



CAROL AND HUGH NOURSE

Creating a miniature bog garden in a container is an easy and entertaining project.

The Potted Bog

ARTICLE AND PHOTOGRAPHS BY CAROLE OTTESEN

IF YOU THINK of bogs as slimy, snakey, and squishy underfoot and the words “bog garden” strike you as an oxymoron, read on! You may become one of a growing number of gardeners who will discard images of pre-historic human sacrifice and man-eating Little-Shop-of-Horrors plants to discover the pleasures of bog gardening. If so, you’ll learn that bogs are unique ecosystems that are easily maintained, happily containerized, and, best of all, home to a range of fascinatingly beautiful, carnivorous plants.

Loosely interpreted, the word “bog” refers to any ground that is water-logged. But the kind of bog that supports carnivorous plants is both water-logged and nutrient poor. Usually highly acidic, it is composed of accumulated organic material—most often, sphagnum peat.

The kinds of plants that live in this nutrient-poor habitat descended from primitive pre-historic ancestors and have had eons to develop cunning mechanisms for deriving nourishment by means other than from the soil. In other words, they trap their own food.

“Most folks assume that such weird vegetation certainly must come from some far-off, exotic and tropical country, necessitating a hot and steamy greenhouse in which to grow them,” writes nurseryman Peter D’Amato of California Carnivores in *The Savage Garden*, which won an AHS Book Award in 1999. “In truth...most carnivorous plants grow in temperate climates...and the North American continent has the widest variety of ornamental carnivorous plant genera in the world.”

Being able to watch these ornamental natives dine has great entertainment value as well as a practical aspect: Plants that feed themselves don’t need fertilizer. In fact, fertilizer, good soil, and

mineral-enriched water are all too rich a diet for most carnivorous plants. What they need is pure water, a sterile, acidic growing medium, and a place in the sun. These simple needs render them ideally suited for life in a container where they can be combined with other plants or grown alone. Either way, their culture is so easy, a child could tend them.

Young children, being the primitive beings they are, love to tend them. Their ghoulish curiosity has not been dulled by years of concentrated civilization. They will watch with fascination as pitcher plants lure unsuspecting insects to be imprisoned and

digested. Forget grandma’s gallstones, the fingernail that fell off when the car door slammed on it, or the desiccated anole you finally found under the dishwasher. Containerized bog gardens with their ravishing, ravenous plants are the ultimate show-and-tell.

PLANTS FOR THE BOG GARDEN

Finding plants well suited to a bog garden environment is actually quite easy, especially since many carnivorous plants are native to North America. Just be sure you purchase your plants from a reputable source (see “Sources,” page 30). Many bog plants

are illegally harvested from the wild and certain species are endangered. Buying propagated plants is not only easy on the environment and likelier to yield healthy plants, it will enrich your bog with extraordinarily ornamental hybrids and selections.

Over the last decade or so, a number of outstanding pitcher plants with gorgeous leaves and spectacular flowers have been selected and propagated by tissue culture. One of these, released by the Atlanta Botanical Garden (ABG), is *Sarracenia leucophylla* ‘Tarnok,’ a white-topped pitcher with maroon-red veins. It bears cranberry red flowers that stay showy from spring until fall.



The pitcher plant (*Sarracenia* spp.) is highly adaptable. Opposite: Hybrid pitcher plants in bloom at the Atlanta Botanical Garden. Above: Red pitcher plants in a terracotta dish make an unusual centerpiece for an outdoor patio table.

Pitcher plants (*Sarracenia* spp.) are eating machines. Every aspect of their anatomy is adapted to lure, trap, and digest food.

Nectar glands and bright red veins attract prey to the plant's lip—a structure that doubles as a handy landing pad. From here, the insects—often flesh flies (Sarcophagidae) and ant species—are lured down inside the pitcher—almost always a one-way trip. Downward-pointing hairs accelerate progress down, but impede any escape upward. Farther along the tubular leaf is the slippery slope. On its sticky edge, the unfortunate insects struggle, then plummet to their deaths in the drowning pool at the base of the pitcher.

Venus flytrap (*Dionaea muscipula*) is well-named. Its eyelid-shaped leaves form two halves of an efficient trap. When lured by nectar, an insect lands on one of the leaves—the eye shuts. Large hairs, like eyelashes, act as bars to keep it imprisoned while enzymes in the leaf glands digest it. While Venus flytrap is endangered in the wild, plants have been produced by tissue culture. A beautiful red cultivar, 'Red Dragon' (sometimes listed as 'Akai Ryu') was introduced by ABG in 1997.

