

## MEDICINAL REMEDIES PRACTICED BY THE TORWAL AND GUJARS COMMUNITIES OF MANKIAL VALLEY SWAT, HINDUKUSH RANGE, PAKISTAN

Asad Ullah<sup>1</sup> and Abdur Rashid<sup>2</sup>

<sup>1</sup>Centre of Plant Biodiversity, University of Peshawar, Pakistan

<sup>2</sup>Department of Botany, University of Peshawar, Pakistan.

---

### ABSTRACT

Mankial Valley is located at 35° 12' N and 72° 32' E in the Hindukush range of Northern Pakistan. Its area is 13063 ha and its elevation range is 1430-5800 m. The landscape includes snow covered peaks, barren rocky mountain slopes; alpine and sub alpine pastures glaciated tracts and forested slopes. The valley floor is the site of irrigated agricultural fields, waterfalls, and small villages of the local communities. Most of the inhabitants of the valley are Torwal (67%) who remain in the valley for all year. The remainder are Gujars (33%), who migrate seasonally. Both groups rely on the local plants and plant products for almost all their medicinal needs. We interviewed people in eight communities, asking which plants were used, how they prepared various remedies and what dosage was used for curing various ailments. In addition, we asked what part of the plant was used, what it was used for, how it was administered, and when and where it was collected. We divided the interviewees into four age groups (15-30 years, 30-45 years, 45-60 years, 60+ years) to determine how effectively knowledge is being transmitted. Twenty plant species are regularly used for medicinal purposes by the Torwal and Gujars of Mankial Valley, seven as a tonic, five for stomach problems, three each for diarrhoea and as pain killer, blood purifier, and stimulant, two each for dysentery, wounds, carminative, antiseptic, and one each for cholera, dropsy, emetic, cathartic, ulcer, coolant, kidney problems, asthma, purgative, fever, vomiting, eye problems, toothache, milk production, fever, jaundice and throat infections. People in the two older age groups knew more than those in the younger groups. The Torwal and Gujars communities have a rich ethnobotanical heritage, but traditional medicinal knowledge is disappearing rapidly.

**Key words:** Mankial valley, Torwal, Gujars, local plants, cathartic, purgative, heritage

---

### INTRODUCTION

Mankial valley is located in the Hindukush mountainous ranges 70 km in the Northeast in Swat valley on the main Saidu-Kalam road. It is located on 35°, 12', 24" N to 72°, 32', 15" E. The total area of the Mankial valley is 32278 acres varying greatly in the elevation ranges from 1430m at Mankial to 5726m at Chokail (Koohe Shaheen). The area is represented by mountain terrain of high-glaciated peaks, perennial snowfields, falls, glaciers, pastures, rivers, streams and intact forests. Koohe Shaheen or Sooko Sar is the Second highest peak of the Swat valley, first being the Falak Ser. The percentage share by area of mountains, valleys/pastures and river is estimated to be at 95, 4.5 and 0.5 % respectively. The pastures are at high elevation ranges in height up to 3000 m and fall under the alpine region. Precipitation and temperature for the Valley has not been recorded for the valley so far. Most of the precipitation occurs in the form of snowfall and rainfall. The summer temperature does not rise above 35°C. Winter season is long and severe lasting from September to April. The summer is very short and pleasant lasting from June to August. The area is very rich in plant natural resources. Many plants are collected and used by the local for various purposes.

Agricultural is the main occupation of the area. Maize, turnip, potato, tomato and pea are the main crops. Keeping livestock, collection and selling of the medical plants are the other income resources of the inhabitants of the area. The locals belong mainly to Kohistan and Gujar community. During the winter season most of the population migrate to the plains of the down country for 5-6 months due to severe snowfall in the area.

Though some information on the local uses of the plants have been reported in Swat Kohistan and joining areas (Hussain *et al.*, 1995; Ahmad and Sirajuddin, 1996; Gul *et al.*, 1999; Shinwari *et al.*, 2000 a & b; Khan, 2001; Din *et al.*, 2003; Ghafoor *et al.*, 2003; Haider *et al.*, 2003; Iqbal *et al.*, 2003; Muhammad *et al.*, 2003; Shinwari *et al.*, 2003; Thomas and Shengji, 2003; Hussain *et al.* 2006) but so far no one has carried out such kind of studies in the Mankial valley. The present studies will highlight the indigenous knowledge of the local regarding how various plants remedies are prepared and used in the health care system.

