

A Rare Medicinal Plant *Thalictrum dalzellii* from Ahmednagar District (M.S) India

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Abstract

The current research focuses on floristic diversity and taxonomy, as well as observations of precise locations, flowering and fruiting periods, and potential threats to *Thalictrum dalzellii* a rare medicinal plant from Ahmednagar Maharashtra. *Thalictrum* is a taxonomically challenging genus with illdefined species borders that need more taxonomic and field study to clarify. The medicinal plants of the genus *Thalictrum* (Ranunculaceae) are of interest for research as they have the potential to extend the gene pool and treat socially significant ailments. Our goal was to analyse the coenotic complex and discover the ecological-coenotic confinement of *Thalictrum dalzellii* in the western ghat region, as well as the species of the genus *Thalictrum* that grow there, their distribution, and application in medicine.

Keywords- Medicinal, *Thalictrum*, Harishchandra fort, Rare

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I. Introduction

Vertical rocky cliffs made out of numerous types of rock can be found all over the globe. The basaltic rocks of India's northern Western Ghats create the world's biggest cliff environment, although there are little research on its floristic richness. Cliffs of the northern Western Ghats were studied for microhabitats, species diversity, distribution of endemics, occurrence of certain adaptive features, and potential threats in order to better understand the vascular plant assemblage of this habitat. The representatives of *Thalictrum* genus are quite common in the western ghat. The *Thalictrum* genus, which belongs to the Ranunculaceae family, is an exceedingly prolific medicinal plant source with over 200 species worldwide. *Thalictrum dalzellii* belong to family Ranunculaceae ie. Primitive family (Buttercup or Crowfoot family) Family (Hindi name) :Neelamabari Family (नीलाम्बरीकैमिली) *Thalictrum* plants are high in benzyloisoquinoline-derived alkaloids, with at least 250 isolated from 60 species, the majority of which have strong biological activities. *Thalictrum* extracts and alkaloid isomers have been shown to have antitumor, antimicrobial, antiemetic, and HIV antiviral properties. The little erect herb *Thalictrum dalzellii* Hook grows in highland woodlands.

This species is classified as 'Indeterminate' (endangered or extinct), according to the Red Data Book of Indian Plants. *T. dalzellii* plants are quickly depleting due to the cultivation of plantation crops and the removal of natural habitat in hill forests, increasing fears about extinction. *T. dalzellii* is also found to the Southern Peninsular of India. The description of plant as follows

Herb, 25-30 cm high; stem glabrous. Leaves 3 foliolate; leaflets 2.5-4.5 cm across, Suborbicular with deep sinus, glabrous, margin crenate or toothed. Flower 0.5-0.6 cm across, 4-merous, crowded in leafy panicles in upper parts. Achenes ca. 0.3 cm long glabrous.

Fls & Frts – August.

Study Area

Harishchandragad is a historic hill fort in the Ahmednagar district of Maharashtra, located 8 kilometres from Khireswar, 50 kilometres from Bhandardara, 166 kilometres from Pune, and 218 kilometres from Mumbai. The fort is located at a height of 1,424 metres above sea level. Harishchandragad is a popular Maharashtra hiking destination as well as one of the most popular Bhandardara tourist sites. The fort was constructed in the 6th century during the reign of the Kalchuri dynasty. The citadel was built during this time, and many caves were most likely carved out in the 11th century AD. The sage Changdev meditated here in the 14th century AD. The fort was later captured by the Mughals, and then by the Marathas in 1747 AD. Here, human remnants dating back to the Microlithic period have been uncovered. Puranas such as the Matsyapurana, Agnipurana, and Skandapurana include several references to Harishchandragad. Rohidas, Taramati, and Harishchandra are the three peaks of Harishchandragad.

II. Material And Methods

During This work area is visited two to three times every year. Various locations were investigated during the work. During the course of work, photographs are taken in order to create a digital herbarium, as well as voucher specimens are gathered and a herbarium is created, which is submitted to the Department of Botany at Annasaheb Awate College in Manchar Tal, Ambegaon Dist, Pune. Voucher specimens taken in the flowering and fruiting stages for identification using various floras. *T. dallzellii* plants, which belong to the Ranunculaceae family, were collected for the study in Harishchandra Fort in Ahmednagar.

III. Conclusions

Such studies provide information to the researchers. By using above information We can study the biodiversity of *Thalictrum dalzellii*. Magnoflorine, hernandezine, and the structurally related alkaloid berberine are examples of benzylisoquinoline alkaloids discovered in this genus.

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