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ETHNO-MEDICINE PRACTICED BY MAGAR PEOPLE IN TAHOON PALPA, NEPAL

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ABSTRACT

The present research work seeks to explore ethno-medicinal plants and animals used by the Magar people in Tahoon Palpa for primary healthcare. A total of 48 medicinal plant species belonging to 34 families and 48 genera, and 10 animal species belonging to 10 families and eight orders, have been recorded from the study area. The most dominant families of plants belonged to Eurphorbiaceae, Gramineae, Leguminosae and Liliaceae (3 species in each). The main medicinal plant species were *Adhatoda vasica* (Nees), *Cannabis sativa* (Linnaeus), *Artimisia vulgaris* (Linnaeus), *Terminalia chebula* (Retz), *Terminalia bellirica* (Roxb), *Phyllanthus emblica* (Linnaeus), *Ocimum sanctum* (Linnaeus), *Bauhinia variegate* (Linnaeus), *Mentha spicata* (Linnaeus), *Zanthoxylum armatum* (DC.), *Acorus calmus* (Linnaeus), *Euphorbia hirta* (Linnaeus), *Azadirachta indica* (A. Juss), etc. while animal species were *Achaearanea tepidariorum* (C.L.Koch), *Potamon fluviatile* (Herbst), *Passer domesticus* (Linnaeus), *Canis aureus* (Linnaeus), *Apis cerena* (Fabricius), *Limax flavus* (Linnaeus) etc. In the study area the local people mostly use plant species to treat cuts, wounds, stomach problem, cough, fever, dysentery etc., while animal products were used for typhoid, bone fracture, intestinal problems, piles, rheumatism, cough etc. This paper recommends to the implementation of conservation activities such as awareness to the locals, appropriate management and initiating scientific research to ensure a minimum viable population of the medicinal flora and fauna.

Key words: Ethnic group, magar, shamans, diseases.

INTRODUCTION

Ethno-medicine deals with the study of the interaction between bio-resources and people with a particular emphasis on traditional curing the various infectious and non-infectious diseases (Nepali, 2004). It is a land with great cultural ethnic diversity having different castes, religions and cultures. Nepal is one of the rich mega-biodiversity countries of the world having wide varieties of plants with medicinal values. In many tribal societies, particularly those living in remote rural areas of Nepal, indigenous knowledge of plants are being largely utilized as an exclusive means of combating human as well as animal diseases (Chaudhary, 1998).

The Magars are traditionally farmers and inhabit the area near the forest, forest patches and forest boundary. So they are closely linked with nature and have rich knowledge, skills and techniques on the traditional utilization of natural resources, especially the local plant and animal species for traditional healing purposes. The present paper documents the plant and animal species used by the Magar community of Tahoon Palpa for healing diseases.

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MATERIALS AND METHODS

Study area

The study was conducted in Tahoon village of Palpa district that lies in the 83° 43' 6"E to 27° 50' 13" N where Magar ethnic group is densely populated. Tahoon village is 32 km southeast from the district headquarter Tansen and is linked by a sub Highway road towards Rampur Municipality which diverts east from Aryabhanjyang in the Siddhartha Highway (Figure 1).

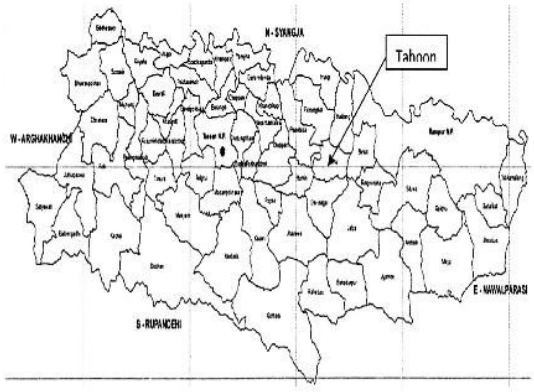

Figure 1. Location map of study area.

Data Collection

The area was surveyed 4 times from October 2016 to May 2017. However, several short observations were also conducted for the study. Household-head healers and elderly people who have knowledge of medicine in that tribe were requested to accompany the trip in every field visit, which helped to collect more data for this study.

Then interview was conducted with traditional healers, shamans and local people to collect information like names and parts of plants and animals used in medicine, mode of preparation etc. Most of the plant specimens were photographed while some plants were collected for further identification. Primary data was collected by interviewing with the ethnic people (Magar) as well as collecting and photographing the plant species. Interview was taken with Magar people who live in Tahoon for a long time. Some elder leaders who were more familiar with medicinal plants and animals were also interviewed. They provided very important information about the local treatments of different kinds of diseases in the past and present. The interviewed respondents were both of new and old generations.

