

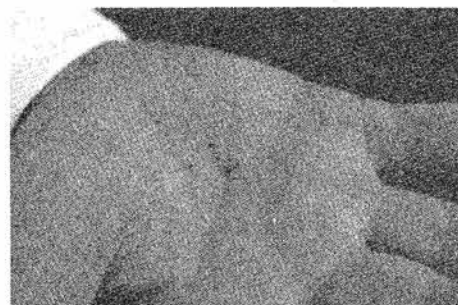
HOMEGROWN PEYOTE

Story and photographs by Robert Miller

My first contact with peyote was in 1972. I packed my camping gear and a copy of *The Teachings of Don Juan* into my battered VW van, and headed to Texas in search of an organic path to an alternate reality. (We talked like that in 1972.) Texas was alien territory for ponytailed Californians driving VW vans in the early '70s, but I arrived in Rio Grande City, Texas, without any serious hassles. My real problems began the day after my arrival, when I started searching for peyote. I quickly learned that peyote isn't like the cactus you see on a cover of *Arizona Highways Magazine*. It's a fat, little, ball-shaped cactus that hides under the shade of spiny shrubs and thorny bushes, the same places snakes and tarantulas like to spend

their day. Peyote may be spineless, but every other plant in Texas is covered with them. My first day of searching turned up a diamondback rattlesnake, lizards, spiders, and a heat rash, but no peyote. I didn't give up. On the second day I discovered a clump of three plants growing in the shade of a small shrub. The following day I found half a dozen more plants for a total of nine in three days of hard searching.

Even fifteen years ago peyote was difficult to find in the wild. Its growth is restricted to the southernmost limits of Texas along the Rio Grande Valley, and extends for a considerable distance into Mexico. The plump blue-green body sits barely above the ground during



Peyote seeds are tiny. Life in the Chihuahuan Desert has inbred the ability for peyote seeds to lay dormant for years and still remain vital.

the rainy season, and during the dry season shrivels up and almost disappears beneath the sand. The first plants I found were given away by their bright pink fruit, otherwise I would never have seen them.

The evening before I left Texas I



A crested form of peyote. Cresting occurs when the plant's growth tip loses control of the growth regulation process and begins spreading laterally instead of upward. This very old and beautiful plant has produced a normal offset at the very base of its catapillar like tip. Cresting is fairly common among cactus and doesn't seem to harm the plant.



A collection of mature peyote clusters.

decided to sacrifice a couple of my hard won trophies. I sliced the plants into wedge-shaped pieces and carefully removed the little tufts of wool which I had heard would make you sick. Eating peyote is not love at first bite, especially fresh, slimy peyote. The chokingly bitter taste is nauseating. I quickly learned my apple-sized wedges were too large to eat without chewing, so I diced them into small chunks and swallowed them whole with some juice. After about twenty minutes, with the help of a couple of joints, I was beginning to come on. After about an hour I lost the battle with my stomach and was convulsed with nausea. What I'd worked so hard to get down, came up quickly. When my stomach began to stabilize, I was able to close my eyes, enjoy the beautiful warm Texas evening and experience a sense of closeness to an ancient Indian culture that I could never really begin to know.

The next morning I packed my remaining plants into a sack and headed back to California. I guess I figured I'd eat the rest of my plants

on some future occasion, but I never did. Maybe it was because I'd gone through so much to get them, maybe it was because they were somehow a special link to those ancient Indians, or maybe it was because I'd puked my guts out the first time I'd eaten them. Whatever the reason, I stuck them in a couple of clay pots and forgot about them. Miraculously, they survived the neglect, and bloomed faithfully every year.

