



“*Gloriosa Superba* L. (Flame Lily Or Glory Lily) Colchicaceae DC.: A Comprehensive Review Of Plant Morphology, And Medicinaly” A New Distributional Report For North- Western Uttar Pradesh

Amit Kumar¹, Rohini Singh² and Sheesh Pal Singh³

¹Assistant Professor of Botany, Satguru Institute of Education and Technology, Nakur, Saharanpur

²Assistant Professor of Botany, Govt. PG College, Ambala Cantt, Haryana, India

³Professor of Botany, Janta Vedic College, Baraut

Abstract

This spectacular lily is a native of Africa, where it is the national flower of Zimbabwe, and also of India (Kavithamani et.al. 2013) The study reports the occurrence of a taxon namely *Gloriosa superba* (Glory Lily, *Colchicaceae* DC.), collected and identified for the first time from Western Uttar Pradesh. This is a perennial climbing herb widely used in traditional medicine. Native to tropical Africa and now found across India and Southeast Asia, it is valued for its potent alkaloids such as colchicine and zloriosine. These plant exhibit diverse medicinaly activities, including antibacterial, anticancer, antidiabetic, anti-inflammatory and antioxidant antifertility effects. The plant's various parts—especially the tubers and seeds—are rich in bioactive constituents like colchicosides and saponins, which contribute to its therapeutic properties. Owing to its extensive medicinal and economic importance, *G. superba* is a significant yet endangered herbal resource requiring sustainable cultivation and conservation.

Keywords: *Gloriosa superba*, *Colchicaceae* DC., Capsule that splits open along the compartments (loculicidal), north- western Uttar Pradesh.

Introduction

Gloriosa superba lilies valued much for their distinctive, showy and vividly colored blooms. The study was conducted in western part of Uttar Pradesh including Saharanpur, Muzaffarnagar and Shamli districts which come under Saharanpur Forest Division. It lies in the Upper Gangetic Plain. District Western Uttar Pradesh represents a wide variation in the topographical, geomorphological, edaphic and climatic features, and thus supports a wide range of forest types.

Shamli is located at 29.45370 N and 77.32 E. It has an average of 248 meters (813) feet. It is around 92 km from Delhi 38 km from Panipat, 66 km from Meerut, 40 km from Karnal (Haryana) and Saharanpur (Uttar Pradesh).

Hence, it has been considered worthwhile to study the angiospermic plants of north-west Uttar Pradesh and the results are presented in the Paper. It lies to east of the Yamuna River which marks the borders of two Indian state Haryana and Uttar Pradesh. The district lies in the fertile doab region between the Ganga and Yamuna. Shamli is located along with Delhi - Saharanpur (National highway -709) Meerut - Karnal (National highway - 709A) and Panipat - Khatima (State highway - 12), highway the district lies in the fertile doab region and hence the major occupation is agriculture. The district was carved out from the Muzaffarnagar district on 28 September 2011 as Parbudh Nagar and renamed Shamli in July 2012. At present, district Shamli is divided in three tehsils viz. Shamli, kairana

and Oon, and five blocks viz. Thanabhwana, Khandhla, Shamli, Oon, and Kairana. Field surveys were carried out in Shamli, Kairana and Oon tehsils respectively that lie between 29° 23' 0.48" N, 77° 17' 36.95" E. Geographical coordinates were recorded using Nikon D 5300 HD-SLR Camera with Geo Tag. Height and girth were measured by a measuring tape. Flowering and fruiting were observed by periodic field visits.

They have showy flowers, many with distinctive and pronouncedly reflexed petals, like a Turk's cap lily, ranging in colour from a greenish-yellow through yellow, orange, red and sometimes even a deep pinkish-red. Some synonyms, arising from the many variations, for *Gloriosa superba* include *G. simplex*, *G. virescens*, *G. Rothschildiana* (or) *G. superba* (*Rothschildiana*), *G. abyssinica*, *G. Carsonii* and *G. lutea*.

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Plant Morphology

1. *G. superba* L. Sp. Pl. 305 (1753); FBI. 6: 358; FUGP. 3: 262.; *Eugone superba* (L.) Salisb. in Prodr. Stirp. Chap. Allerton: 238 (1796); *Methonica superba* (L.) Crantz in Inst. Rei Herb. 1:474 (1766).

An annual, smooth (glabrous), grow up to 4 meters long, either by climbing or, less often, stem scandent, 2–3 m or more, rather slender. Rhizome usually forked. 1 cm in diam., fleshy. Leaves in groups of 3 to 4, or, alternate or occasionally also opposite, sessile or short petiolate to ovate-lanceolate, 7–13 cm, apex long caudate with a tendril. Simple, with no stalks (sessile); blades are egg-shaped to spear-shaped, 6–15 cm long and 1.5–4 cm wide. Flowers at nodding, large, single flowers that grow from the leaf axils; Nectar-producing glands are present. The flowers

develop in an orderly succession, with the youngest at the top of the flower stalk. pedicel 10–15 cm. Perianth is petal-like and remains on the plant six tepals, start as greenish, then progress through yellow, orange, and scarlet to a final crimson color; Tepals reflexed, bright-red, proximally tinged with yellow, linear-obovate, base slightly clawed, margin much crisped. **Androecium** has six stamens attached below the ovary. **Gynoecium** consists of a superior ovary formed from three fused carpels (syncarpous). **Fruit** oblong, 4–6 cm by 1–2 cm capsule that splits open along the compartments (loculicidal) to release up to 20 seeds. Seeds are egg-shaped, 4–5 mm in diameter, and have a thick, fleshy, and red outer coating known as a sarcotesta.

Fl. & Fr.: Jul.-Aug.

Collection: Block Khandhla, Village Khandrawali.

Location: 29° 23' 0.48" N, 77° 17' 36.95" E.

Medicinal Use:

1. Leaf - Head lice are managed with an external application of leaf paste.
2. Flower - Methanol extract of flower was found to be toxic against the larvae of *Anopheles subpictus*, *Rhipicephalus microplus*, and *Culex tritaeniorhynchus*. Acetone extract of the flower was found to be toxic against the adult animal sheep internal parasite *Paramphistomum cervi*.
3. Tubers - For nerve-related pain, a warm paste made from the tuber is applied to the affected area. Asthma is treated by administering a decoction of the tubers. To treat wounds, a paste is made by crushing the tuber and applying it to the injury.
4. Root- A root infusion, when consumed orally, serves as a remedy for gonorrhea. Snake and scorpion bites treated with an externally applied paste made from a root. The rhizomes have rich in the alkaloid colchicine. Decoction of kalihari root stock in sesame oil is filtered and applied twice in a day followed by a massage on joints having pains continued in one month. (Tomer, 2009)

5. Whole plant- A medicinal decoction is used to treat sexually transmitted diseases. □ The juice from the whole plant is used for external treatment of skin

conditions. A prepared paste made from the plant is externally applied to draw out embedded spines.



A-Habitat



B-Twig



C- Twig with leaves



D -Flower

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