

Cincinnati Zoo & Botanical Garden: Native Plant Program[®]

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The Cincinnati Zoo & Botanical Garden has long had a reputation as being a leader in the conservation of both flora and fauna. The goal of the Native Plant Program is the conservation, education, and promotion of native flora. This is a joint effort between the Horticulture Department and the scientists at the Center for Research of Endangered Wildlife (CREW).

Conservation of critically endangered plant species is primarily the responsibility of CREW. The labs at CREW work with a number of plant species through tissue culture and other means. Tissue can be collected in both in situ and ex situ situations. Tissue can then be placed in culture and developed.

The CREW also oversees the CryoBioBank[™]. Here, plant tissues are frozen at -320 °F to preserve the genetic material for future use. This genetic material is extremely important when it comes to saving our endangered species. For example, if a particular population of plant would disappear due to development, overgrazing, or other events, the genetic material could have been preserved in the CryoBioBank.

The Local Flora Project is an effort to pull together all known plant records in the area and consolidate them into a database. This will allow us to better understand our history of native flora in the region and help us to preserve it in the future.

These records are from old herbarium specimens, universities, verified sightings, and other documents. These records are then inputted into a searchable data base. This consolidation will help to give us a better picture of the history of our native flora in the region.

The Cincinnati Zoo also has many of these critically endangered species on display in order to educate the public on the plight of some of our endangered native flora.

The education component is geared to both the general public as well as the horticulture industry. We educate the public by holding many talks, as well as wildflower hikes, to expose the participants to the vast diversity of native flora that we have here in the Midwest. We hope to build an interest in them of our native flora, and the associated ecosystem they comprise.

We also educate the public on current issues, such as invasive species. If a particular plant seems to be invasive in our region, we try to recommend a comparative substitute. We are also active on the Ohio Invasive Plants Council (OIPC). The OIPC is a coalition of agencies, organizations, and individuals throughout Ohio concerned about the introduction, spread, and control of invasive, non-native plants in Ohio's natural habitats. The OIPC promotes public awareness of invasive species issues and encourages land management and research to detect invasive species and prevent new invasions into natural ecosystems.

The Cincinnati Zoo & Botanical Garden also displays many species of native wildflowers. This is done, as well as to beautify the grounds, to expose our native flora to the gardening public. All species are labeled, and displayed in both naturalized as well as semi-formal gardens. It is hoped that this will encourage the gardening public to seek out these new or little known species and plant them in their home gardens.

As for the horticulture industry, we trial many native species to see which plants that may have cultivated interest that are not currently being grown or propagated in large numbers, as well as growing these plants to check the possible large-scale propagation and production of them.

If a garden worthy plant does indeed propagate well and can be produced in large numbers, we then work on the final aspect of the program promotion. We will attempt to first promote the plant to growers who may want to propagate the plant. As the plant becomes available, we will then promote the plant to the gardening public as a great plant that does need to be used more in the landscape.

One such group of plants is *Trillium*. This genus makes a wonderful garden plant. It is long lived, hardy, and forms an impressive flower display in spring. The challenge is, it is not in large-scale production. We are currently working with this plant to try to unlock some of its secrets to make it better perform in large-scale production, or get the plants to bloom size earlier.

We are looking at both horticulture practices and lab techniques to propagate this plant. Everything from finding plants that rapidly setting offsets for divisions to placing green trillium seed on agar plates in the lab is being trialed.

We hope his program will result in both more garden-worthy plants being grown and becoming available, as well as growing the demand for such plants.