Ethno-medicinal study of Pulwama tehsil (Jammu and Kashmir)

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ABSTRACT
This paper is based on the results of an ethno-medicinal research project conducted in Pulwama tehsil of Jammu and Kashmir. The people of the area have always used the medicinal herbs for the treatment of various diseases. A total of 30 plant species belonging to 25 different families have been recorded, with their correct botanical identification, local name, family, habit, habitat, status, part used, indications of disease and mode of application for each plant.

Keywords: Ethno-medicine, Pulwama, Medicinal herbs, Jammu and Kashmir.

1. Introduction
Man has always made use of flora to alleviate sufferings and diseases. 80% of the world population rely on traditional health care system [1]. The system of ethno-medicine is safe and is a low cost therapy for treating various ailments. As elsewhere, in India too, the medicinal use of plants has been practiced since ancient times by various rural and tribal communities through the system of Ayurveda, Siddha and Unani [2].

More than 2800 km long and 300 km wide Indian Himalayan region (IHR) is a mega hotspot of biological diversity [3]. Kashmir Himalaya often referred to as paradise on earth is located at the north western tip of the Himalayan biodiversity hotspot [4].
Pulwama tehsil is a beautiful spot on earth, because of its congenial climate, streams, waterfalls, fragrant flowers, delicious fruits and other natural sceneries. It is located in the south Kashmir about 30 km’s from Srinagar. The climate is predominantly dry, temperate. The areas at higher altitude are cool in summer and having harsh winters. The spring is pleasant with frequent rains. The maximum temperature of the area is 29 °C, rising up to 36 °C. The food crops of the area are rice, maize and wheat etc. The cash crops are apple, almond, and walnut etc. A perusal of literature [5, 6, 7, 8, 9, 10] shows that no systematic study of medicinal plants from ethno-medicinal point of view has been carried out in the area of investigation. In the present study an attempt has been made to document the ethno-medicinal usage of the various plant species in Pulwama tehsil of Jammu and Kashmir.

2. Methodology
During this investigation field trips were carried out to the area of study during March to June 2011. Appropriate methodology was used to obtain the information about the medicinal use of different plants from the local population [11, 12]. The information was collected from the people by using questionnaire. The local herbal healers (Hakims) were mostly consulted during the study. The information gathered was rechecked and verified by discussions with Hakims, important works [13, 14] and at IIIM (Indian institute of integrative medicine) Pulwama.

3. Results
The plants are enumerated in alphabetical order. The botanical name of each plant is followed by local name, family, habit, status and medicinal importance.

3.1 Acorus calamus
Local name – Vai; Family – Acoraceae; Habit – Herb; Status – Vulnerable

Uses:-
Crushed plant made into paste and applied externally for various skin diseases. Extract or decoction of root taken in small dozes for stomach troubles.
3.2 Adiantum cappilus veneris
Local name – Gautheer; Family – Adiantaceae; Habit – Herb; Status – Vulnerable

Uses:- Paste of whole plant made with ghee applied on hair as tonic. Extract of plant taken for stomach pain and as expectorant.

3.3 Aesculus indica
Local name – Handoon; Family – Sapindaceae; Habit – Tree; status – Rare

Uses:- Extract of leaves given for fever. Seed oil used for healthy hair and in treatment of headache.

3.4 Allium cepa
Local name – Gande; Family – Alliaceae; Habit – Herb; Status – Secure

Uses:- Crushed bulb applied externally for boils. Crushed bulb mixed with mint eaten for increasing appetite.

3.5 Allium sativum
Local name – Roohun; Family – Alliaceae; Habit – Herb; Status – Secure

Uses:- Cloves rubbed on portions of baldness grow new hair. For high blood pressure and obesity cloves are eaten raw or mixed with vegetables as spice.

3.6 Anagallis arvensis
Local name – Chari Saben; Family – Primulaceae; Habit – Herb; Status – Rare

Uses:- For ulcers crushed plant is applied on affected area. Extract of rhizome given for sore throat and as an expectorant.

3.7 Arisaema jacquemontii
Local name – Hapet Gogej; Family – Araceae; Habit – Herb; Status – Rare

Uses:- For muscle strength massage of grinded rhizome mixed with brassica oil is done. For boils and blisters dried root or tuber is powdered, mixed with oil and applied on the affected part.

3.8 Artmisia absinithium
Local name – Tethwan; Family – Astrateae; Habit – Herb; Status – Vulnerable

Uses:- For abdominal pain extract of whole plant is taken in small doses. Extract of whole plant is also used for chronic fever and gout.

3.9 Asperagus recemosus
Local name – Satavar; Family – Asparagusaceae; Habit – Herb; Status – Endangered

Uses:- For burning sensation of skin, paste of fresh leaves is applied. For increasing libido, extract or powder of root with water is taken.

3.10 Atropa belladonna
Local name – Sagangur; Family – Solanaceae; Habit – Herb; Status – Vulnerable

Uses:- For asthma, leaves are burnt and smoke is inhaled. For joint pain, paste of leaves is applied on the affected area. For blood circulation, Extract of root is taken.

3.11 Bergenia ligulata
Local name – Pashanabheda; Family – Saxifragaceae; Habit – Herb; Status – Vulnerable

Uses:- For wounds, paste of fresh leaves is applied. For stomachache and internal injury, powder of dried roots is taken with milk or water.

3.12 Brassica rapa
Local name – Tilgogul; Family – Brassicaceae; Habit – Herb; Status – Secure

Uses:- For abdominal pain, seed oil is applied. For healthy hair massage of seed oil is done regularly. For cold, warm seed oil is applied on chest and nose.