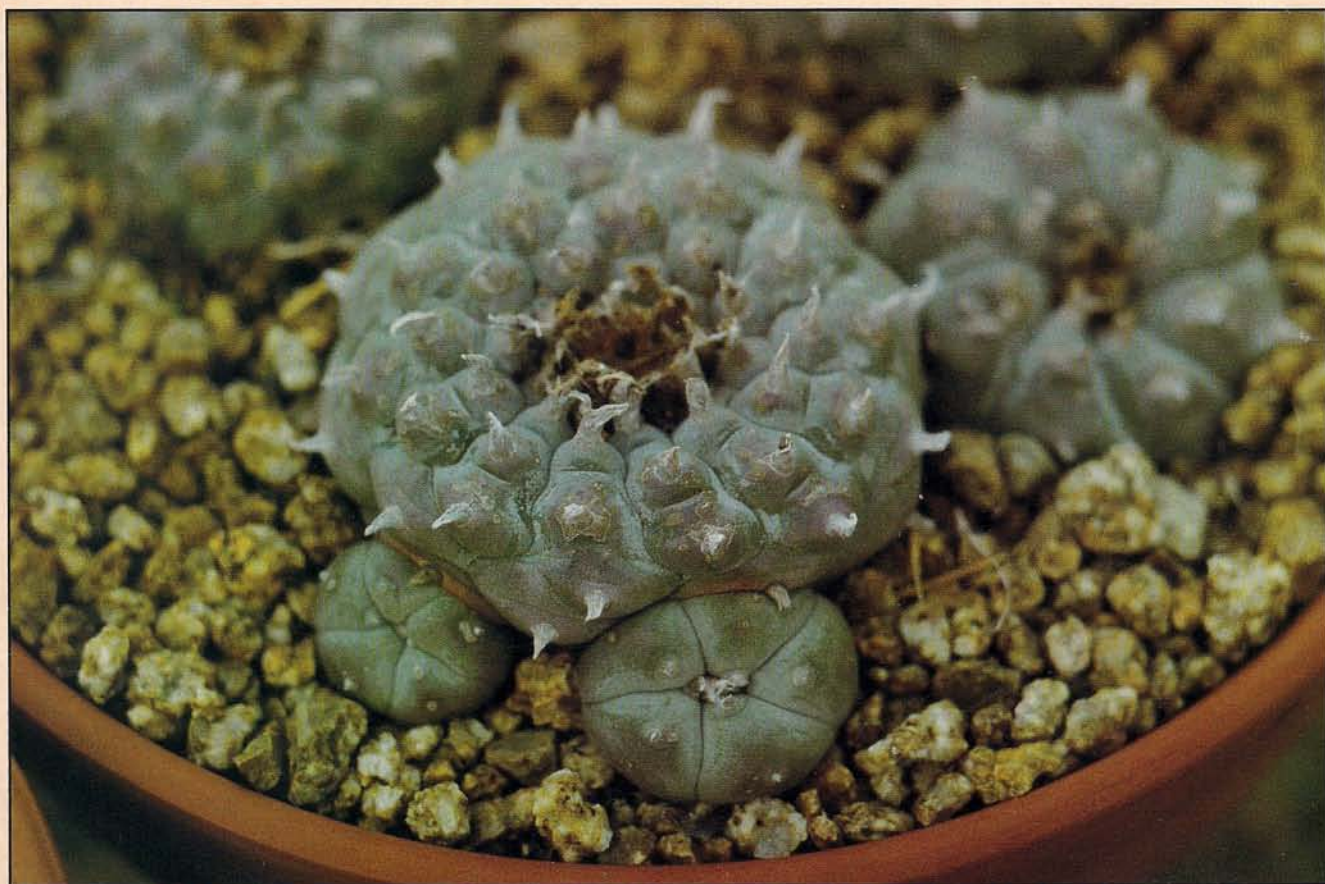
In 1980 I renewed my interest in plants after meeting a woman who was into cactus. Unfortunately the interest outlived the romance, but my peyote found themselves the main attractions of a large greenhouse I'd built in the backyard. I was anxious to add more cactus to my budding collection, so I headed back to Texas, through Arizona and New Mexico. I collected enough cactus to nearly fill my greenhouse, but during a week in Texas I couldn't find a single peyote.

Disappointed, I returned to California and began to do some research on the endangered plants. Peyote used to be relatively common

across Southern Texas, but, over the past decade, collectors, dopers, Indians, and narcs have nearly exterminated the plant on both sides of the border. Even the Indians of Mexico, whose culture is inextricably tied to the peyote ceremony, have had to start buying their plants because peyote can no longer be found at traditional gathering sites.

I decided to begin a serious effort to raise peyote from seeds off my original Texas plants. My success in growing this endangered cactus might prove the key to its survival during this period of antidrug repression.

I was lucky. I had mature, seed producing plants to work with. The most difficult part of growing peyote turns out to be getting vital seed. Packets of seed can be purchased from cactus specialists in Europe. The British seed firm Thompson and Morgan offers ten seeds of *Lophophora williamsii* (peyote's formal name) for \$3.95 in its 1987 catalog. If you have access to a plant, seed collecting is easy. Peyote



A peyote which has produced two offsets. An old clump in the wild might have 20 heads or more. Offsets can be detached with a sharp knife and potted up.

produces mature fruit nine months to a year after flowering. The cylindrical fruits are 1/16th of an inch long and contain about six seeds. The fruit dries and shrivels up, leaving the seeds inside the wooly topknot. They can be plucked out using a pair of tweezers.

