

Datura stramonium L.

Jimson Weed Leaf

Folium stramonii

Solanaceae

Jimson weed is a very toxic plant that has been used medicinally for centuries, primarily as a topical agent but also for internal purposes. This and other species of *Datura* contain atropine-like alkaloids—specifically, hyoscyine. It is not used in herbal supplements and is rarely used in the practice of modern herbalists.

Surface view: Epidermal cell walls are sinuous or straight over main veins; anisocytic or occasionally anomocytic stomata occur on both surfaces but slightly more frequently on the lower epidermis; covering trichomes are abundant along veins, uniseriate with three to five cells, up to 300 μm long, conical with a wide basal cell, acute tip, and conspicuously warty cuticle; glandular trichomes are abundant, usually with a unicellular stalk and multicellular ovoid head, and entire length up to 80 μm ; cluster crystals of calcium oxalate visible beneath the surface are regularly arranged in the intercostal regions; reticulate vessels are visible beneath the surface.

Transverse section: Bifacial; palisade cells occur in a single row; calcium oxalate cluster crystals form a layer in the spongy mesophyll immediately below the palisade cells; vascular bundles are bicollateral.

Powder: Fragments of epidermis with anisocytic and occasionally anomocytic stomata, covering and glandular trichomes, and often regularly scattered calcium oxalate cluster crystals; broken trichomes; because young and flowering twigs may be found in the crude botanical, fibers, pollen grains, and seed fragments may occur in the powder.

