

Botanical gardens preserve endangered flowering plants by growing them in managed collections and storing seeds or other plant material for the future. They also study the plants, share knowledge, and sometimes help return them to protected habitats.

Keeping plants and seeds safe

A garden may grow an endangered plant in a greenhouse, nursery, or outdoor bed where staff can monitor its health. They try to provide the light, soil, moisture, and seasonal conditions the species needs. Labels and records identify the plants and, when known, where their original material came from.

Living collections are useful because horticulturists can observe how a plant grows, flowers, and produces seed. They can test ways to propagate it and learn which pests or diseases pose a threat. A collection also gives researchers access to plants without repeatedly gathering them from the wild.

Many gardens store seeds in seed banks. Seeds that tolerate drying and cold storage can remain viable for years, though their lifespan varies by species and storage conditions. Staff test samples from time to time to see whether the seeds still germinate.

Not every plant produces seeds that survive drying or cold. For some species, gardens may maintain living plants or use laboratory methods to keep small pieces of plant tissue. These methods require ongoing care and are not a substitute for protecting wild populations.

Supporting plants in the wild

Conservation begins with understanding the threats a species faces. Habitat loss, invasive species, changes in climate, and other pressures can make it difficult for flowering plants to survive or reproduce. Garden scientists may work with local communities, land managers, and other researchers to study those pressures.

Keeping genetic diversity in a collection matters. Plants from a single parent may represent only a small part of the variation found in a wild population. Where collection is permitted and appropriate, conservation teams may gather seeds from multiple plants while taking care not to harm the population.

Some gardens help grow plants for restoration projects. Before plants are returned to a habitat, partners need to consider the source of the material, the condition of the site, and whether the original threats have been addressed. Plants then need monitoring to see if they survive and reproduce.

Gardens can also introduce visitors to local endangered plants and explain why habitat protection matters. Seeing a flower in a collection may help people recognize a species they would otherwise never encounter.

Questions you might have

Can a garden save a species on its own?

A garden can safeguard plant material and build knowledge, but lasting protection usually also depends on conserving habitat and working with others.

Are all endangered flowering plants kept in seed banks?

No. Some are difficult to collect or store, and some seeds do not tolerate conventional seed banking conditions.

Can visitors help?

Visitors can learn about local conservation projects, follow rules that protect wild plants, and support gardens or habitat groups doing this work.

More background: website