### MATERIALS AND METHODS

Field visits were made from May to September, 2010. Eight villages viz. Mankial Bazaar, Ghund Patay, Badai, Miashkoon, Jabba, Char Banda, Serai, and Chokail were visited in the area and information regarding preparation of various remedies were collected from a broad range of people ranging in age from 25-120 years using simple questionnaire. Plants specimens were collected and preserved. All the relevant information such as local name, growing season, collection, preparation, and ways of administration and uses was collected. Plants identified with

the help of available literature (Nasir and Ali, 1970-1989; Polunin and Stainton. 1990; Ali and Kaiser, 1993-2006) and comparing with specimens of Peshawar University Herbarium (PUP).

Table 1. Information regarding various remedies using by the Torwal and Gujars communities at Mankial Valley Swat, Hindukush Range Pakistan.

Botanical Name/Voucher No. and Family	Local Name	Season	Locality	Part used	Collection	Preparation	Administrative	Quantity	Uses
1. <i>Paevonia emodi</i> Wall. (Paeoniaceae)	Mameekh	April-June	Jabba, Mashkoon	R.S	Digging	Dried, grinded and powdered. Mixed with flour, ghee or milk.	Orally	One chalang (70 g) for adults. Half chalang (35 g) for children. After every two days at night	For diarrhea, dropsy, epilepsy and pains killer. Seeds emetic, blood purifier, cathartic, pain killer and as a tonic
2. <i>Berberis lycium</i> Royle (Berberidaceae)	Quaray/ Zairiargay	April-July	Chokail	R, B	Root by digging & bark by cutter.	Boiled in water and then filtered. The bark is dried, grinded, and mixed with milk	Orally, also can be used externally.	One glass before breakfast every day. One thalay three times a day. Small amount for wounds three times a day	Used for blood purification, ulcers, coolant, and tonic, kidney problems and cutting
3. <i>Rheum emodi</i> Wall. ex Meisn. (Polygonaceae)	Chotial	June-July	Kafar banda	R	Digging	Collected, dried and grinded	Orally, once in a day before meal	½ chalang (17g)	Stomach problems
4. <i>Trillium govanianum</i> (Royle) Kunth (Trilliaceae)	Marhi Jari	June-July	Kafar banda	R	Digging	Dried, grinded and powdered	Orally, once in a day at morning before or after meal every day	Half swollen roots is used, once	For children, especially in Weakness (Nary Maraz) as tonic
5. <i>Coffea alba</i> L. (Ranunculaceae)	Makanpat <sup>h</sup>	May-Aug.	Jabba, Mashkoon.	R	Digging	Dried, grinded, and powdered.	Orally, one either at morning or evening after meal	One chalang (70 g) for adults and half chalang (35g) for children	Used for asthma
6. <i>Aconitum solaceum</i> Stapf (Ranunculaceae)	Zarmora	July-Aug.	Char Banda	WT	Digging	Dried, grinded and powdered	Orally, used only by the adults once a day at morning before breakfast	Wheat grain size amount is used	Used for pain (Body dard)
7. <i>Valeriana jatamansi</i> Jones (Valerianaceae)	Mushke-Bala	April-July	Jabba, Kafar banda	R	Digging	Dried, grinded and powdered	Orally	Small amount	Used in Cholera and dysentery, also carminative and stimulant
8. <i>Podophyllum emodi</i> Wall. (Podophyllaceae)	Kakora	April-May	Kafar banda, Jabba	R	Digging	Dried, grinded and powdered	Orally	One thalay (10g) is used at night	Stimulant, purgative, used for pain killer
9. <i>Morchella</i> spp. (Helvelliaceae)	Gochay/ Gooay	March-Apr.	Mashkoon, Badai	WP	Hands	Dried, and grinded. Fresh is	Orally	No specific quantity	Highly nutritive, used as nutrition

