

Shirui Lily: An Indigenous and Endangered Flower

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Shirui lily is renowned as the “Jewel of Northeast India” which is a special gift from Manipur to the world's floral wealth. This flower is an Asiatic lily species, botanically called *Lilium mackliniae* which belongs to family Liliaceae. In 1946, botanist Frank Kingdon- Ward of the New York Botanical Society made the discovery of this species of Asiatic lily, which he named after his wife, Jean Kingdon-Ward (née Macklin). This lovely flower was awarded the renowned merit prize in 1948 at the Chelsea Flower Show, which was put on by the Royal Horticulture Society in London. It is a rare species of terrestrial lily which is an indigenous and endangered flower of India, growing naturally only in the Shirui Hill range of Ukhrul district in Manipur at an elevation of 1730 – 2590 metres above the sea level. Reputed for being Manipur's highest hill district, Ukhrul is located roughly 83 km east of Imphal, the state capital. The native habitat of the lily, which is spread across an area of 41 km², was designated as the Shirui National Park in 1982. Shirui lily is believed to be the daughter of goddess Philava, who resides in and guards the Shirui hills and on 21 March 1989, it was designated as the State flower of Manipur in recognition of its legacy and distinctiveness. This beautiful flower also symbolizes wealth and a contented existence and locally known as Kashong Timrawon, named after Timrawon, the daughter of mythical goddess Philava.

Travellers will find paradise when they visit the Shirui hill area in the blossoming season. It is a seasonal flower which blooms in the month of May and June and its height varies from 1 to 3 feet. The plant is shade tolerant in which the beautiful flower hangs downward resembling the modest and shy girl. The plant is perennial and herbaceous in nature, bulb is broadly obovoid in shape and pale yellow or light pinkish in colour. The flower features 3-5 petals, lovely pink in colour that are 4-5 cm long, a 3 cm peduncle, an ovary 4 by 2 cm with a 2.5 cm lobe, a 3.5 cm style, 6 stamens in two rows, and an anther that is 0.9 mm long and basifixed in a brownish red colour.

Leaves of the plant are long and narrow like other lilies and flowers are pale bluish pink in colour with bell shaped petals. The flower blooms solitary or upto 9 flowers per plant and during its blooming season, the flower infuses the air with a delightful smell.



Photo courtesy: Dr. Y. Rupert Anand, CAU, Imphal

Shirui lily is also used medicinally to treat stomach and skin problems due to its antibacterial and anti-anthelmintic properties. This unique flower has several distinctive features, one of which is that, when viewed under a microscope, it comprises of seven colours.

A postal stamp has been issued by the Indian Postal Department to memorialize the rare Shirui Lily flower. This plant cannot be replanted anywhere in the entire world, it is the most unique characteristics of this flower.

From 2017 onwards, Shirui lily festival is organized as a state festival in Manipur which is the second biggest tourism festival in the Manipur after the Sangai festival. The festival is organized by Department of tourism and Manipur state Government in order to give honor to this flower and

with a motto of conserving this endangered species of Lily. It attracts thousands of visitors from throughout the state, other regions of India and from entire world. Different cultural shows, traditional dances, folk songs, live music concerts, art and handicraft exhibitions, indigenous games and sports are organized on this occasion. The event is going to be observed every year at Ukhrul town as well as Shirui village in Manipur which help in spreading awareness about the endangered Shirui lily.

Climate change, global warming, unlawful tree-cutting, careless forest fires, unchecked plucking and uprooting, manipulative behaviour, and the introduction of foreign species are all contributing factors to the Shirui Lily's imminent extinction. Along with that a wild dwarf bamboo species' extensive root system has recently encroached over the lily habitat at Shirui Peak. In addition to having a negative effect on the stability of the lily population, this new rival will restrict conservation efforts by preventing in situ plant reproduction from bulbs and/or seeds. The head of Goa's Department of Environment and legacy, ShajinJinks, organized an expedition to the Shirui Hills on October 13, 2013, to raise awareness for the need to safeguard this endangered cultural legacy.

The population of lilies is on the verge of extinction due to changing climate conditions, human encroachment, and resource exploitation. Therefore, this vulnerable plant is listed in the "Red Data Book"

of "Indian Plants Volume I". An important concern for the researchers is how to save this vulnerable species in the face of shifting climate conditions. The genetic resources of rare and endangered plant species can be conserved via techniques like tissue culture which provide useful tools for rapid mass propagation of the species in vitro condition. Micropropagation in bulbous plants is preferred over the traditional vegetative propagation method because it produces high-quality, disease-free planting materials and multiplies the rate of multiplication by many times. To ensure the long-term preservation of these uncommon bulbous plants, a high-throughout micropropagation technology must be developed for the generation of healthy clonal plants. A campaign to restore the Shirui Lily's habitat was started on February 19, 2015 by the National Institute of Bio-resources and Sustainable Development. The flowers are going to be grown in the lab and then sent to nurseries to be planted and grown.

The endangered lily flower is suffering from negligence of government still remains unexplored by the researchers. To save this flower from extinction, some important actions must be taken by the Government. And researcher should also focus for conserving the vulnerable plant from extinction. Both ex situ and in situ methods of conservation strategies should be used to preserve it.

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