

Second species of ramp, or wild leek, documented in Pennsylvania

July 27 2023, by Jeff Mulhollem



Allium burdickii has narrower leaves than *Allium tricoccum* and flowers a bit later than the more common species of ramp, however it offers a similar strong garlic-like aroma and onion-like flavor. Credit: Penn State, [Creative Commons](#)

The presence of a second species of ramp, *Allium burdickii*—commonly known as narrow-leaved wild leek—has been documented in southwest Pennsylvania by a team of Penn State researchers in a new study. This plant species never before has been documented in the state, and the researchers suggest the discovery shows a need to protect remaining populations of the plant.

The more common and well-known broader-leafed [ramp](#) species, *Allium tricoccum*, is widespread in the state and often collected. Eaten for thousands of years by Native Americans, ramps are valued for their strong garlic-like aroma and onion-like flavor. More recently, they have become popular among foodies and restaurant chefs, leading to an increased demand by urban consumers.

Allium burdickii likely has been in Pennsylvania a long time, according to team leader Eric Burkhart, associate teaching professor in the Department of Ecosystem Science and Management. His research group in the College of Agricultural Sciences has been studying the distribution and abundance of forest herbs such as ramps, goldenseal and ginseng for nearly two decades.

"We think at one time, there was probably a much more widespread and perhaps contiguous [population](#) of the slow-growing perennial plant that occurred throughout western Pennsylvania into the Midwest," he said. "But now, *A. burdickii* seems to be found only in isolated populations in increasingly urban areas outside Pittsburgh. We are working to figure out areas where it occurs so that hopefully we can conserve what's left."

Because *Allium burdickii* has thinner leaves, grows in slighter dryer locations and flowers earlier than *Allium tricoccum*, scientists and perhaps most collectors just missed it, Burkhart explained.

"From a conservation standpoint, because we're finding *A. burdickii* in

urban areas around Pittsburgh to date, the populations appear to be relatively small and localized—and they are vulnerable," said Burkhart, who is director of the Appalachian Botany and Ethnobotany Program at the Penn State Shaver's Creek Environmental Center. "Because of development in the region, and the high demand for ramps, we need to educate the public about the need to recognize and conserve them."

Researcher Cassie Stark, who spearheaded the study as a master's degree student, studied four populations each of *Allium tricoccum* and *Allium burdickii* in southwestern Pennsylvania, and compared and contrasted the habitats where they were found. She documented the [soil fertility](#) and moisture and site characteristics, such as topography, associated with sites where each species of ramp grew. Also, she recorded the presence of other plants growing with the ramps.

In findings published July 26 in the *Natural Areas Journal*, the researchers reported that *Allium tricoccum* is associated with north-facing slopes and higher soil moisture content throughout the growing season, whereas *Allium burdickii* was found on a variety of facing slopes. Soil pH and nutrient content were greater at *Allium burdickii* sites than *Allium tricoccum* sites, suggesting the former may rely more heavily on nutrients such as calcium.

More information: Cassie J. Stark et al, Two Ramp Taxa, *Allium tricoccum* and *A. burdickii*, Differ in Abiotic Habitat Characteristics and Floristic Associates in Pennsylvania, *Natural Areas Journal* (2023). [DOI: 10.3375/22-30](https://doi.org/10.3375/22-30)

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