10. <i>Nepeta nephotricha</i> Bth. (Labiatae)	Kasool Thoor boori	June-July	Serai	L	Sickle/Cut	also used.			
11. <i>Menyanthes viridis</i> L. (Labiatae)	Podina	May-July	Badai	L	Knife/Sickle	Dried, grinded and powdered. Mixed with small amount of salt.	Externally	A small amount is used	For curing cuttings
12. <i>Primula denticulata</i> Aitch. (Primulaceae)	Mamera	April-July	Jabba, Serai.	Fl. R	Cutter	Dried and powdered	Externally, at night	Three Sahian at night	Used for eye infections
13. <i>Juglans regia</i> L. (Juglandaceae)	Ghoz	June-July	Badai, Serai, Ghund Patu	S, B, Fr	Cutter & hands	Collected, dried and small bundles are made. Seeds dried	Endosperm of the seeds is used orally Bark is used externally	About 10 g of bark is used daily at night Small amount of seeds are used	Bark is used as antiseptic and for beautification. Endosperm of the seeds are used as tonic
14. <i>Mentha longifolia</i> L. (Labiatae)	Vimalay. Ben	June-July	Ghund Patu	L	Sickle	Collected, dried and grinded and are mixed with Onion.	Orally	One thalay (20g) is used at two-hour interval.	Used for diarrhea, stomach problems, stimulant, and antiseptic.
15. <i>Arisaema flavum</i> (Forssk.) Schott. (Araceae)	Mar Jarai	June-July	Serai	R	Digging	Mixed with Roots <i>Mitux parviflora</i> (Sonchali) & <i>Litsea monopetala</i> (Khadang) boiled with ghar and milk of either goat or buffalo	Orally	One liter once a day and at a time	For animals: It is used as tonic and for more milk production
16. <i>Rumex nepalensis</i> Spreng. (Polygonaceae)	Shakha, Voola	June-July	Ghund Patu	R	Digging	Dried, grinded, mixed with water and boiled	Orally	One liter is once	As tonic to animals
17. <i>Solanum lauratum</i> (DC.) Sieb. & Zucc. Ex Walp. (Rutaceae)	Nazar Para	June-July	Badai, Serai, Jabba	R	Digging	Dried, grinded, mixed with water and boiled	Orally	One liter bottle is used once	As tonic to animals
18. <i>Thymus tophylium</i> L. (Labiatae)	Eital	June-July	Badai, Serai, Jabba	L, Fl	Cutter/Sick	Dried and grinded	Orally	One teaspoon in tea for human One chalang for animal	For warmth and more milk production
19. <i>Aliga bracteosa</i> Wall. Ex Bth. (Labiatae)	Bootee	June-July	Badai, Serai, Jabba	L	Cutter/sick	Grinded-mixed with water-kept at night in open place	Orally.	One glass, every day in the morning before breakfast	Detoxication is used for purification of blood. Carminative, used for jaundice and throat problems
20. <i>Litsea monopetala</i> (Roch.) Pers. (Lauraceae)	Khadang	June-August	Badai, Serai, Jabba	B	Cutter/sick	Grinded and powdered	Orally	Small amount every day in the morning before breakfast	Used in diarrhea and dysentery and tonic.

Key: R=Roots, B=Barb, L=Leaves, Fl=Flowers, S=Seeds, W=P=Whole plant, W T=White tubers.

## RESULTS AND DISCUSSION

The remedies prepared from the plants were found to be used for various purposes (Table 1). Out of the 20 plants seven were used as general body tonic. These included *Paevonia emodi*, *Berberis lycium*, *Trillidium gavanianum*, *Morchella* spp., *Juglans regia*, *Rumex nepalensis* and *Litsea monopetala*. Five plants *Rheum emodi*, *Mentha viridus*, *Mentha longifolia*, *Arisaema flavum* and *Rumex nepalensis* were used for stomach problems. Three plants *Paevonia emodi*, *Mentha longifolia* and *Litsea monopetala* are used for treating diarrhoea and *Paevonia emodi*, *Aconitum voilaceum* *Podophylum emodi* are used as pain killer. *Paevonia emodi*, *Berberis lycium* and *Litsea monopetala* are used as blood purifier. *Valeriana jatamensi*, *Podophylum emodi* and *Mentha longifolia* are used as stimulant. Two plants each such as *Valeriana jatamensi* and *Litsea monopetala*; *Berberis lycium* and *Nepeta raphnorhiza*; *Valeriana jatamensi* and *Litsea monopetala*; *Juglans regia* and *Mentha longifolia* are used for dysentery, cutting, carminative and antiseptic respectively. *Paevonia emodi* is used as emetic, for dropsy and cathartic while *Valeriana jatamensi* is used for treating cholera. *Berberis lycium* is used for treating ulcer, as coolant and kidney problems. *Mentha viridus* is used in vomiting and fever while *Caltha alba* is used for asthma and *Podophylum emodi* is purgative. *Thymus serpyllum* is given to animals for more milk production and body warmth. *Litsea monopetala* is used for jaundice and throat problems while the bark of *Juglans regia* is used for beautification (Dandasa).

