



## **The Ethnobotanical Heritage of Lotkuh, a High-Altitude Tribal Haven of Chitral, the Eastern Hindu Kush Pakistan**

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### **Abstract**

#### **Background**

In northwestern Pakistan, Lotkuh is a high-altitude terrain nestled within the eastern Hindu Kush region. Enclaved by towering peaks and harboring a unique culture, the region mirrors the geographical and cultural diversity of Pakistan. In this geographically isolated region, a treasure trove of ethnobotanical knowledge unfolds through generations of interaction between the inhabitants and indigenous plants, resulting in a profound understanding of the plant uses in nutritional, medicinal, cultural, and ritual contexts. Thus, the study seeks to gather, analyze, and document the indigenous knowledge of plant utilization of the distinct tribal culture.

#### **Methods**

Through semi-structured questionnaires, inventory interviews, and participatory workshops, data was collected by engaging a cohort of 120 local respondents. The collected data was then classified into nine distinct use categories, following which quantitative indices were calculated.

#### **Results**

The research identified a total of 150 plant species spanning across 59 different families and categorized them into 9 distinct usage groups. Among these, *Astragalus oihorensis*, *Astragalus owirensis*, *Cicer nuristanicum*, *Geranium parmircum*, and *Rochelia chitralensis* stand out as novel species with distinctive applications. Notably, medicinal use garnered 600 reports, while animal feed, veterinary applications, human consumption, and toxicity recorded 500, 450, 425, and 104 reports respectively. Informant consensus was high ranging between 0.8 to 0.9 with most agreement on human food and animal feed category. *Platanus orientalis* and *Juglans regia*, with RFC 0.91 were the most cited. The Family Importance Value (FIV) of Juglandaceae and Platanaceae, each with an FIV of 0.91, and Capparidaceae with an FIV of 0.83 indicate the intricate role the families play.

#### **Conclusions**

In this study, we explore 150 ethnobotanical species, uncovering novel entries within ethnobotanical literature. Among these, several species showcase unique uses previously

undocumented in Pakistani literature. Our research sheds light on the intricate interaction between plants and the distinct cultural landscape of the Lotkuh region.

**Keywords:** Ethnobotany, Chitral, Hindukush, endemic flora, traditional knowledge