Sundews (*Drosera* spp.) have long tentaclelike leaves that are covered with a sticky substance that glitters like dew in the sunlight. It also acts like a powerful glue. When an insect lands on the leaves it is stuck fast. As the insect struggles to escape, hairs on the tentacles close around it and digestive enzymes begin their work.

Cobra orchid (*Darlingtonia californica*) resembles a cobra head with a hood and "fangs"—a fishtail-shaped appendage below the hood. Native to California and coastal Oregon, cobra orchids are denizens of running water in areas underlain by serpentine rock—habitat requirements that are difficult to duplicate in a container garden. Insect prey are attracted by a sweet nectar fragrance and may fly or crawl to the rolled edge of the plant's mouth from where they topple into the depth of the pitcher's hollow leaf. Downward-pointing hairs impede escape.

RARE AND ENDANGERED PLANTS

Carnivorous species turn up with discouraging regularity on lists of the rare and endangered. Thirty-one species and subspecies of *Sarracenia* appear on many state lists of rare, protected, or at-risk plants. And three pitcher plant species as well as the Venus flytrap have been listed as "federally endangered."



Top: A Venus flytrap. Above: A sundew. Right: Pitcher plants growing wild in a Mississippi bog. Many natural habitats are endangered.

Sources

Meadowview Biological Research Station in Woodford, Virginia, is a non-profit organization dedicated to preserving and restoring pitcher plant bogs in Maryland and Virginia. A beginner's package of one pitcher plant, a Venus flytrap, and a sundew is available for \$15 from its Web site (www.pitcherplant.org). (840) 633-4336.

California Carnivores, Sebastopol, CA. (707) 824-0433. www.californiacarnivores.com. (No catalog)

Plant Delights Nursery, Inc., Raleigh, NC. (919) 772-4794. www.plantdelights.com. Catalog for 10 first-class stamps.

Resources

Carnivorous Plants of the United States and Canada by Donald E. Schnell, Timber Press, Portland, Oregon, 2002.

The Savage Garden by Peter D'Amato, Ten Speed Press, Berkeley, California, 1998.



Ironically, while digging up a single Venus flytrap in North Carolina could land you in jail with fines up to \$50,000, razing an entire bog to make way for a housing development doesn't seem to raise an eyebrow. "In the United States, over 95 percent of the original carnivorous plant habitats along the southeastern coastal plain are gone," says D'Amato, adding, "the devastation and disappearance of carnivorous plant habitats throughout the world is currently beyond alarming."

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CREATE YOUR OWN BOG GARDEN PLANTER

Containers make it easy to satisfy the needs of carnivorous plants, which are: an acidic, low-nutrient growing medium, mineral-free water, consistent moisture, and full sun. The growing medium is a blend of fine sphagnum peat and children's playground sand that has been washed. To supply the plants with mineral-free water, you can collect rainwater or use bottled drinking water labeled sodium-free; boiling tap water will not remove minerals.

One of the attractions of growing carnivorous plants is their low maintenance. For several years, I've grown them in containers left outside year round in an exposed area of my USDA Zone 7, AHS Zone 7 garden. I've lost some sundews and Venus flytraps to smothering by sphagnum moss but not to winter cold. —C.O.

WHAT YOU WILL NEED

- Assorted carnivorous plants
- Container with a drainage hole and a deep dish or tray that holds water on which the container can be set to keep the growing medium wet
- Sphagnum peat
- Sand (well washed)
- Perlite or pine needles (optional)
- Bucket for mixing growing medium
- Water (mineral free)
- Sheets of live sphagnum moss



1. PREPARING THE CONTAINER. Combine equal amounts of sphagnum peat and sand in a bucket with water until you get a mudlike mixture. You can also mix in perlite or pine needles if you want some texture. Then fill the container with the mixture—firming it down to remove air pockets—to within two inches of its rim. Set the container in a water-filled tray.



2. PLANTING THE CONTAINER. Set the potted plants on the surface of the filled container until you get a design you like. A tip: Set taller plants either in the middle or off to one side. Then make a hole in the growing medium below each pot and insert the plants, tamping around the rootballs.



3. FINISHING. Carefully arrange wet pieces of live sheet sphagnum moss on top of the growing medium around each plant. This makes the container more attractive and also helps prevent the medium from drying.



4. REGULAR MAINTENANCE. A container bog doesn't need a lot of care beyond watering. The occasional weed and overgrown sphagnum moss can be removed as needed. Plants go dormant in the winter. In spring, just cut away the dead parts with pruning shears before growth resumes.