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Saguaros on the go

Giant cacti suffer
when transplanted,
experts contend



Benjie Sanders, The Arizona Daily Star

Becci Hare says this saguaro was transplanted seven years ago and is doing fine

original photo in color - B1

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By Douglas Kreutz
The Arizona Daily Star

Saguaros, those tall and stately cacti that have come to symbolize the very concept of desert, sometimes happen to grow in what people consider the "wrong" places.

A popular solution to this problem: transplanting.

Government agencies, developers and homeowners routinely hire professional cactus movers to uproot the thorny giants from one patch of desert and replant them in another.

Unfortunately, according to some cactus experts, there appears to be a problem with this solution: It is fatal to most large saguaros.

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A long time to die

Gene Joseph, a horticulturist who worked at the Desert Museum before opening his own nursery, said, "My direct experience is that virtually 100 percent of the big, grandiose saguaros — the kind everybody wants — die" as a result of transplanting.

"They may last for three or four years, because it takes them that long to die," Joseph said. "People may be able to point to one or two that have survived, but I'd be real surprised if anybody came up with significant numbers of large saguaros that survived five years after transplanting."

Such conclusions are strongly disputed by other nursery operators and professional cactus movers.

They maintain that healthy large saguaros can survive for decades after transplanting — if the work is done properly and the plants receive adequate care.

"That's just a big crock, this idea that large saguaros can't be transplanted," said Shawn Widger, a spokesman for Arbor Tree and

Cactus Nurserymen, 1320 W. Newton Drive.

"You do have a few that wither and die," Widger said. "But the majority of the ones I transplant don't just survive — they thrive. . . . We have a 90 to 95 percent success rate."

Becci Hare, co-owner of The Cactus Grove nursery, 8647 E. Golf Links Road, said, "As long as we begin with a healthy, viable plant, we haven't had a lot of problems.

"We've been in business about 14 years and we've moved a lot of saguaros — some of them 18 to 22 feet and bigger," Hare said. "I have one in my front yard that's been in for about seven years now. It's about 18 feet tall, with arms, and it's doing fine."

Dimmitt said the Desert Museum has stopped transplanting large saguaros "because it just doesn't seem to work."

"We've had no problems with the younger ones," he emphasized. "We have transplanted hundreds of plants up to 7 feet high, and we've had almost 100 percent success with those. By long-term success, I mean the plant is still green and obviously healthy five years after it's transplanted.

"But with the larger ones, our experience has been just dismal," he said. "Over the last 10 years, we've had about 20 saguaros — all of them at least 12 to 20 feet high — planted for us by professional cactus movers. Only one of those is still alive, and it is not healthy."

"Very little data"

Three rare crested saguaros also were transplanted onto museum grounds during the past decade, Dimmitt said.

"All of them died within two years," he said. "There may be places where big saguaros have been transplanted successfully, but they sure don't make it here."

Greg McPherson, an assistant professor in the landscape architecture department at the University of Arizona, shares Dimmitt's concern that transplanting a large saguaro may amount to signing its death warrant.

"We have very little data, so everything has to be qualified at this point," McPherson said. "But there are some things that happen in transplanting that make it pretty hard on the plants.

"When you transplant a large saguaro or tree, you're often reducing the root system by 90 to 95 percent," he said. "With trees, they prune the top of the trees back to compensate for the lack of a big root system.

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"But it's hard to prune a saguaro. So you end up with a tremendous amount of above-ground biomass with a greatly reduced root system."

Replanted deeper in ground

Another problem with transplanting, according to McPherson and Dimmitt, is that saguaros are replanted deeper in the ground than they were growing at their original site.

"Virtually all movers will transplant them 18 inches to 3 or 4 feet deeper than in the wild," Dimmitt said. "They say this is the only way

they can guarantee that they won't blow down.

"But saguaro roots are rarely more than a few inches deep," he said, "and the roots go out laterally about as far as the plant is high. If you bury them deeper, they don't get enough oxygen. They just suffocate."

