

A New(er) Pigweed in Town – *Amaranthus Blitum* or Purple Pigweed

Several calls have come in to identify an unusual and relatively uncommon weed, *Amaranthus blitum* (sometimes listed as *Amaranthus lividus*), often referred to as purple or livid amaranth. A tropical annual in the pigweed family (Amaranthaceae), this summer germinating species is introduced in North America. The USDA PLANTS database (<https://plants.usda.gov>) documents its occurrence in 23 US states (mainly in the Mid-South, Southeast, and Northeast), three Canadian provinces, and Puerto Rico. Historical records from the Herbarium of the L.H. Bailey Hortorium (Cornell University) document the occurrence of plants in and around the New York City and Long Island, in Central New York (Madison County), and in the North Country (St. Lawrence County).

The growth habit of the plant is prostrate to slightly upright. The most distinguishing feature of the species is its leaf, which has a wedge-shaped base and a deeply notched tip that can contain a single leaf hair. Stems are green to whitish in color and can have many branches. Purple amaranth is monoecious with flowers being held in terminal inflorescences and at the base of the leaves. Flowering occurs between July and October. Seeds are small (approximately 1 mm in width), black, shiny, and smooth.

The International Survey of Herbicide Resistant Weeds (www.weedscience.org) documents a report of resistance to imazethapyr (WSSA Group 2, ALS-inhibiting herbicide) in New Jersey (1993). Recent work from Michigan State University reports that a field-collected population from Michigan is resistant to PS II-inhibiting herbicides (WSSA Group 5). Resistant biotypes have also been identified in France, Malaysia and Switzerland. If you suspect that purple amaranth or other weed species aren't responding to herbicides, please contact Cornell Vegetable Program Specialists or Dr. Lynn Sosnoskie (lms438@cornell.edu) to discuss seed collection and herbicide resistance screening.



Purple amaranth has a distinctive, deeply notched leaf tip that contains a stiff hair



*Purple amaranth produces terminal flowers, as well as in the axils of leaves and at the base of branches
Stems are smooth and white-ish in color*



Characteristics of Other Common and/or Troublesome Pigweed Species

	Palmer Amaranth	Waterhemp	Powell	Redroot	Smooth
Leaves	Diamond-shaped	Long and linear	Diamond-shaped	Oval- to egg-shaped with wavy margins	Oval- to egg-shaped with wavy margins
Petioles	LONGER than leaf blade	Shorter than leaf blade	Shorter than leaf blade	Shorter than leaf blade	Shorter than leaf blade
Stems and Plant Height	Smooth Up to 10 feet	Smooth Up to 10 feet	Sparsely hairy 3 to 6 feet	Sparsely to very hairy 3 to 6 feet	Very hairy 3 to 6 feet
Male and Female Flowers	SEPARATE plants	SEPARATE plants	Same plant	Same plant	Same plant
Flower Heads	Thick branches and tightly clustered flowers, female flowers have SHARP bracts	Branches are thinner than Palmer amaranth, flowers are less tightly clustered, no bracts	Sparsely branched, but branches can be long and flowers have bracts resembling Palmer	Branches on flowerheads are compact and short/stubby	Many branched flower heads with branches longer and thinner than redroot



**Top (L to R): smooth pigweed, redroot pigweed, and Powell amaranth
Bottom (L to R): waterhemp and Palmer amaranth**

**For more pigweed ID information visit:
<https://cals.cornell.edu/weed-science/weed-identification/pigweed-identification>**