Identification

Most of the collected and observed plant specimens were identified in the field and the unidentified specimens were later confirmed by colour photos following Shrestha (2001), Joshi and Joshi (2001), Pandey *et al.* (2005), as well as by comparing with the preserved materials of the herbarium preserved at Department of Botany, Tribhuvan Multiple Campus, Palpa. Animal specimens were identified upto species level (except a few) following Majupuria and Majupuria (1998), Shrestha (1981) and Kotpal (2006).

RESULTS AND DISCUSSION

From the survey the reported families of medicinal plants used by the ethnic Magar people in Tahoon, Palpa, included Eurphorbiaceae, Gramineae, Leguminosae and Liliaceae which represented the highest number of species (3 species in each) followed by Acanthaceae, Amaranthaceae, Compositae, Combretaceae, Labiatae, Lauraceae, Myrsinaceae (2 species in each), however, remaining 23 families included single species in each. They fell under Trees (38%), Shrubs (33%), Herbs (27%) and Climbers (2%). From the investigation it was found that the local Magar tribe used tree species most in the study area. On the basis of mode of preparation, the plants had been found to be in oral use and external ointment. In case of oral,

the medicine was in the form of juice (38%) followed by the powder (28%), paste (23%), decoction (5%), oil (3%) and chewing (3%). The study also investigated that the most frequently utilized plant parts among 48 medicinal plant species were leaves (20%) followed by barks (18%), fruits (14%), roots (14%), flowers (7%), whole parts (11%), seeds (6%), stems (7%) and rhizomes (3%). They used leaves most among the parts of medicinal plants. Among 10 species of animals the medicinal derivations include flesh (34%), blood (17%), whole parts (17%), bile (8%), viscera (8%), carapace (8%) and honey (8%).

Table 1. List of medicinal plants and their uses.

S.N.	Family	Scientific Name	English name/ Vernacular name	Form	Parts used	Disease/case
1.	Acanthaceae	*Adhatoda vasica* Nees	Malabarnut/Asuro	Shrub	Leaves and buds	Stomachic
2.	Acanthaceae	*Rhus javanica* Linnaeus	Nutgall tree|Bhakimlo	Tree	Fruits	Dysentery
3.	Amaranthaceae	*Achyranthes aspera* Linnaeus	Prickly chaff flower|Datiun	Shrub	Whole parts	Skin diseases, deactivated poisonous
4.	Anacardiaceae	*Mangifera indica* Linnaeus	Mango	Tree	Barks	Gastric
5	Araeceae	*Acorus calamus* Linnaeus	Sweet flag/Bojho	Herb	Rhizomes and roots	Cough
6.	Berberiaceae	*Berberis aristata* DC.	Barberry/Chutro	Shrub	Barks and roots	Jaundice, skin diseases and conjunctivitis
7.	Cannabinaceae	*Cannabis sativa* Linnaeus	Hemp/Ganja	Shrub	Leaves and inflorescence	Tonic, stomach problem of animals in digestion
8.	Caricacae	*Carica papaya* Linnaeus	Papaya/Mewa	Tree	Fruits	Jaundice and good for eyes
9	Chenopodiaceae	*Chenopodium album* Linnaeus	Goose beet/Narabethe	Herb	Whole parts	Cold
10	Compositae	*Artimisia vulgaris* Linnaeus	Mugwart/Titepati	Herb	Leaves	Scabies
11	Compositae	*Ageratum conyzoides* Linnaeus	Goat weed| Gandejhar	Herb	Shoots and leaves	Wounds and cuts
12	Combretaceae	*Terminalia chebula* Retz	Chebulic myrobalan| Harro	Tree	Fruits	Abdominal pain and cough
13	Combretaceae	*Terminalia bellirica* Roxb	Beleric myrobalan|Barro	Tree	Fruits	Abdominal pain and cough
14	Cruciferae	*Raphanus sativus* Linnaeus	Radish		Root	Indigestion
15	Cuscutaceae	*Cuscuta reflexa* Roxb	Dodder/Akasebeli	Climber	Whole plants	Jaundice
16.	Dipterocarpaceae	*Shorea robusta* C.F. Gaertn	Sal	Tree	Leaves and barks	Gastric
17	Ericaceae	*Rhododendron arboretum* Smith	Rhododendron/Laliguras	Tree	Bark and flower	Cough, diarrhoea, dysentery, fish spine block in throat
18	Euphorbiaceae	*Phyllanthus emblica* Linnaeus	Goosebery/Amala	Tree	Fruits	Stomach and good for eye
19	Euphorbiaceae	*Euphorbia royleana* Boiss	Cactus/Siudi	Shrub	Whole plants	Stomachic
20	Euphorbiaceae	*Euphorbia hirta* Linnaeus	Asthma plant/Dhudhejhar	Herb	Whole plants	Cuts and wounds
21	Gramineae	*Bambusa arundinacea* Retz-Willd	Bamboo	Tree	Shoots and root	Purify blood
22	Gramineae	*Cynodon dactylon* Linnaeus	Bermuda/Duboo	Herb	Whole plants	Checking blood from nose and wounds, cuts
23	Gramineae	*Thysanolaena latifolia* Nees	Broom grass|Amriso	Shurb	Leaves	Abdominal discomfort
24	Lauraceae	*Lindera neesiana* Nees-Kurz	Kurz fruit|Siltimur	Shrub	Seeds	Bleaching, Abdominal colic

