Charismatic flora can be exciting and amazing

By Susan Yost, Ph.D.
Delaware State University

Garden Tales

"Charismatic macrofauna" is a term describing animals with special appeal, like pandas, koalas and penguins. Plants are charismatic also; although lacking cuddly fur, big eyes and locomotion, they nonetheless are exciting and endearing.

Plants of special interest are often superlatives — biggest, tallest, oldest, newest, strangest and prettiest.

The largest living individual organism on earth is a plant (not an animal!). This is the giant sequoia tree, also known as giant redwood or bigtree (*Sequoiadendron giganteum*) of California, with a mass of less than 42,000 cubic feet. Some giant sequoias have reached the age of 3,500 years, and height of 280 feet. However, the record for the tallest living tree is held by a relative, the coast redwood or redwood (*Sequoia sempervirens)*, of California and Oregon, which reaches heights of 379 feet (about one third the height of the 1,250-foot-tall Empire State Building!).

Among the widest trees are some figs (*Ficus*), which attain huge girths because of aerial prop roots which grow down and add to the original trunk.

The oldest living individual on earth is also a plant, the bristlecone pine (*Pinus longaeva*), of the southwestern U.S. The oldest of these are about 5,000 years old.

However, it could be argued that certain plants that grow by cloning are the true record-holders for size and age. Aspen (*Populus tremuloides*) can form large stands by sprouting new trees from the roots.

One such grove in Utah, covering 106 acres and weighing 6,000 tons, could be called the largest organism. Similarly, a fungus called honey mushroom (*Armillaria sp.*) is also said to hold the record for largest species, growing by strands called hyphae, which cover thousands of acres. If you include plants cloned by humans, then the largest plant may be a fruit tree, like "Jonathan" apple. Clonal candidates for oldest include the creosote bush (*Larrea tridentata*), and box huckleberry (*Gaylussacia brachycera*).

The largest single flower is rafflesia (*Rafflesia arnoldii*). This parasitic plant of Southeast Asia produces a giant flower measuring more than 3 feet in diameter, but no leaves. The Titan arum (*Amorphophallus titanum*) holds the record for the largest unbranched inflorescence, or flower cluster, growing more than 8 feet tall. Both *Rafflesia* and *Amorphophallus* have been called "corpse flower" and thus may also qualify for stinkiest, since they produce an odor like rotting meat to attract flies and other pollinating insects.

The largest fruit is the double coconut (*Lodoicea maldivica*), measuring about 1½ feet long, and weighing a record of 92 pounds.

Delaware State University/**Susan Yost**

The oldest living individual organisms on earth are said to be bristlecone pines (*Pinus longaeva*), like this one growing in the White Mountains of California. Some reach approximately 5,000 years in age.

Newly discovered plants, not previously known to science, are exciting. Even large trees have been overlooked, like the dawn redwood (*Metasequoia glyptostroboides*) which was discovered in the 1940s in a remote part of China, and is now commonly planted. The Wollemi pine (*Wollemia nobilis*) was discovered a mere 15 years ago, with close to 100 trees growing in steep, almost inaccessible gorges in Australia.

A number of plants could qualify for strangest. Baobab trees (*Adansonia spp.*) of Africa and Australia have a striking appearance with large trunks and small branches, and are sometimes called the "upside-down tree". Living stone plants (*Lithops spp.*) from dry areas in southern Africa are also unusual. They resemble large pebbles, in the center of which a flower may appear.

High on the "charisma scale" are plants that have the unusual ability to move. The leaves of sensitive plant (*Mimosa pudica*) fold up instantly when touched. The well-known Venus fly-trap (*Dionaea muscipula*), native to North and South Carolina, has leaves that snap shut to trap insects. Other carnivorous plants are also fascinating, even those that don't move like pitcher plants (*Sarrancenia, Nepenthes, Darlingtonia*) and sundews (*Dionaea*).

And then there is simply the amazing variety of gorgeous flowers found in the several hundred thousand different flowering plant species, from asphodels to orchids to zinnias.