

# Ginkgo: a fit survivor through the ages

Once upon a time, say, 250, 300 million years ago, in the late Paleozoic era, all the earth's continents collided. The result was Pangea, one great land mass, surrounded by one great ocean, called Panthalassa.

During another 80 to 100 million years, (the Permian age), resulting grinding of Africa against North America created monster mountains—the high Atlases of northern Africa, and the Appalachians on this continent.

Siberia hit against Europe, and the Ural mountains were born. Ginkgos, conifers, cyads and seed ferns grew there.

Then, another catastrophe occurred, a comet, it is believed. Swamps were drained and deserts appeared. Extensive glaciers formed, probably in the Southern hemisphere. Many plants and animals who had lived in swamps now perished. No more giant cockroaches scurrying to avoid the sun.

As the swamp forests fell, pressed together by their own weight, they formed massive layers of material that would eventually become coal.

All in all, of the many species of flora and fauna growing at that time, only two out of ten species survived. Practically all the marine species and amphibians died out. But ginkgo trees, ferns, cyads and conifers survived and flourished.

A few warm blooded reptiles made it, some being therapsids, who later evolved into mammals. Some developed feathers against the cold, and found that flapping arm feathers could help them jump higher and catch flying insects for dinner. Then they grew even thicker feathers, and started staying in the air most of the time.

On the ground, 200,000,000 years ago dinosaurs developed into the greatest reptiles of all. Three-foot-long Thecodonts begat Brontosaurus, measuring 80 feet. Stegosaurus and Tyrannosaurus dominated the world for 100 million years. This whole planet was one color: green. It took another fifty million years for flowers to evolve.

Another meteorological catastrophe wiped out the dinosaurs, but the mammals made it. As the continents drifted apart, climates began to vary, and the mammals grew hair and pumped warm blood through prehistoric veins. Mountains continued to come and go. Apes lived in Kentucky and redwoods lived in Colorado. The Himalayas and Alps developed the mighty forests they still support today.

In Asia, the ginkgo tree continued to flourish.

Glaciers melted, the Great Lakes appeared, and man began living all over the world, cutting down forests, domesticating animals, developing agriculture and urban areas. The ginkgo lived through it all.

Ginkgo biloba, the Ginkgo, Duck-foot tree, or Maidenhair Tree, is named after the old Japanese worked for "silver apricot", originally from the even older Chinese word ngin-ghang. Biloba means two lobed (the leaves).

Ginkgos, like conifers and cyads, are gymnosperms, plants lacking flowers and reproduced by seeds born naked on a special bract, most often in a cone. In contrast, angiosperms have flowers and seeds enclosed in mature ovaries. Ginkgo is the only surviving genus of its species. Cultivar are: 'Aurea', leaves yellowish, drupe like; 'Fastigiata,' of pyramidal habit; 'Laciniata,' leaves deeply divided; 'Macrophylla,' leaves exceptionally large; 'Mascula,' a listed name; 'Pendula,' pendulous branches; 'Pyramidalis,' a listed name; 'Variagata,' leaves variegated yellow.

Ginkgo leaves are most distinctive, 2½ to 3½ inches wide fan-shaped, two-lobed, leathery in texture. Both sides are smooth and green, with very fine veins running out from the petioles that radiate over the leaf blades. The leaves turn a bright yellow in autumn, giving a spectacular show.

Over millions of years, the leaves have not changed in appearance at all. Rock fragments from geological discoveries in many lands worldwide frequently contain imprints of ginkgo leaves.

Ginkgo seeds are the result of a peculiar process. Ovules are borne in pairs on the end of short stalks. After having found nothing on the male catkin but tasteless pollen, which adheres to their bodies, insects seek the sticky sap secreted close to the exposed ovules. Some of the pollen falls into the sap, and is quickly transported down a pollen tube.

Fruits are fleshy drupes that hang like small plums, producing seeds in the fall. Fertilization occurs within the ovules after the seeds have been shed from the tree. Embryos are formed during later stages of maturation of the seeds.

Fruits have a rancid odor, like bad butter, or worse, which is the result of butyric acid in their fleshy coats. For this reason usually male trees are planted, which are propagated asexually.

Occasionally oil from the seeds causes dermatitis in some people. The seeds themselves, though, are delicious when roasted or incorporated in culinary dishes. They are quite popular with oriental cooks.

Today there may not be any truly native trees of the living species, but G. biloba has been cultivated for thousands of years on temple

grounds in China and Japan. Beloved of American landscape architects for the last 200 years, its ultimate height of 80 to 120 feet helps to make a definite statement



in any established planting. It is a city tree: look around next time you are in Washington, D. C. for example. Ginkgo succeeds there and other urban areas because it withstands air pollution and drought better than most tree species. Ginkgo does not constantly litter the ground surface around it, as do pecan, maple and magnolia trees. The leaves drop all at the same time, making fall cleanup an easier task. Another plus is its remarkable resistance to fungal diseases and insect attacks.

These very reasons make ginkgo highly satisfactory for home landscapes and oriental gardens. When young, its form is pyramidal with upright branches. As it ages, the branches spread and its crown becomes more open. This pattern keeps it from being a truly excellent shade tree, but I find the resulting dappled sunlight an interesting contrast to shadows emanating from conifers and oaks.

Ginkgos require little care except for some basal pruning when young, which involves keeping bottom limbs a minimum of eight feet from the ground in lawn areas, and 12 to 15 feet in height if the branches interfere with traffic.