S.N.	Family	Scientific Name	English name/ Vernacular name	Form	Parts used	Disease/case
25	Lauraceae	*Cinnamomum camphora* Linnaeus	Camphor	Tree	Leaves and barks	Intestinal disorder, checking vomiting & nausea
26	Labiatae	*Ocimum sanctum* Linnaeus	Holy basil/Tulsi	Herb	Leaves	Fever, typhoid, headache
27	Labiatae	*Mentha spicata* Linnaeus	Mint/Pudina	Herb	Leaves	Diarrhoea, dysentery, cough
28	Leguminosae	*Bauhinia variegata* Linnaeus	Mountain ebony|Koiralo	Tree	Barks buds and flowers	Cough, diarrhea and dysentery
29	Leguninosae	*Mimosa pudica* Linnaeus	Touch me not plant/Lajawotijhar	Herb	Root	Fever and aundice
30	Leguninosae	*Mucuna pruriens* Linnaeus	Cowhage/Kausoo	Shrub	Leaves and seeds	Ulcer
31	Liliaceae	*Allium sativum* Linnaeus	Garlic	Herb	Bulb	Headache, stomach problem, gastric
32	Liliaceae	*Aloe vera* Linnaeus	Aloevera/Ghiukumari	Shurb	Leaves	Antihelmintic, burns, gastric and Menstrual problem
33	Liliaceae	*Asparagus racemosus* Willd	Asparagus/Kurilo	Shrub	Roots	Tuberculosis, cough , bronchitis, diarrhoea, dysentery
34	Malvaceae	*Malvaviscua arboreus* Cav	Hibiscus/Ghantiful	Shrub	Flowers	Sinusitis
35	Meliaceae	*Azadirachta indica* A.Juss	Neem	Tree	Barks and roots	Purify blood, blood pressure, headache
36	Malvaceae	*Abutilon indicum* Link Sweet	Country mallow	Shrub	Tubers and roots	Stomach problem
37	Menispermaceae	*Cissampelos pareira* Linnaeus	Velvet leaf|Batulepaate	Shrub	Roots	Cough, diarrhea
38	Myricaceae	*Myrica esculenta* Buch –Ham.	Bayberry/Kaphal	Tree	Barks	Cough, Fever, gastric problem, asthma
39	Myrsinaceae	*Maesa chisia* Buch.-Ham.	Bilaune	Tree	Roots and barks	Insecticidal
40	Myrtaceae	*Syzygium aromaticum* Linnaeus	Clove/Lwang	Herb	Flower	Toothache
41	Oxalidaceae	*Oxalis corniculata* Linnaeus	Indian sorrel/Chariamilo	Herb	Whole plants	Cuts and wounds
42	Punicaceae	*Punica granatum* Linnaeus	Pomegranate|Darim	Tree	Seeds, roots and barks	To kill tapeworm, diarrhoea, cough and dysentery
43	Rutaceae	*Zanthoxylum armatum* DC.	Winged prickly ash|Timur	Tree	Seeds	Fever, cough, round worm infection, dental problem
44	Solanaceae	*Solanum virginiaum* Dunal	Thorny nightshade|Kanthakari	Shrub	Fruits and roots	Cough, fever, gastric, neck pain
45	Sapotaceae	*Aesandra butyracea* Roxb	Indian butter tree/Chiuri	Tree	Fruits and seeds	Rheumatism.
46.	Theaceae	*Schima wallichii* Korth	Needle wood/Chilaune	Tree	corollas	Uterine disorder and hysteria
47.	Umbelliferae	*Centella asiatica* Linnaeus	Water pennywort/ Ghodtapre	Herb	Leaves and whole plants	To improve memory, toothache, fever, dysentery and throat troubles.
48.	Urticaceae	*Urtica dioica* Linnaeus	Stinging nettle/Sisnoo	Shrub	Leaves	Sugar and Increase blood level

Table 2. The animals and their parts used for medicine.

