

# Ginkgo has ancient lineage

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Ginkgo (*Ginkgo biloba*) is an attractive tree with an ancient lineage, distinctive leaves, smelly seeds, and medicinal properties.

Ginkgo has been called a "living fossil" because nearly identical plants were already present on earth approximately 200 million years ago. It is now the one and only living species in the ginkgo family (*Ginkgoaceae*); the other species are all extinct.

Ginkgo has long fascinated me because of its leaves and other unusual features. The leaves are a unique fan shape, with forking veins. At this time of the year, the leaves turn a lovely light yellow, and then all fall within a short time to form a bright "skirt" around the base of the tree. The other common name for this tree, maidenhair tree, comes from the resemblance of the leaves to the leaflets of maidenhair fern. Surprisingly, although ginkgo has broad flat leaves rather than needles, it is a non-flowering seed plant ("gymnosperm") and, therefore, more closely related to pine trees than to maples or oaks.

The branches are of two types — long shoots and short shoots. In the winter, the tree has a distinctive appearance, with the short shoots forming stubby little pegs on the branches.

Ginkgo is native to China. It's thought that there may no longer be any wild, natural stands of ginkgo, and that the species only survived to the present because it was planted around monasteries. Ironically, ginkgo is now widely planted and successful in many cities, and is resistant to pollution and pests. The largest ginkgo in Delaware, near The Green in



Submitted photo

**Ginkgo (*Ginkgo biloba*) leaf extract, highly processed and with toxic compounds removed, is used as a memory-boosting herbal medicine.**

downtown Dover, is a grand 196 inches in circumference and 107 feet in height (according to the Big Trees of Delaware). Here at Delaware State University, two young ginkgo trees can be seen on the Campus Tree Walk, which has over 80 different species of labeled trees (for brochure and map, see <http://herbarium.desu.edu>).

The seeds of ginkgo are memorable. Ginkgos have separate male and female trees, with the latter bearing foul-smelling seeds. The smell, said to be like rotting butter, is attributed to butyric acid (my daughter, when very young, called this tree "ginkgo-stinko"). The smell is confined to the fleshy outside of the seed, which can also cause dermatitis. Inside is a hard inner seed coat surrounding a softer white inside, which, with

proper preparation, is edible and a delicacy in Chinese cuisine (I've eaten them roasted, and they tasted good). It's hypothesized that the smelly seeds may have been eaten and dispersed by a now-extinct animal. If you want to avoid planting a female tree, grafted male trees are available.

Ginkgo leaf extract, highly processed and with toxic compounds removed, is used as a memory-boosting herbal medicine.

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