Coburn 1984; Manandhar 1989a; Oli 2001; Prasai 2001; Shrestha *et al* 2004), wounds of cattle (Manandhar 1989 a,b; Shrestha 1997; Bhattarai 2002; Shrestha *et al* 2004; IUCN 2004) and abdomen swelling.
10. *Viscum articulatum* Burm.f. (**Viscaceae**)
Plant bark is often mixed with hen egg and *Pinus roxburghii* leaf and taken for ailment of bone dislocation. It is given in fever attended with itching limbs and as an aphrodisiac. It has febrifuge properties (HMGN 1970). Paste prepared from all parts of the plant is applied over the fractured portion of the body (Oli 2003).

Stem paste and decoction is applied on cuts, wounds, bone fracture (Nepal 1999; Joshi and Joshi 2001; Niraula 2001; Gurung 2003; IUCN 2004), ulcers and blood diseases (Sapkota 2000; Pandey 2001; IUCN 2004), epilepsy and sprain (Siwakoti and Siwakoti 2000). Plant is also used as fodder (Thapa *et al* 1997).

11. *Viscum sp.* (**Viscaceae**)

Plant paste is used in fracture (Kattel and Kurmi 2004).

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