One-year guarantee

Dimmitt and Joseph, who operates Plants for the Southwest nursery at 50 E. Blackledge Drive, said transplanted saguaros sometimes will appear to be healthy for several years after transplanta-

tion — even though they're dying.

"It can take up to five years for them to die," Dimmitt said. "They have that much water stored in them."

Joseph maintained that "You could hang a saguaro upside down by its roots for three years and it would look the same as if it were transplanted.

"The movers will give you a year's guarantee, but that doesn't mean much if it dies in three years," Joseph said. "Most people aren't aware that a saguaro is able

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to die for three years. When it finally dies, they blame themselves and say, 'I have a black thumb.'"

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Professional cactus movers maintain that death-by-transplantation is far from inevitable. If large cacti die after being transplanted, the movers say, it's usually because they were unhealthy plants or because incompetent movers did a poor job.

"There are certain techniques we use that not everybody uses," said Widger, whose company has been in business for 15 years. "But I cannot disclose any of the secrets I use, or everybody in the business would be using them."

"When saguaros die, it's because some of the other movers use a 'rip-and-tear' technique" that causes excessive damage, he contended. "All they see is a dollar sign. These rip-and-tear people are giving us a bad name. But this company really cares about our work, and we stand behind our work."

Widger said effective moving techniques are only part of the process necessary for plant survival.

"We also provide watering instructions for the buyer," he said. "The instructions vary per plant, depending on the type of roots, the size of the plant and the soil conditions. There are many variables."

"A lot of the times saguaros wither and die it's because a contractor won't follow these instructions," Widger said. "But I'm saying that out of 100 plants, you might lose maybe 10 if the customer is taking care of it properly. That's talking about large saguaros."

Widger acknowledged that "the success rate does drop a little bit" for saguaros over 30 or 35 feet in height. He said his company charges anywhere from \$450 to \$1,450 to transplant a large saguaro cactus and guarantees the plant for one year.

Hare said "the big factor is care."

"When you move saguaros, you have to put them into the ground deeper than before or you lose the stability," Hare said. "That doesn't seem to hurt them as long as the plant was healthy to begin with."

She said one factor contributing to some transplant deaths is excessive watering.

"If they get drip irrigation, or if they're near a green area, they'll get too much water and die," she said.

She said rates for saguaro moving vary depending on the plant.

"On large saguaros with arms, we guarantee them for a year," she said.

Some developers and public agencies acknowledge that they've had serious problems transplanting large saguaros.

Joe Bornkessel, grounds superintendent at The Westin La Paloma Resort, 3800 E. Sunrise Drive, said "a lot of the large ones we've had transplanted haven't really performed very well at all."

Bornkessel said "maybe 300 saguaros have been transplanted over the whole project."

"The small ones didn't seem to be any problem," he said. "But the success drops off with increase in size. ... We've had a few of the larger ones that have made it" since they were transplanted five or six years ago. "They seem to be healthy in all respects."

Bornkessel said he couldn't esti-

mate the percentage of large saguaros that survived transplanting at La Paloma. "Part of our problem here was that they ended up moving the saguaro nursery (area at La Paloma) two or three times," he said. "So I'm sure the multiple moves didn't help."

Mel Persons, an environmental specialist with the Central Arizona Project, said project workers have transplanted about 100 saguaros from project canal routes into a nursery area.

"They've lived there now for three or four years," Persons said. "I don't see many of them die. ... But in our nursery, we don't have big ones with big arms."

"When you start moving the big ones, it's hard to find equipment to move them well. They take quite a beating and get pretty shook up."

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Those who question the practice of transplanting large saguaros say scientific research is the only way to learn for sure about survival rates and the most effective transplanting techniques.

"Obviously, somebody needs to fund a good study on this," Dimmitt

McPherson said such a study is warranted, "especially given the symbolic and ecological and aesthetic value of the saguaro. It is the plant that everyone associates with the Sonoran Desert."

In the meantime, McPherson said, a conservative approach to saguaro transplanting might save the lives of some of the elegant plants.

"If it's true that we don't have a very high survival rate with larger saguaros, then we're really defeating the purpose of transplanting them," McPherson said.