The seeds germinate readily, but unless you know what you're doing, they won't survive two weeks. To propagate, get a small clear plastic tray with a top. The trays that strawberries are sold in are ideal because they are transparent and have holes for air circulation and drainage. Fill the trays with an inch of damp vermiculite. This material is good because it stays damp and removes the hazard of having to water the extremely fragile seedlings.

Sprinkle the tiny black seeds evenly across the surface of the vermiculite. Don't try to cover them. If your seeds get buried they won't be able to push themselves to the surface. You can easily push the roots into the vermiculite with a

toothpick, once the seeds have germinated.

I've had over a 90% success rate using this simple germinating tray, a remarkably high rate for such an exotic and rare cactus.

Once your seeds are on the damp vermiculite, cover the tray with its protective cap and leave it in a warm, bright spot, out of any direct sunlight. Maintain a temperature of between 70 and 90 degrees F. Within two weeks you will see the seeds beginning to germinate. Be careful when you take the lid off to check your plants. Even the slightest jarring can bury them.

Peyote, like many forms of rare cactus, is painfully slow-growing. A mature, baseball sized plant can be thirty years old. You can double or triple the expected growth rate of wild plants through careful cultivation. Remember though, a tripled growth rate is still a slow growth rate. Growing peyote requires patience. If you want fast growth and a quickly available high you better stick to raising pot.

To improve the growth rate you need to understand how *Lophophora* grows in the wild. Peyote is an extremely succulent cactus. It thrives in areas of hot, rainy summers and cool, dry winters. It does not like direct sun, preferring the broken shade under the shelter of a shrub. It won't thrive in an acid or neutral based soil. It is often found growing in nearly pure limestone soil. Peyote does not like cold weather; however, my plants have survived 30 degrees F with overhead protection and dry potting soil. Cactus can survive colder temperatures as long as they are kept very dry. My plants have also endured temperatures of 120 degrees F in my cactus house, benefitting from frequent watering and shade cloth. Ideally you'll provide your plants with a temperature range of 45 degrees to 100 degrees F. Try to match the weather patterns of peyote's native Chihuahuan Desert. Hot and damp in the summer and cool and dry in the winter. One British cactus



A flowering crested peyote. Crests occur when a plant's growth tip begins to spread laterally instead of upward. It is a growth abnormality fairly common in some species of cactus.

collector would only water her plants after her Mexican friend would call her and tell her it was raining in the desert.

Three months after germination your plants will start to develop wooly topknots and begin to resemble mature peyote. After a year they will be the size of a raisin. You will be able to see a pattern of small irregular "ribs" appear along the sides of the plant. These ribs are an extremely interesting feature of many succulent species. They allow the plant to expand and contract with the availability of water. As your plants get older pay attention to these ribs when watering. If the ribs are fully expanded don't water unless you want to split the plant open like an over ripe melon.

Year-old seedlings are ready to move out of the germination tray. This task is best done in late spring, when new growth is obvious. Use a larger version of the germination tray if possible. Mix coarse builders' sand with a pinch of garden lime and a small amount of good potting

soil. Increase or decrease the ratio of sand to potting soil, depending on how humid your climate is. Don't use dirt. It isn't sterile and can cause disease and fungal infection which can kill your plants.

Peyote has a long turnip-like tap root, so be very careful when lifting your seedlings out of the vermiculite. Punch a small hole in the sandy mix using a large nail, then gently lower the small plants into the hole. If particles of vermiculite are attached to the rootlets, leave them on. If you try to brush them off you will damage the roots. Firm the sand around the tap root, using care not to set the neck of the plant deeper than it was growing in the vermiculite. Space the plants evenly about a half-inch apart. They'll remain this way for the next two years. (I warned you: peyote cultivation is an act of patience.)

Once you've potted your plants into the larger tray, dust a slow release fungicide over the surface. The high humidity of the tray can cause fungus dampoff, if you aren't

careful. Water from below by placing the tray in a shallow pan of water and letting the water rise to the surface.

By the fourth year, the peyote can be potted into two-inch individual containers, using the same sandy soil mix. When repotting, attempt to lift the plants without disturbing the soil around the tap root. By the fifth year, your walnut-sized peyote will begin to flower and set seed.

This process may seem painfully slow, but it is fully twice to three times the growth rate of seedlings in the wild. After all this effort, I doubt you'll want to eat your plants. Besides, a five year old plant can bring as much as \$100 from a cactus collector.

I am convinced that if this mythical and potentially valuable medical plant is to survive, it will be with the help of conservationists. I'm planning on returning to Texas and planting some seedlings near the place where I found their parents 25 years ago. ●