

Botanical Briefs: Daffodils—*Narcissus* L.

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Clinical Importance

“Daffodil itch” or “lily rash,” occurs after handling the stems of daffodils (Figure 1) and has been implicated as the most common cause of irritant dermatitis in florists.¹ Bulb dermatitis is a hazard of nursery gardeners and bulb planters. Virtually all *Narcissus* growers admit to having experienced “lily rash.” The plant contains calcium oxalate and irritant alkaloids in its sap.² Allergic contact dermatitis due to *Narcissus* spp. is uncommon.

Cutaneous Manifestations

Dryness, fissures, scaling, and erythema chiefly affect the fingertips, hands, and forearms and are often accompanied by subungual hyperker-

atosis.² However, vesicles and even pustules may ensue, and the rash may become more generalized and even involve the face.³ Bulb handlers often develop a fingertip dermatitis that resembles “tulip fingers,” but is less severe.

Family

The family Amaryllidaceae contains about 725 species of perennial bulbous herbs that are native to tropical and subtropical regions of Europe, southern Africa, and the Andes.

Distribution

Daffodils are native to Europe and the Mediterranean area, but they are now cultivated throughout the world.

FIGURE 1. Daffodils growing at the Denver Botanical Gardens.



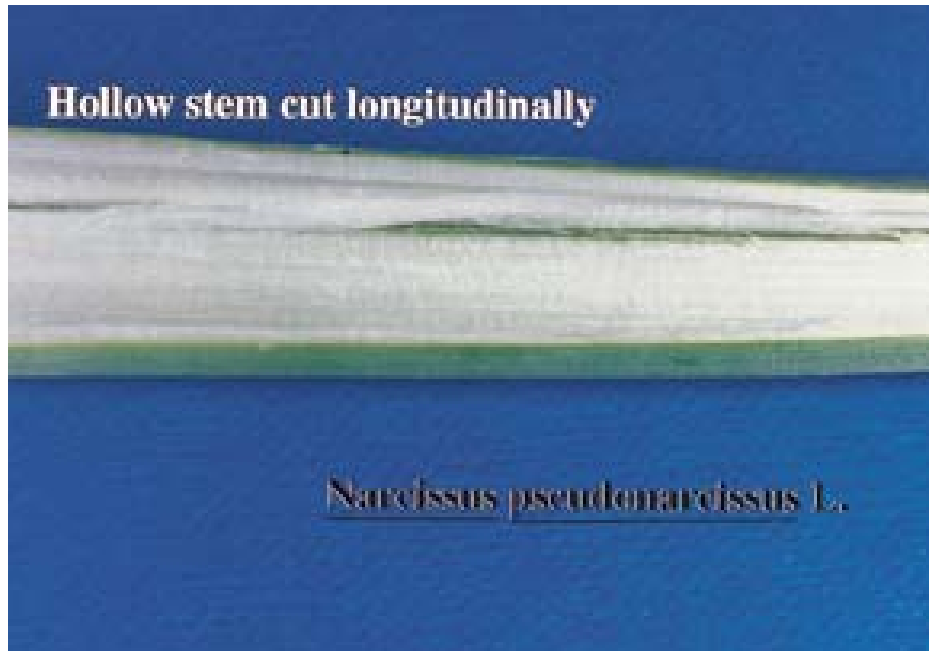


FIGURE 2. Mucilaginous sap in stem of *Narcissus pseudonarcissus* L.



FIGURE 3. Mucilaginous sap of a daffodil between the thumb and forefinger.

Dermatitis-Inducing Parts of the Plant

The large quantities of mucilaginous sap in the bulbs and hollow stems (Figures 2 and 3) contain large amounts of calcium oxalate. The bulbs contain the greatest amount of irritant alkaloids.

Nomenclature

Narcissus presumably derives from the Greek youth of mythology who fell in love with his own reflection in a pool, so, as a just punishment, the gods turned him into a flower. However, another theory states that the name may be derived from “narkao” (fall

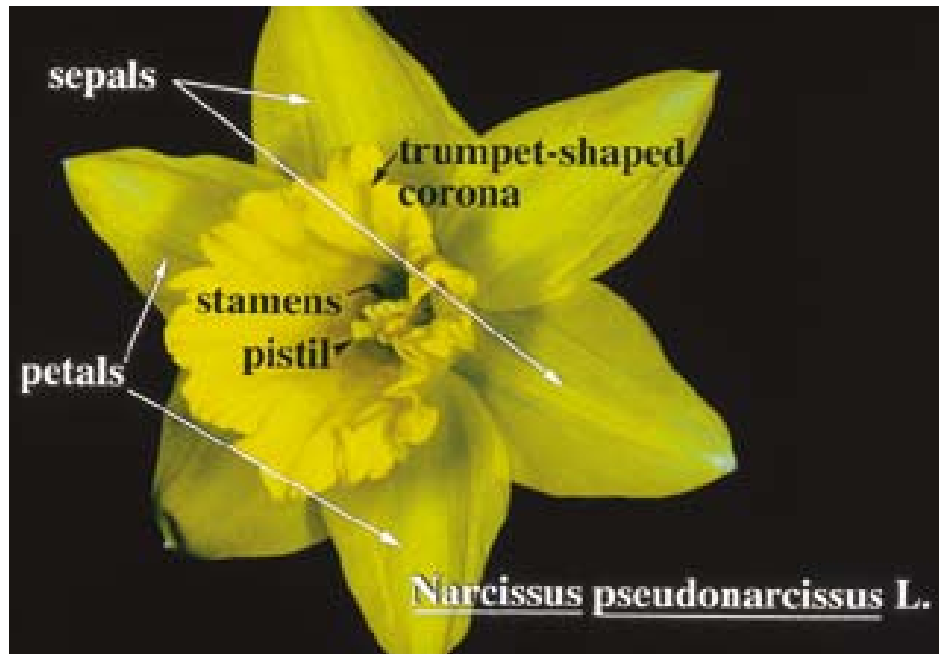


FIGURE 4. Flower of *Narcissus pseudonarcissus* L.

stiff), referring to its supposed narcotic properties.⁴ The term “daffodil” is commonly used to refer to the “trumpet” species (*Narcissus pseudonarcissus*).

Identifying Features/Plant Facts

The plants are typically lily-like or onion-like, with numerous narrow leaves and a single flowering stalk (Figure 1) arising from a subterranean bulb. The flowers are distinctive in that appendages of the petals form a prominent tubular to dish-shaped “corona” that extends upward from the center of the flower (Figure 4). The stamens are separate and do not extend beyond the corona. Plants flower in the early spring, and this led to the popular name, “Lent lily.”

Irritant Chemicals

Calcium oxalate causes cutaneous microtrauma. The bulbs contain irritant alkaloids that penetrate the skin more effectively after damage by the calcium oxalate crystals.³ The alkaloids are also weak allergens. The shape of the crystals

(“raphides”) is crucial to irritancy. They must be barbed or longer than 180 microns to induce dermatitis.⁵

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