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MEDICINAL VALUE OF RANUNCULACEAE OF DIR VALLEY

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Abstract

Dir valley has diverse habitats for the growth of various medicinal plants. Fifty-one local uses for various ailments were found out for 39 species belonging to 14 genera of the family Ranunculaceae. The local medicinal uses include anticancer, painkiller, diuretic, febrifuges, carminative, anthelmintic, anti-inflammatory, aphrodisiac, cardio tonic, tonic, stomachache, dyspepsia, jaundice, leprosy, cough, asthma, ulcers, vomiting etc.

Introduction

Dir lies in the North West Frontier Province of Pakistan. It is in the south of Chitral between 35° 50' and 34° 22' N and 71° 2' and 72° 3' E, taking its name from the village of Dir, the headquarter of the former rulers.

In the north west of the District is the District of Chitral, in the south is the Malakand Agency and in the east is the District of Swat, while in the west it adjoins Afghanistan. The area is about 5284 km^2 while the population, according to the census of 1998, is 1,293,507, most of which comprises the sub-branch of the Yusuf Zai's, called the Malizais. In 1996 district Dir was bifurcated into two separate entities i.e., district Dir Upper and district Dir Lower. According to 1998 census report Dir Lower with an area of 1585 km^2 has the population of 717649 with a density of 543.3 people per kilometer.

Basically the area is mountainous, surrounded on all sides by high mountains. To the western border, from north to south, stretches the mountain range of Koh-i-Hindu Raj, which separates district Dir from district Chitral and Afghanistan. To the east from north to south, there is the mountain range of Swat and Dir, which serves as a boundary between the two districts and in the north, it separates Kalam (Swat) from Dir Kohistan. The areas of lower Swat, Nekpi Khel and Shamozai are also separated from Dir by these hills. The area is floristically rich for medicinal plants.

All the plant natural resources are gifted with tremendous natural chemical compounds that are potentially rich for further exploitation by the human being for diverse purposes. But classically only those plants which have been in practice for the treatment of various ailments in a particular region or the plants serve as a starting material for chemical or pharmaceutical synthesis.

It is a sacred and obligatory duly from the time immemorial. There are several systems of medicine practiced in the World, every system with its own basic philosophy and therapeutics, but the common object is always the alleviation of diseases.

In Pakistan, the traditional system of medicine dates back to Indus civilization, which has been verified by the excavation, conducted in the buried cities of Mohenjaradaro and Harappa, as well as Taxila, which flourished during the Gandahara period. These findings clearly reveal the importance of medicinal plants in the lives and religious teaching of the said civilizations (Sher, 1998). Modern medicine traces its origin to the Greeks. The Greek medicine was taken over by the Arabs, from whom (after its enrichment with Chinese and Indian medicine) it was taken over by modern Europe. The Muslim rulers introduced (Arshad & Akram 1999) it into India and incorporated with it

the native Ayurvedic medicine, this mixture is now known as Unani medicine or broadly speaking Eastern medicine. The traditional Indian system of medicine known as Ayurveda, which evolved during the period commencing from around 2500 B.C has been codified and documented by 600 B.C. Ayurveda was adopted by the Hindu people, while the Muslim people of the sub-continent followed a different traditional systems known as Unani. Later on these both systems Ayruveda and Unani" benefited and complemented from each other. The dominant traditional system in Pakistan is the Unani system. In Pakistan there are 50,000 Hakims (Shinwari *et al.*, 2002) spread all over the country who run their clinics in rural and urban areas and use medicinal plants. According to Unani system, Pakistan has rich flora in which 2,000 plant species are used for medicinal purposes but out of these only 400 to 600 plant species are documented and studied for medicinal purposes. Beside Hakims the rural area dwellers use the plants on their own experiences. Owing to the deficiency of allopathic doctors and medicine in the remote areas and to some extent fears of side effects of modern medicine are inviting local people to the traditional systems. This remote area was selected to revive the old tradition because in past there was deficiency of doctor and the Hakims resorted to different medicinal plants as a treatment to different disease (Battacharjee, 2004; Prajapati *et al*., 2004; Shinwari & Gilani, 2003).

The eastern medicine practiced in Pakistan comprises three systems Chinese, Ayurvedic and Greco Arabic. The recipes of medicines used in these systems are derived from both organic and inorganic sources. The knowledge of drugs goes back to prehistoric times. Records of ancient civilizations show that a considerable number of drugs, used by modern doctors, were already in use of Egyptians, Babylonians, Greeks, Romans, Chinese and peoples of the subcontinent of India and Pakistan (Khan, 1991).

Materials and Methods

Regular study trips were made to concerned areas and collections were completed in the flowering season from March 2006- August 2006. During these trips different plant species of the family Ranunculaceae were collected, dried, documented and were identified both by comparing them with herbarium specimen and with the help of flora of Pakistan. (Riedl, 1991; Choudhary *et al*., 2000). The specimens were deposited in the Herbaria University of Malakand Campus-I and Campus-II for future reference. Medicinal usage data were collected from local people and practioner medical experts (hakims) that practice medicine regularly. The data were collected through a questionnaire.

