

Great Mullein

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“If you stand by the river long enough, you will see the bodies of your enemies float by.”

Sun Tzu (544 - 496 BC) Chinese general, strategist, philosopher, and the author of “The Art of War.”

Strange as it may seem, there is a parallel with gardening. If you sit in your garden long enough, you will see all make and manner of industrial grade weeds attempt to establish themselves in your landscape. If you have yet to experience Porcelain-berry (*Ampelopsis brevipedunculata*), Mile-a-minute weed (*Persicaria perfoliata*), or Bishop’s weed (*Aegopodium podagraria*) just sit back in your garden chair and wait.

Several springs ago, I observed a new botanical visitor to my garden that resembled a lamb’s-ears-like (*Stachys byzantina*) rosette on fuzzy steroids. I didn’t know what it was, but it looked interesting. It looked harmless enough, so I decided to wait and see what it would do. It didn’t occur to me that this new volunteer might be a biennial (a plant which requires two years to complete its life cycle). As you might expect, the second year was something of a surprise. It wasn’t a repeat of the nice neat little fuzzy rosette, but a fuzzy rosette with a towering nine foot, fuzzy, central stalk with several flowering spikes. Making the rounds of my colleagues who have a better grasp on matters horticultural, I learned that this was something called mullein (pronounced mull-lin).

Great mullein or common mullein (*Verbascum thapsus*) is a member of the snapdragon family and is native to Europe, northern Africa, and Asia. It was introduced into the U.S. by the European colonists as either an ornamental, a medicinal herb, or a fish poison. Subsequently, it escaped and has become “naturalized” throughout the U.S. Today, it is in Australia, New Zealand, Hawaii, Chile, Argentina, and Japan. Many places consider it a weed and a “noxious weed” at that. From the 1974 Federal Noxious Weed Act, a noxious weed means “any living stage, such as seeds and reproductive parts, of any parasitic or other plant of a kind, which is of foreign origin, is new to or not widely prevalent in the United States, and can directly or indirectly injure crops, other useful plants, livestock, or poultry or other interests of agriculture, including irrigation, or navigation, or the fish or wildlife resources of the United States or the public health.” In short, on reputation alone, mullein might not be a welcome addition to your garden.

Common names (not a complete list) include: Aaron’s Rod, Adam’s Flannel, Beggar’s Blanket, Blanket Herb, Bullock’s Lungwort, Candlewick Plant, Clown’s Lungwort, Feltwort, Hag Taper, High Taper, Indian Flannel, Jacob’s Staff, Molene, Our Lady’s Flannel, Quaker Rouge, St. Peter’s Staff, Torches, Velvet Dock, Velvet Plant, Witches’ Taper, Woolen, and Woolly Mullein. These names allude to either some physical aspect of the plant or to its many uses.

Mullein has a lengthy record. On the one hand, Pedanius Dioscorides (40-90 AD), a Greek physician, pharmacologist, and botanist, recommended its use in treating lung problems. At one time or another, the leaves, flowers, and roots have been used to heal wounds, sooth sprains, quiet coughs, cure hemorrhoids, earache, asthma, nasal congestion, sore throats, pneumonia, cystitis, and irritable bladder. If homeopathy is your thing, mullein is available in pellet, liquid, tincture, granules, and ointment.

The utility of mullein also extends to non medicinal purposes. In parts of Europe, mullein stalks were dipped in tallow to create a torch to frighten away witches. The dried leaves make excellent tinder for starting fires. When rolled and dried, leaves were

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▲ Fig.1 - In the first year, mullein produces a rosette of hairy, greyish-green leaves. It is roughly circular, and it is about one meter (39 inches) in diameter.

used as wicks in candles. Mullein leaves were worn as charms to both ensure and prevent conception, a neat trick. The Romans used it as a hair rinse to restore hair color. Quaker women applied it to their checks as a cosmetic substitute for rouge. Finally, the flower stalks are decorative and can serve as an element in a dried floral arrangement.

Now before anyone tries any of the many recipes (e.g., mullein-flower tea or mullein flowers in milk) that are available on the Internet, you should understand that the leaves contain rotenone (an insecticide) and coumarin (a blood thinner). Further, most all of the recipes recommend that you filter out the hairs which can be quite irritating to skin and mucous membranes.

