MEDICAL ETHNOBOTANY IN THE KARNALI ZONE, NEPAL¹

N. K. BHATTARAI


The traditional phytotherapy of the lay population of Jumla, Mugu and Kalikot districts of Karnali Zone, West Nepal, has been investigated. Information on 80 empirically accepted prescriptions involving 62 plant species (one species of fungus, one species of fern, five species of gymnosperms and 55 species of angiosperms) are presented along with details on uses. These herbal remedies are used to treat a wide spectrum of ailments, the majority of which are the frequently occurring. In most of the cases, these remedies appeared to be the only available source of treatment.

THE STUDY AREA

The study area (28°17'–29°59'N longitudes and 81°02'–82°59'E latitudes; Fig. 1) has clearly defined sub-tropical (up to 2000 m), temperate (2000 m–3000 m), sub-alpine (3000 m–4000 m) and alpine (above 4000 m) zones. The representative forest in the lower altitudes is dominated by Pinus roxburghii Sargent, Quercus floribunda Lindl. ex A. Camus, Alnus nepalensis D. Don and Rhododendron arboreum Smith. Higher elevations are represented by Pinus wallichiana A. B. Jacks., Abies spectabilis (D. Don) Mirbel and Picea smithiana (Wall.) Boiss, with some Cedrus deodara (Roxb. ex D. Don) G. Don, Aesculus indica (Colebr. ex Cambess.) Hook., Juglans regia L., Juniperus indica Bertol. and Rhododendron campyanulatum D. Don. The uppermost limit of the forest is bordered by Betula utilis D. Don. The overall vegetational pattern is characterized by mixed coniferous forest with meadows on gentle slopes, by deciduous broad-leaved forest along the river-valleys, and by birch forest along the tree line.

METHODS OF STUDY

The study area was surveyed five times between 1982 and 1983, in different seasons and along different transects. As the present study was not particularized to any caste or ethnic group, informants were chosen at random. Interviews were conducted with the cooperation of the village chiefs, country school teachers, the traditional herbal healers and ordinary villagers. Each datum was considered authentic only after confirmation through three or more sources of distinct localities. Plants with putative medicinal virtues were collected by the investigator, with the help of informants. Botanical identity was confirmed in the National Herbarium (KATH), Kathmandu, Nepal. Voucher specimens are also deposited there, with the author's field numbers. Information regarding the mode of preparation of the drugs and methods of their administration, along with dosages, were recorded. The medicinal properties of the plants considered are as reported by the informants.

RESULTS

In the following enumeration, plants are arranged alphabetically, followed by (family), local Nepali name (collection number of author), followed by the locally reputed medicinal uses.

Abies spectabilis (D. Don) Mirbel (Pinaceae) thingre sallu (84/46). The leaves of A. spectabilis (D. Don) Mirbel, Pinus wallichiana A. B. Jacks. and Thymus linearis Benth. ex Benth., 5 g of each are boiled in 300 ml of water with common salt and drunk warm twice a day for 2–3 days to relieve bronchitis and whooping cough.

Aconogonum molle (D. Don) Hara (Polygonaceae) chaunle (84/27). The tender stem, sour

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in taste, is peeled and eaten for refreshment and as an appetizer.

_Acorus calamus_ L. (Araceae) _bojho_ (83/131). Two grams of the rootstock are boiled in 300 ml of water with sugar or molasses and drunk warm, regularly, before bedtime as a curative measure for throat infection. A warm decoction of the rootstock is used, regularly, to wash the mouth to treat gingivitis, pyorrhoea and scurvy. A paste of the rootstock is considered antiseptic to wounds.

_Aesculus indica_ (Camb.) Hook. (Hippocastanaceae) _pangro_ (83/20). The seed oil is smeared, regularly, on the affected parts to treat cutaneous infections like scabies and ringworm. The oil cake is made into a paste with water and applied to the forehead which is supposed to relieve severe headache.