## REFERENCES

- Ahmad, H. and Sirajuddin (1996). Ethnobotanical Profile of Swat. Proc. First Training Workshop on Ethnobotany and its application to conservation, National Herbarium, PRAC, Islamabad.
- Ali, S.I and M. Qaiser (1993-2006). *Flora of Pak.* Nos. 194-210. Department of Botany, Karachi University, Karachi.
- Din, S., M. A. Khan and Inamullah (2003). Traditional use of Medicinal Herbs for Gastrointestinal Disorder in Maidan Valley. *Proc. Int. Workshop, Islamabad*.
- Ghafoor, S., H. Ahmad, Z. Ali, S. A. Shah, Z. A. Swati and M. Shakirullah (2003). Potentials and Prospects of growing *Morchella* in natural environment. *Proc. Int. Workshop, Islamabad*.
- Gul, T., Ismail, I., Nosheen, I. Rehman, G. Shakespeare and H. Sher (1999). Women Indigenous Knowledge of folk medicine. Project of Horticultural Promotion in N-W.F.P.
- Haider, A, M. Y. Wazir and H. Ahmad (2003). Potential and Trade of Locally Medicinal Plants in Mingora City. *Proc. Int. Workshop, Islamabad*.
- Hussain, F., A. Khaliq and M. J. Durrani (1995). Ethnobotanical Studies on some Plants of Dabargai Hills Districts Swat Pakistan. *Proc. Ethnobotanical Workshop*, NARC, Islamabad.
- Hussain, F., M. Islam and Aqal Zaman (2006). Ethnobotanical Profile of Plants of Shawar Valley, District Swat, Pakistan. *Int. J. Biol. Biotech.*, 3 (2): 2006, 301-307.
- Iqbal, I., M. A. Khan and M. Hamayun (2003). Studies on Ethnobotanical profile of Malam Jabba Swat. *Proc. Int. Workshop, Islamabad*.
- Khan, A. (2001). *Ethnobotanical studies of the Mount Elum, District Buner*. M. Phil. Thesis, Deptt. Biol. Sci., QAU, Islamabad.
- Muhammad, R., H. Ahmad and A. Khan (2003). Marketable medicinal plants of Mankial Valley Swat. *Proc. Int. Workshop, Islamabad*.
- Nasir, E. and S. I Ali (1970-1989). *Flora of Pakistan*. Nos 1-190. Botany Department, Karachi University, Karachi. Pakistan. Pakistan Agricultural Research Council, Islamabad.
- Shinwari, Z. K., A. A. Khan and T. Nakaike (2003). *Medicinal and other useful plants of Swat Pakistan*. Nature Conservation Society of Japan.
- Shinwari, Z. K. and S. S. Gillani, M. Kohjoma and T. Nakaike (2000 a). Status of Medicinal Plants in Pakistan Hindu-Kush Himalayas. *Nepal-Japan Joint Symposium on Conservation of Natural Medicinal Resources and their Utilization* Kathmandu, Nepal: 279-285.
- Shinwari, Z. K., T. Watanabe and Z. Yousaf (2000 b). Medicinal Plants of Pakistan, an Overview. *Nepal-Japan joint Symposium on Conservation of Natural Medicinal Resources and their Utilization* Kathmandu, Nepal.
- Thomas, A. Y. and P. Shengji (2003). Applied Ethnobotany a case from the Himalayas region. *People and Plants Working Paper*

(Accepted for publication June 2011)