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Cover: Stripe-necked Mongoose *Urva vitticollis* in poster colours, adapted from photograph by Ashni Dhawale, by Pooja Ramdas Patil.



First record of the Western Himalayan Yew *Taxus contorta* (Gymnosperms: Cupressales: Taxaceae) from Lumbini Province, Nepal

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Yews (*Taxus* spp.) are among the most threatened plant species within the Hindu Kush-Himalaya (HKH) region including Nepal (Mulliken & Crofton 2008). Due to over exploitation of the species for the production of anticancer drugs and in some areas intense local use for medicine, timber, and fodder the natural yew populations along the HKH region have been cleared up to 90% over the last few decades (Schippmann 2001; Mohapatra et al. 2009). Delayed germination (1.5–2 years) of its seeds and poor survival rate of seedlings have further accelerated the decline of yew population in the Himalaya (Rikhari et al. 1998). Despite its threatened (EN) status, little information is available regarding the size and status of its populations (Iqbal et al. 2019). Even the taxonomic identification of species remained controversial in Nepal till the year 2012 (Poudel et al. 2012). The Forest Regulation, 1995 named the *taxus* species found in Nepal as *Taxus baccata* in its annex till 12 October 2015, which was corrected and named as *Taxus contorta* Griff., *Taxus wallichiana* Zucc., and *Taxus mairei* (Lemée & H. Léveillé) S.Y. Hu ex T.S. Liu in its fifth amendment in the year 2015.

Currently, a total of 13 (four in North and South

America, one in Europe and eight in Asia) species of *Taxus* have been identified in the world (Gao et al. 2007; Farjon 2010; Liu et al. 2011). The threatened Western Himalayan Yew *T. contorta* is one among three of the *Taxus* species (*T. contorta*, *T. mairei*, *T. wallichiana*) found in Nepal (Thomas 2011; Poudel et al. 2012, 2014; Bhatt et al. 2017). It is assumed to be distributed sparsely over Darchula District in the far western region to the northern belt of Gorkha District in the central region of Nepal (Poudel et al. 2014). It has been recorded from several districts of three of the seven provinces of Nepal (Bhatt et al. 2017). However, this is the first record from Lumbini Province, Nepal.

T. contorta is a medium-sized dioecious evergreen tree species which grows naturally within the elevation range of 2,000–3,500 m in Nepal and the recorded height of *T. contorta* in Nepal is 25–30 m (Bhatt et al. 2017). The species has diagnostic characters such as bud scales few, ovoid, persistent at the base of branchlets; leaves arranged irregularly, pectinate, usually linear, equally wide throughout length, base cuneate, mostly symmetric, apex acute, midrib papillate, midrib & leaf margin underneath not shiny, loosely arranged (6–9)