3.13 Cannabis sativa
Local name – Bhang; Family – Cannabaceae; Habit – Herb; Status – Vulnerable

Uses:- For diaphrea extract of leaves is taken. For menstrual problems, fine powder of leaves mixed with eggs is made into an omelet and taken.

3.14 Datura stramonium
Local name – Datur; Family – Solanaceae; Habit – Herb; Status – Vulnerable

Uses:- For asthma, leaves are burnt and smoke inhaled. For dandruff extract of whole plant is applied on hair. For rheumatic pain, seed powder is mixed with ghee and applied on affected part.

3.15 Euphorbia helioscopia
Local name – Gursochal; Family – Euphorbiaceae; Habit – Herb; Status – Vulnerable

Uses:- For boils, milk sap of whole plant is applied on affected parts. For cancer, decoction of plant is taken in small concentration for long periods. For cholera seed powder mixed with pepper is taken in small concentrations.

3.16 Foeniculum vulgare
Local name – Badiyan; Family – Apiaceae; Habit – Herb; Status – Vulnerable
Uses: For blood purification, decoction or extract of seed is taken. For increasing digestion, seeds are eaten raw.

3.17 Glycyrrhiza glabra
Local name – Shanger; Family – Fabaceae; Habit – Herb; Status – Rare

Uses: For cough, decoction of root is taken. For hepatitis, fine powder of dried root is taken with water.

3.18 Iris nepalensis
Local name – Sonzal; Family – Iridaceae; Herb; Status – Secure

Uses: For joint pain, fresh grinded stem is applied on affected area. For growth of teeth in children, rhizome of the plant is given to children for chewing.

3.19 Matricaria chamomilla
Local name – Fake Gasse; Family – Asteraceae; Habit – Herb; Status – Secure

Uses: For stress, powdered flowers are taken with tea or water. For mouth infections, extract is whole plant is used as mouthwash.

3.20 Mentha arvensis
Local name – Pudina; Family – Lamiaceae; Habit – Herb; Status – Rare

Uses: For appetite, whole plant is mixed with onion and eaten. For abdominal pain, oil of plant is taken in small concentrations. For sore throat, leaf powder is mixed with curd and taken.

3.21 Oxalis corniculata
Local name – Amrul; Family – Oxalidaceae; Habit – Herb; Status – Vulnerable

Uses: For diarrhea and fever decoction or extract of leaves is taken. For inflammation, crushed leaves are applied on affected part.

3.22 Paeonia emodi
Local name – Kuklipot; Family – Papaveraceae; Habit – Shrub; Status – Vulnerable

Uses: For vomiting and diarrhea, extract of root or flower is taken. As blood purifier, powder of whole plant mixed with water is taken.

3.23 Papaver somniferum
Local name – Khash-Khash; Family – Papaveraceae; Habit – Herb; Status – Secure

Uses: For pain, dried milk of whole plant is taken. For cancer, grinded seed powder or oil of seeds is taken in small amounts.

3.24 Podophyllum hexandrum
Local name – Banwangun; Family – Berberidaceae; Habit – Herb; Status – Endangered

Uses: For acidity and diarrhea juice of fruits or extract of roots is taken. For heart diseases, extract of root is taken.

3.25 Portulaca oleracea
Local name – Nuner; Family – Portulacaceae; Habit – Herb; status – Rare

Uses: For liver inflammation, it is eaten as vegetable. For cough, extract of whole plant is taken. For burns crushed plant is applied on affected area.

3.26 Potentilla nepalensis
Local name – Ratanjot; Family – Rosaceae; Habit – Herb; Status – Vulnerable

Uses: For burns, ash of burnt plant is applied on affected area. For gastrointestinal disorders, extract of leaves or flowers is taken.

3.27 Rumex acetosa
Local name – Obej; Family – Fabaceae; Habit – Herb; Status – Vulnerable

Uses: For stomach problems, whole plant is eaten as vegetable. For sting of nettles, leaves are rubbed on affected part to get relief.

3.28 Saussurea costus
Local name – Kouth; Family – Asteraceae; Habit – Herb; Status – Rare

Uses: For asthma and cough extract or powder of root is taken. For joint pain, crushed root is applied on affected area.

3.29 Urtica dioica
Local name – Soi; Family – Urticaceae; Habit – Herb; Status – Secure

Uses: For fractures, crushed plant is applied on fractured bones. For dandruff, extract of whole plant is used for washing hair. For stomach pain, filtered extract of whole plant is taken.

3.30 Viola odorata
Local name – Banafsha; Family – Violaceae; Habit – Herb; Status - Rare

Uses: For sore throat and cough, paste or juice of flower is taken. For constipation and fever, crushed root is eaten raw.

4. Discussion
The present study shows that the Pulwama tehsil of Jammu and Kashmir is rich in useful medicinal plants with a variety of medicinal plants. A total of 30 medicinally important plant species
belonging to 25 different families were reported during this study. The plants are arranged in alphabetical order. Based on the indigenous knowledge collected during the study, it can be seen that the area is a valuable source of medicinal flora with different medicinal properties. Most of the plants used for different medicinal purposes are regarded as very important and are used extensively. Due to extensive usage they are over harvested. The plants like *Podophyllum hexandrum* and *Aesculus indica* are endangered and need immediate attention towards preservation on high priority basis.

In recent times serious threats of bio-piracy and intellectual property rights (IPR’s) with huge economy at stake have necessitated the early bio prospecting of the potential medicinal plants used in the folklore [15,16].

5. References