Results and Discussion

A total of 39 species were collected and documented from research area out of these 15 plants were used in various ailments such as febrifuge 14; astringent 2; expectorant 4; tonic 10; stimulant 5; emollient 6; laxative 8; tonic 7; poisonous 7; diuretic 7; carminative 6; leprosy 6; painkiller 6; dyspepsia 5; anthelmintic 5; cough 5; jaundice 5; asthma 4; stomachache 4; purgative 3; vomiting 3; toothache 3; bitter 3; emmenagogue 3; cardiotonic 2; each was used as astringent, cold, sedative, cardiac, colic, bronchitis, irritant, cancer, ulcer, anodyne, digestive, inflammatory, rheumatism, constipating, aromatic, constipating, rheumatism. One each was used as cardio poison, appetizer, diarrhoea, gastric pain, piles, insecticides, hysteria, measles, small pox, aphrodisiac, burning, antibacterial, deodorant, appetizing, sudorific, thermogenic (Hussain, 1987; Nasir, 1970-2002; Ahmad, 2000).

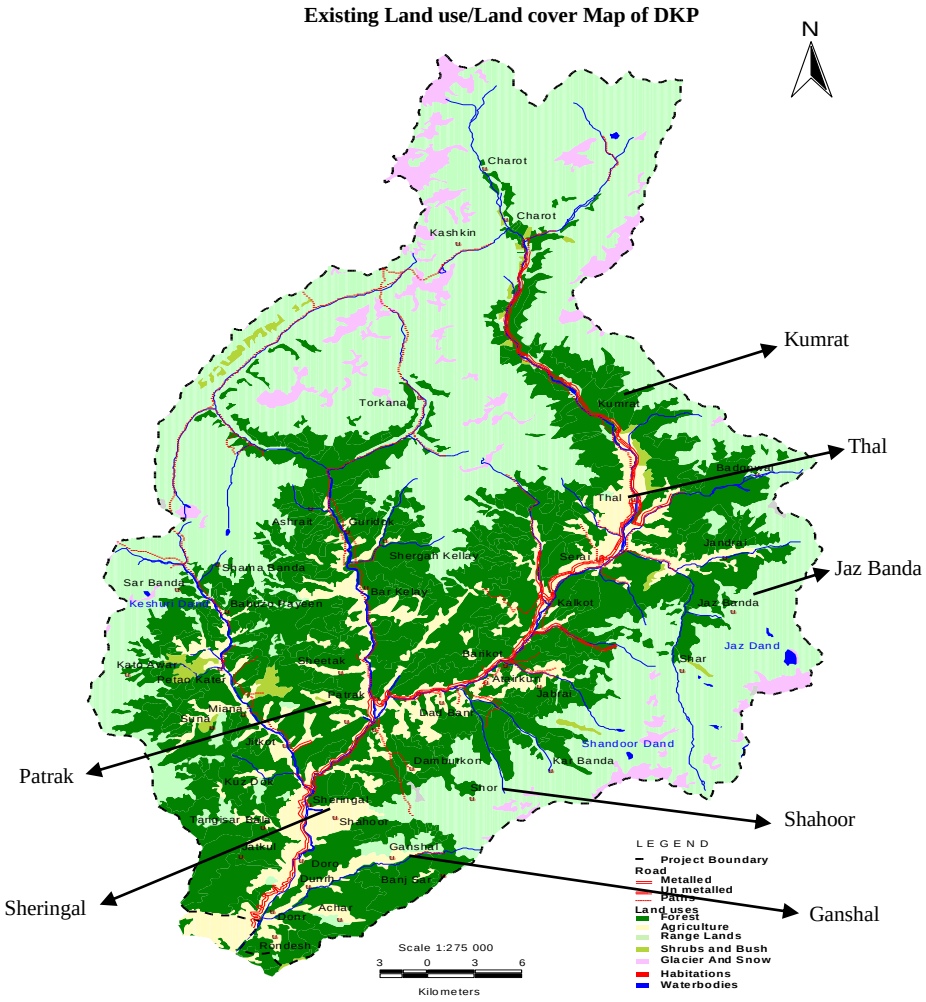

Fig. 1. Dir valley Map showing the areas from where plants species were collected.

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References

Ahmad, H. 2000. The medicinal plants of Tharparker, WWF - Pakistan Peshawar.

Arshad, M., and S. Akram. 1999. Medicinal plants of University of Arid Agriculture, Rawalpindi. *Hamdard Med*., 42:46-49.

Battacharjee, S.k..2004.Handbook of medicinal plants. 4th Ed. pp. 490. Indian IAROI New Dehli.

Choudhary, M., S. Ahmad, A. Ali, H. Sher and S. Malik. 2000. *Technical Report: Market study of medicinal herbs in Malakand, Peshawar, Lahore and Karachi*. SDC- Inter co-operation, Peshawar.

Hussain, M. 1987. Medicinal plants of Mansehra. M.Sc. Thesis, Department of Botany, University of Peshawar.

Khan, A.A. 1991. Marketing of herbal drugs and its problems, proceedings of the national workshop on appropriate uses of medicinal plants in traditional medicines. NIH, Islamabad. 69-72.

Prajapati, Purohit, Sharma and Kumar. 2004. *A hand book of medicinal plants, a complete source book*. pp.158.

Riedl, H. 1991. In: *Fl. Pakistan*. (Eds.): S.I. Ali and Y.J. Nasir. 193: 1-64.

Sher, H.1998. Marketable value of the wild medicinal plants and their propagation on large scale in Upper Swat Valley. ERP Report Pakistan. No. 28.

Shinwari, Z. K., S.S. Gilani and M. Akhlas. 2002. Sustainable harvest of medicinal plants at Bar and Shinakii valleys, Gilgit. Consultancy Report: WWF-P.

Shinwari, Z.K. and S.S. Gilani 2003. Sustainable harvest of medicinal plants, Bulashbar Nallah, Astor, Gilgit. *J. Ethno Pharmacology*, 84: 289-298.

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