

Delaware has share of rare, beautiful orchids

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The orchid family is one of the largest families of flowering plants in the world, with an astonishing 20,000-plus species. Living in Delaware, this may come as a surprise, since orchids are not at all common here. Most of the world's orchids are tropical, often growing as epiphytes on tree trunks and branches. Delaware's orchids are all terrestrial, growing on the ground, and most are rare.

Thinking back over this past year, one particularly memorable wildflower was a pink lady's-slipper orchid (*Cypripedium acaule*) that bloomed in Delaware State University's forest in May. The common name "lady's-slipper" or "moccasin-flower" is a good way to describe this flower. It's exciting to come across this bright pink flower, with its "slipper" (lip petal) measuring 3 inches long.

Orchids have three petals, one of which (the lip petal or labellum) is usually different in shape, and often serves as a landing platform for pollinators. The three sepals may also be petal-like. The pollen is in a mass called a pollinium, and many orchids have very specialized pollinators.

Another far less conspicuous orchid blooms in the DSU woodlands, in August. Crane fly orchid (*Tipularia discolor*) has a stalk of tiny greenish-purple flowers, which on close inspection do resemble delicate crane flies ("mosquito hawks"). This native wildflower is unusual because you don't see the leaves and flowers at the same time. In the fall, a crane fly orchid produces a single leaf, green above and striking purple-red beneath, which persists throughout the winter. Then, the leaf fades away by or during the summer, before the flowering stalk is produced.

Other Delaware orchids are ladies'-tresses (*Spiranthes spp.*) with flowers arranged in a spiral on the flower stalk, and rattlesnake-plantain (*Goodyera pubescens*) with uniquely patterned leaves.

Delaware has 36 different species of orchids, all native. However, most of these are rare. In fact, only six species are not rare

Garden Tales



Delaware State University/Dr. Susan Yost
Pink lady's-slipper orchid (*Cypripedium acaule*) is a spectacular Delaware native wildflower. This one was photographed last spring in the woods at Delaware State University.

or uncommon, including the lady's-slipper orchid, crane fly orchid and rattlesnake-plantain described above. Twenty five species are listed as "conservation concern" (fewer than 20 populations in the state). An additional five species are uncommon (fewer than 100 populations). Worse yet, of the 25 "conservation concern" species, two are considered "extirpated" (extinct from the state because their habitats are gone), and nine are considered "historical", meaning they haven't been seen in at least 20 years. These data come from "The Flora of Delaware," by W. McAvoy and K. Bennett (2001).

Please do not pick or try to transplant native orchids from their natural habitats. Rare and uncommon species should never be collected; many orchids are protected by the federal Endangered Species Act, and



Downy rattlesnake-plantain (*Goodyera pubescens*) is a native orchid with uniquely patterned leaves.

picking them is illegal. Additionally, orchids don't transplant well. They are mycorrhizal (associated with fungi), and the tiny seeds, and sometimes the adult plants, need their fungal symbionts in order to grow. It's best

to protect the native woodland habitats of our orchids, and enjoy these flowers in the wild.

In the entire orchid family, the only economically-important product is vanilla, produced from the fermented fruits of the tropical vanilla orchid (*Vanilla planifolia*). Other tropical orchids are valued as ornamentals and as cut flowers.

On the campus of Delaware State University, the Claude E. Phillips Herbarium is Delaware's center for research, education, and outreach about plant identifications, locations, and uses. Call 857-6452 (Dr. Susan Yost, Herbarium Educator) to arrange a tour of the herbarium, or for more information about this article.