S.N.	Order	Family	Scientific name	English name/Local name	Parts used	Disease/case
1.	Carnivora	Canidae	*Canis aureus* (Linnaeus)	Jackal/Shyal	Flesh and blood	Rheumatism
2.	Carnivora	Ursidae	*Ursus americanus* (Pallas)	Bear/Bhalu	Bile	Typhoid
3.	Primates	Cercopithecidae	*Semnopithecusentellus* (Dufresne)	Langur/Dhendu	Flesh	Rheumatism
4.	Rodentia	Hystricidae	*Hystrix indica* (Kerr)	Porpupine/Dumsi	Viscera	Typhoid, diarrhea
5.	Passerifomes	Sturnidae	*Acridotheres tristis* (Linnaeus)	Mynah/Dangre	Flesh	Piles
6.	Hymenoptera	Apidae	*Apis cerena* (Fabricius)	Honeybee/Mauri	Honey	Cough, abdominaldisorder,cold
7.	Stylommatophora	Limacidae	*Limax flavus* (Linnaeus)	Slug/Chiplekira	Whole	Tonic, bone fracture and backache
8.	Araninеae	Theridiidae	*Achaearanea tepidariorum* (Koch)	Spider/Makuro	Whole	Umphilitis
9.	Decapoda	Potamidae	*Potamon fluviatile* (Herbst)	Crab/Gangata	Carapace	Bone fracture
10.	Passerifomes	Passeridae	*Passser domesticus* (Linnaeus)	Sparrow/Bhangera	Blood and flesh	Otitis media

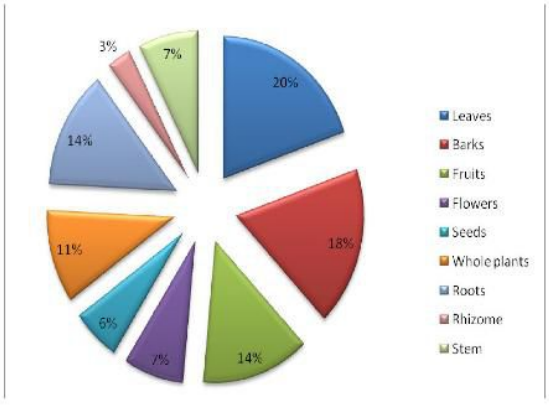

Figure 2. Parts of plants used as medicine.

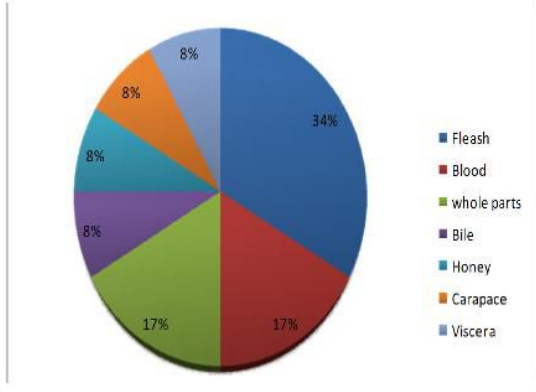

Figure 3. Parts of animals used as medicine.

CONCLUSION

In Tahoon, Palpa the Magar people are dominant ethnic group. Especially the local traditional healers called shamans and elderly people found to have rich knowledge on the use of plant and animal species as medicines. The result indicates that higher proportions of plants than animals were being utilized by the local group for curing diseases. From the survey a total of 48 species of flora and 10 species of fauna were observed to be used as medicine purposes. Different parts of plants like barks, leaves, stem, flowers, fruits, roots/rhizome & seeds etc. were observed to cure diseases like diarrhoea, dysentery, jaundice, fever, typhoid,

gastric problem, common cold, cuts and wounds etc. Blood, flesh, bones, urine, milk, honey etc. were the animal products used for rheumatism, fever, typhoid, boils, cough, bone fracture, piles etc. in the study area.

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