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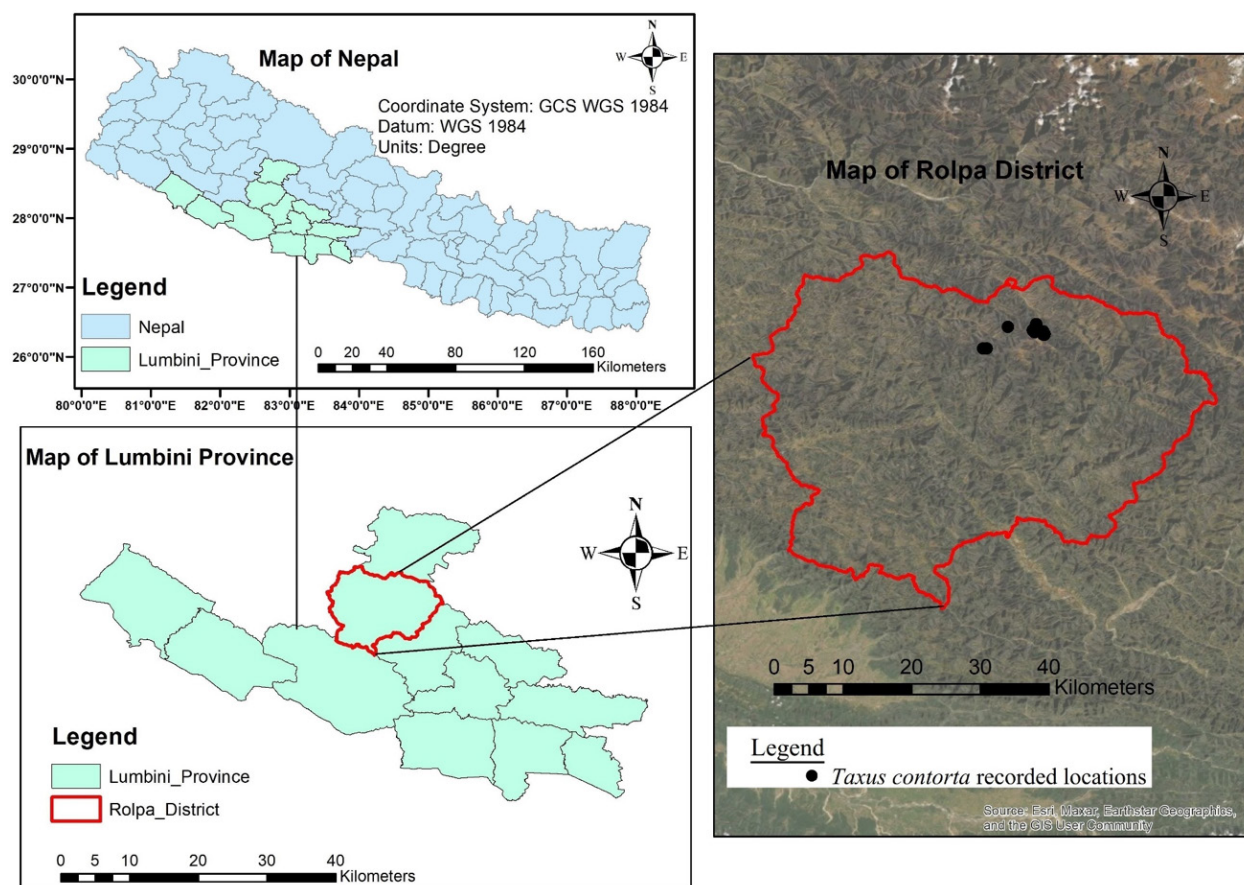


Image 1. Map showing the *Taxus contorta* recorded locations in Rolpa, Lumbini Province, Nepal.

stomatal bands, margin revolute-incurving when dried (Poudel et al. 2012).

During the transect walk survey conducted on March–April 2021 along the four distinct elevation gradient of 2,000–2,400 m, 2,400–2,800 m, 2,800–3,200 m, and 3,200–3,600 m in Thawang Rural Municipality (28.50°N, 82.71°E) of Rolpa District in Lumbini Province, we recorded *T. contorta* in at least 55 locations (Image 1). *Taxus contorta* is recorded mostly (90%) in the northern aspect along the wet sites, a habitat also mentioned in earlier literature (Poudel et al. 2012; Bhatt et al. 2017), with slopes more than 35 degrees, crown cover more than 70% and elevation range of 2,424–3,002 m. The species was recorded at sites away from human dominated landscapes where anthropogenic activities are either minimum or totally absent. The species was found in association with *Picea smithiana* Wall., *Tsuga dumosa* (D. Don) Eichler, *Quercus semecarpifolia* Sm., *Abies pindrow* D. Don, *Rhododendron arboreum* Sm. (Freitag 1971; Rau 1974; Sapru 1975), *Daphne bholua* D. Don, *Rhododendron barbatum* Wall., and *Himalayacalamus asper* Stapleton in the temperate

forest.

In western Nepal, *T. contorta* populations are on a satisfactory level inside the protected areas (Api-Nampa Conservation Area, Khaptad National Park, Rara National Park, and Dhorpatan Hunting Reserve), however, it is sporadically distributed outside the protected areas (Bhatt et al. 2017). Furthermore, the *T. contorta* is an 'Endangered' species (Thomas 2011), and these newly located populations provide an opportunity for in-depth study of their niche and associated site specific threats that will further aid in developing community engagement conservation programmes outside the protected area. Also, the species is facing a threat due to illegal felling for timber and leaves, improper harvesting methods, loss of its natural habitat, unmanaged grazing, delayed germination and lower survival rate. Therefore, it is comprehended to conserve them in-situ and promote its revival through nursery cultivation and plantation initiatives.



Image 2–4. 2—Branching habit of healthy *Taxus contorta* sapling (X: 669769, Y: 3148319, Elevation: 2,810 m.) | 3—Tree stem of *Taxus contorta* (X: 665087, Y: 3149405, Elevation: 2,947 m.) | 4—*Taxus contorta* forest patch (X: 669637, Y: 3148356, Elevation: 2,720 m.). © Image 2—Deepak Raj Prakash Jung Shahi, 3–4—Santa Bahadur Thing.

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