There is now one more extremely important reason to cultivate ginkgo trees, because G. biloba is not just another pretty geological phenomenon. Five thou-

sand years after the discovery of its medicinal properties, it is becoming an overnight success with occidental medical researchers. That's how long Chinese folk medicine has used the extract of the leaf for asthma, coughs, allergic reactions, and care of the heart and lungs.

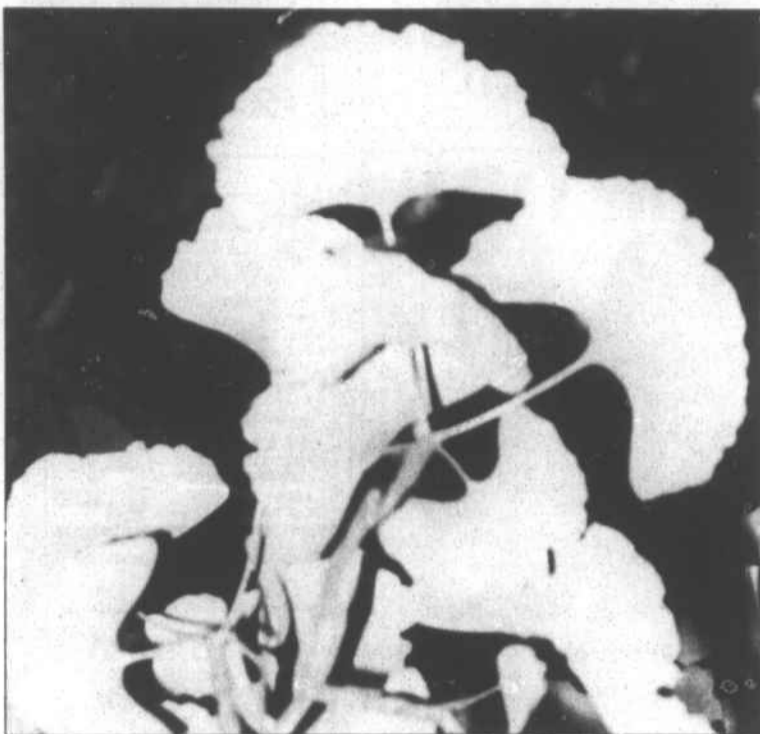
A research team led by Dr. Elias J. Corey of Harvard University has succeeded in synthesizing a natural compound, ginkgoloid B, from the leaf. As yet no one knows why the compound works. The leading theory is that the compound interferes with a chemical in the body known as PAF, short for platelet activating factor. PAF is suspected of initiating graft rejection and inducing asthma complications.

It is hoped that discovery will lead to a new class of medicine that

will fight not only such recognized diseases as asthma, toxic shock syndrome and kidney disorders, but will help lead the fight against Alzheimer's disease.

The renewed interest in this ancient tree has resulted in the planting of a ginkgo tree plantation in South Carolina by Garney, Inc., a Dutch pharmaceutical firm. Leaves will be harvested and dried for export, where the drug will be extracted and refined. So far the unnamed drug has not been available in the United States.

When next you're shopping for an unusual specimen tree for the yard, consider Ginkgo biloba. With all its favorable attributes, it is easy to understand why Ginkgo flourishes. It is, as Darwin asserted, truly proof that the fittest survive.



The Perquimans County Jaycees are collecting aluminum for recycling. The aluminum is flattened before it is sold to the recycling plant. Saturday, the Jaycees held a "can smash" to crush this truckload of discarded cans.

## NOTICE

### PERQUIMANS COUNTY BOARD OF EQUALIZATION AND REVIEW

*The Perquimans County Board of Commissioners will convene as the Board of Equalization and Review on Monday, April 24, 1989, at 10:00 a.m. to hear from Real and Personal Property owners requesting a review of their property assessments.*

*Those persons who would like to meet with the Board of E. & R. should contact the Perquimans County Tax Assessor by 5:00 p.m. on Friday, April 21, 1989 to be scheduled for a time to appear.*

**Keith W. Haskett**  
Tax Assessor

# Someday You May Rely On A Neighbor For Major Surgery.

It's good to know Albemarle Hospital is in the neighborhood. Because some of your neighbors at Albemarle are experienced physicians and surgeons who can care for virtually any medical need.

Albemarle has experienced orthopaedic surgeons who specialize in medical care for bones and joints. And our Emergency Department is staffed with physicians and nurses around the clock to answer your immediate medical needs.

But that's just the beginning. Albemarle is a full service major medical center with extensive capabilities to meet virtually any need.

With a board certified cardiologist on staff in the Cardiac Care Unit, Albemarle offers everything from nuclear cardiology to echocardiograms. Albemarle was the first hospital in the region to offer Activase, a life-saving drug that can actually dissolve bloodclots and stop heart attacks in progress. And the hospital continues to pioneer healthcare technologies while using the latest medications.

Albemarle's Birthing Center offers unique, natural birthing rooms where mother, baby and father can experience the miracle of life in a comfortable home-like environment. Yet, four obstetricians, a

certified midwife and the most advanced medical care facilities are available.

It's always wise to know your neighbors. So visit Albemarle Hospital and see why knowing this neighbor could one day save your life.

Highway 17 North, Elizabeth City, NC 27909, (919) 335-0531.

## Albemarle Hospital

*We're more than a major medical center, we're here for you.*



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(L. to R.) Corlette Stone, Certified Surgical Technologist, Dr. James M. Watson, Orthopaedic Surgeon.