In the Garden

As mentioned above, mullein is a biennial. It is a dicot, it likes sandy, loamy, or clay soils, and it has no pH preference. It requires a sunny location and will not grow in shade. It is particularly at home in disturbed soil and can be found in roadsides, embankments, vacant lots, or eventually as a volunteer in your garden. It's cold hardy to zone 3 and frost tolerant.

In the first year, mullein forms a modest rosette of large velvety leaves (Fig.1). The literature says that the leaves are up to 50 cm (almost 20 inches) long. A leaf from my plant, selected for its significant size, measured 42 cm (approx. 16 inches) long and 15 cm (six inches) across at its widest point (Fig. 2). Aside from the leaf's remarkable size, the other obvious and inescapable feature is the star-shaped trichomes (hairy epidermal outgrowths) which cover everything and give a velvety feel and a silvery appearance (Fig.3).



▲ Fig. 2 - Mullein leaves are grayish green, large, and velvety to the touch.



Photo William C. Miller III

▲ Fig. 3 - This is a closeup of the obverse surface of a leaf. Just about every surface of mullein is covered with stellate trichomes or star-like hairs which are epidermal outgrowths that protect from frost damage, reduce evaporation, and diminish its attractiveness to herbivores.



Photo William C. Miller III

▲ Fig. 4 - The reverse view of a leaf reveals the prominent central vein and the reticulate venation pattern.

The leaves have a strong central rib with a reticulate venation (Fig. 4). The typical leaf is generally oblong, the leaf tip is broadly acute, and the base is cuneate.

In the second year, the rosette returns and a solid, three meter (approx. 10 foot) stalk develops from the center of the rosette (Fig. 5). The central stem may branch into one or more floral spikes of varying length before it terminates. The leaves are alternately arranged up the stalk, differ in shape, and decrease in size. The upper leaves are "decurrent". That means the base of the leaf extends down the stalk and attaches below the leaf's insertion point. It's an unusual look if you haven't seen it before.

The flowers are complete (having all four structural whorls represented) and pentamerous (having flower parts in groups of five). Each yellow flower is about 2.0 cm (between the size of a nickel and a quarter) across, has five unequal stamens, a five-lobed foliaceous calyx, a five-petalled corolla, and a pistil (Fig. 6). Flowering lasts up to three months beginning in early summer. Bloom begins at the bottom of the spike and progresses in an upward direction as it elongates, with only several flowers blooming at one time. Each flower only lasts for a single day. Self-pollination can occur if

the insects (chiefly bumblebees) are not available, and a very large number of little brown seeds are produced. The seeds are small enough to be wind-borne, and they retain their ability to germinate for many years.

Ecological Impact

While mullein cannot compete with well established plants, it can become a problem where vegetation is scarce. It often appears after forest fires and impedes normal succession. It hosts both pest (e.g., thrips and spider mites) and beneficial insects (e.g., predatory mites, the minute pirate bug, and the mullein plant bug (*Orius tristicolor* and *Campylomma verbasci* respectively) and is a reservoir for cucumber mosaic virus (*Erysiphum cichoraceum*) and Texas root rot (*Phymatotrichum omnivorum*).

After the novelty/fascination has worn off and you decide you've had enough mullein, control is best achieved by manual means. Mullein's hairy nature makes it difficult to effectively apply herbicides even with a surfactant, and the bunnies and deer don't seem interested. Burning is not a useful option because that approach significantly reduces good competition. Realistically, it may take a number of years of pulling up rosettes before you exhaust the seed population and rid your garden of mullein.

On balance, mullein is an interesting plant worth learning about. Unless you have a problem with witch control in your neighborhood, I don't recommend it as a worthwhile element for your garden.

References

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Photo Janet B. Miller

▲ Fig. 5 - In the 2nd year, mullein erects a central stalk from which one or more flowering spikes is derived. The author is about six feet tall. The stalk plus flowering spike is about three meters (10 feet) in length.

▼ Fig. 6 - Mullein's bright yellow flowers are pentamerous and last a single day. Flowering starts at the bottom of the spike and proceeds upward at an irregular rate as the spike or spikes continue to elongate.



Photo William C. Miller III

William C. Miller III is a recipient of the Society's Distinguished Service Award and the Brookside Gardens Chapter's Frederic P. Lee Commendation. He is twice past president of the Brookside Gardens Chapter, a former vice president of the Society, a past member of the ASA board of directors, past co-chairman of the ASA's membership committee, past chairman of the Public Information Committee, a long-time ASA member, and a frequent contributor to The Azalean.