_Allium wallichii_ Kunth. (Alliaceae) _jimbu ghans_ (84/37a). A decoction of the leaves is claimed to possess carminative property.

_Anemone rivularis_ Buch.-Ham. ex DC. (Ranunculaceae) _kangarate_ (85/545). A decoction of the root is used, regularly, to wash wounds as an antiseptic.

_Anemone vitifolia_ Buch.-Ham. ex DC. (Ranunculaceae) _kaptase_ (85/523). A decoction of the root is used, regularly, to wash infected eyes.

_Arisaema flavum_ (Forsk.) Schott (Araceae) _tinchu_ (83/45). The leaves or the tubers are boiled and consumed with salt and curd, preferably a sour one, as a mild laxative.

_Asparagus racemosus_ Willd. (Liliaceae) _ban kurilo_ (83/73). A decoction of the tender shoots is believed to be a vital tonic which is frequently prescribed for convalescent and postnatal mothers.

_Aster aspurulus_ (C. B. Clarke) Hutch. (Asteraceae) _ghanse phul_ (85/546). A concentrated decoction of the root is applied, regularly, to wounds for its alleged healing property.

_Begonia picta_ Smith (Begoniaceae) _magarkanche_ (83/71). The petioles, sour in taste, are made into pickles and eaten as an appetizer.

_Berberis aristata_ DC. (Berberidaceae) _chutro_ (85/520). A concentrated decoction of the stem-bark is applied, regularly, on the eyelid to relieve eye infection.

_Berberis chitria_ Lindl. (Berberidaceae) _chutro_ (83/92). A decoction of the stem-bark is used, regularly, to wash the eyes to relieve eye infection.

_Bergenia ciliata_ (Haw.) Sternb. (Saxifragaceae) _pakhanbed_ (84/17). A teaspoonful of the juice from the rhizome is taken in the morning for 3–4 days to relieve low fever. It is also claimed to be effective against intermittent fever. The juice from the rhizome is claimed to be a tonic with carminative property and is frequently prescribed for post-natal mothers and convalescent patients. The usual dose is one teaspoonful of the juice, 2–3 times/day for a week or longer.

_Betula utilis_ D. Don (Betulaceae) _bhojpatra_ (84/44). About 10 g of the leaves are boiled in 400 ml of water, then the cooled decoction is taken 2–3 times daily for 5–7 days as a diuretic. It is also recommended to relieve dysuria. The decoction, when taken warm 2–3 times a day for 2–4 days, is claimed to have antipyretic property.

_Botrychium lunaria_ (L.) Sw. (Ophioglossaceae) _harre jhar_ (84/35). A plant-paste is applied, regularly, to boils. The plants are cooked and prescribed to convalescent patients as a tonic.

_Cannabis sativa_ L. (Cannabinaceae) _bhango_ (85/419). The leaf-juice is applied to cuts and wounds as an antiseptic and is also claimed to promote rapid healing.

_Capsella bursa-pastoris_ (L.) Medik. (Cruciferae) _tori jhar_ (85/558). The tender parts are cooked as a vegetable which is said to be effective against constipation.

_Cedrus deodara_ (Roxb. ex D. Don) G. Don (Pinaceae) _diyar_ (83/431). The essential oil, extracted from the leaves, is massaged, regularly, on the affected parts to relieve rheumatic pain.

_Centella asiatica_ (L.) Urban (Umbelliferae) _ghortapre_ (84/57). A teaspoonful of the leaf-juice is taken each morning for 2–3 weeks for its alleged cooling property. It is also said to be effective against gastritis.

_Chnopodium album_ L. (Chenopodiaceae) _bethe_ (83/102). The tender aerial parts are cooked and consumed, regularly, to treat dyspepsia.

_Cirsium verutum_ (D. Don) Sprengel (Asteraceae) _thakal_ (85/588). The root or the inner portion of the stem is eaten raw for its supposed cooling property. It is also believed to be useful to