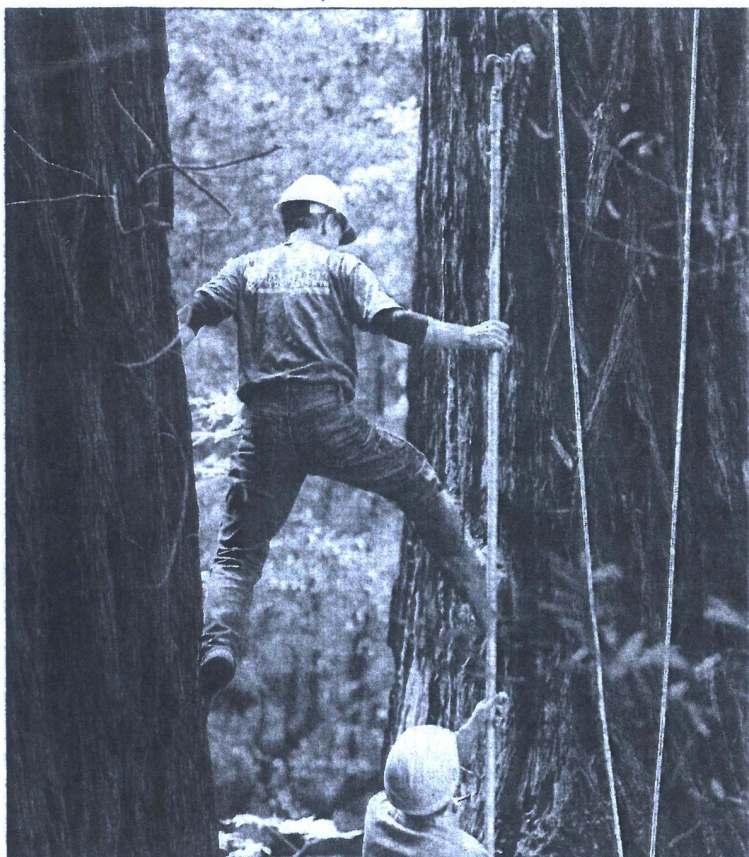




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Starting the climb: Dave Anderson, top, and Dave Dunn of Bartlett Tree Experts position their lines.

Photos by Eric Risberg, AP

Ancient trees benefit from new technology

Scientists clone redwoods for preservation

By Kate Naseef
USA TODAY

Scientists have launched a project aimed at solving the mystery of the giant redwood tree: What allows it to grow so tall and live so long?

Arborists from Bartlett Tree Experts recently climbed almost 300 feet up three redwood trees in Roy's Redwoods Open Space Preserve in Marin County, Calif., to collect samples of new growth as part of an effort to clone some of the oldest and biggest redwood trees in the western USA.

The project will take genetic material from the trees to create a "living library" so researchers can study what allows these trees to become the tallest and largest living things on Earth, says David Milarch of the Champion Tree Project, which is working with Bartlett and the Tree Research and Education Endowment Fund on the project.

Milarch hopes to plant the clones near universities. Because the young trees will be identical to the trees from which they were cloned, scientists can study their genetics without having to make the climb up the older trees to gather samples, which is expensive and difficult.



In California: David Milarch, co-founder of the Champion Tree Project, looks over the first cutting.

Scientists also will cross-pollinate some of the clones from different areas of the 500-mile-wide redwood range. Some of the second-generation trees created by the project might be capable of growing bigger and older than their parent trees under the right conditions, Milarch says.

Although this has never been done before with redwoods, it is standard practice when scientists are trying to find "better versions"

of plants or animals, says Bill Libby, a professor emeritus of forestry at the University of California-Berkeley, who has spoken with Milarch about the plans.

"Most of them are not going to be very good, but some of them will be special," Libby says.

Redwoods can grow to more than 300 feet tall and can live for 2,000 to 3,000 years. But less than 5% of the old-growth redwood forest in the western USA is left, says Ruskin Hartley, director of the Save the Redwoods League.

Since the 1920s, the league has been working to protect the redwoods from logging and other threats. Now 60% of the remaining old-growth redwoods are being preserved, Hartley says.

"The redwoods just have a power to inspire, and people just get drawn to their size and their grandeur and drawn to take action," Hartley says. "I hope (the project) will engage more people in the work to protect the redwoods."

The team will gather samples from the next set of trees in about two months, says David McMaster of Bartlett Tree Experts. This time, the climbers will be going up trees that are more than 300 feet tall and will have to use a crossbow to reach the lowest branch, which is 200 feet high.