

Plant Hunting in Mexico

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INTRODUCTION

I am blessed that my first sojourns into the mountains and deserts of northern Mexico in the 1980s and 1990s were led by Lynn Lowrey (1917-1997). Lynn was a special person, a big part of the colorful history of Texas horticulturists who made a difference in the state



<http://plantanswers.tamu.edu/heroes/lowrey.html>). During his career, he owned or worked at nine nurseries, and those who knew him well would quickly agree that Lynn would rather give away plants, seeds and cuttings than sell them. Many of his plants carried labels with the word “VIP” scribbled somewhere on the tag. This was Lynn’s way of letting you know that he thought this was a very important plant that should be given attention. There were plenty of those.



Lynn made many trips into Mexico in the 1960s and 1970s, usually alone or with a friend, and always hunting seed, cuttings and plants for trial in Texas.

Lynn started taking groups over in the 1980s and 90s, and I felt that as he approached his golden years he wanted to



share what he knew and where he was going. Rules for bringing plants in from Mexico were simpler back then. The normal agenda was to stop at a convenient cantina near the border, have a great lunch, and find a few kids nearby to clean seed and wash plant roots free of soil. USDA APHIS agents at the border were sometimes cheerful and accommodating, sometimes less so. Armed with his USDA plant import permit and knowledge of what could and could not be imported, Lynn became quite a familiar figure at the border. When problems occurred, Lynn would linger along the border for a few days visiting the USDA office often to check on the progress of inspection and encourage the release of some, if not all, of his cache. Usually it worked; sometimes it didn't.

Lynn's trips were morning to dark. Strange plants encountered in the mountains or deserts meant a stroll through his worn volume of P.C. Standley (Standley, 1920). With 1720 pages in the 1982 reprint, this was not a pocket reference. At the start of each trip, the team studied the proposed itinerary. Most of the time, things worked out well. However, the juncture of two mountain roads not on the map often led to intense discussions and another round of map interpretation by the group. Mistakes were made, dead ends encountered, and lodging for the night was often a good looking spot for a camp. Things are much the same today.

MEXICO EXPEDITION – JUNE 11 – 25, 2006

In early 2006, I was invited to participate in a two-week expedition to Mexico by George Hull of Mountain States Nursery, Phoenix, Arizona. The focus of the trip was mainly Agaves and other desert lilies, with several members on an intense succulent hunt, with particular emphasis



on *Escheverias*, *Crassulas*, and other euphorbs of importance. While most of my interest resides in the tree and shrub world, I found it inspiring to travel with folks obsessed by plants less than the size of a salad plate. A brief summary of the route of this grueling 2500-mile expedition is as follows. We crossed the border at Douglas, Arizona, and drove southeast to Las Varas, through Chihuahua, Delicias, Jimines, Gomez Palachio, Saltillo, Galeana, Linares, Matehuala, Queretaro, and then west to Fresnillo, and northwest to Durango, Hidalgo, and Hermosillo to reenter the USA at Nogales, Arizona. Along the way, the team made side trips into the nearby deserts and mountains looking for the likely habitat of a wide range of target plants. For readers interested in a longer and more complete travelogue, contact the author.

THE TEAM

George Hull, formerly of Mountain States Nursery, Phoenix, Arizona and continuing as an adjunct professor at Glendale Community College and the School of Landscape Architecture at Arizona State University. Popular on the lecture circuit, George brought a sense of humor and a laissez-faire attitude to the group. When things looked bleak, George always managed to assure us that things would either work out in the end, or it could get worse.

Brian Kemble, Horticulturist at the Ruth Bancroft Gardens, Walnut Creek, California, with many years of experience in the wonderful world of desert plants. Of the group, Brian was the quickest to reach the mountain top, first to find a sought-after plant, and incessantly passionate about the world of desert and dry mountain plants. (<http://www.ruthbancroftgarden.org/>).

Rob Nixon, environmental assessment professional from California, and a snake, spider and desert plant enthusiast. Rob was eager to bring spiders and snakes he had caught into our midst for what he thought was a good show and tell opportunity. Most of the team thought it was a poor idea.

Sam Joel-Schafer, a biochemistry graduate and a Spanish-proficient rebel with a cause, cheerfully struggling for a career in juggling, a hand stands in the middle of a highway guy, and at last account doing quite well as a professional gypsy in South America. Sam was probably the most complete and self-satisfied member of our troop.

Sean Hogan, owner of Cistus Nursery, Portland, Oregon, author, lecturer, a walking encyclopedia on anything that has something to do with an obscure plant, and introducer of new plants and new ideas in the Pacific Northwest. While his mastery of puns was punishing, Sean did bring a needed touch of sensitivity, culture and civility to our group (www.cistus.com).

Greg Starr, owner of Starr Nursery, Tuscon, Arizona, is a fine botanist, teacher, and nurseryman of immense reputation and insight. Greg wrote the description of *Agave ovatifolia*, the rare whale's tongue Agave found by Lynn Lowrey growing between 3000' and 7000' elevation in Nuevo Leon, Mexico (Starr, 2004). Greg's nursery is a small but intense backyard mail order nursery. With a desert lily focus, this is dangerous work and best attacked by using rolled up newspapers, welder's gloves, and a whole lot of pain management (www.Starr-Nursery.com).

Janet Creech, my adventure-friendly, cookie-making wife, wanted to go on the trip right from the start. While I was a bit skeptical at first, I finally relinquished provided she promise to always be cheerful, no matter what, and for the most part, that is exactly what happened. As the only lady in an otherwise unkempt and untidy group, she found the whole experience exciting, but probably not worth repeating (www.swifthill.com).

8) **David Creech**, Regents Professor of Horticulture and Director of SFA Gardens, Stephen F. Austin State University, Nacogdoches, Texas, and still eager to learn from anyone willing to educate, entertain and enlighten (<http://arboretum.sfasu.edu>).

AGAVES ENCOUNTERED ON THIS EXPEDITION (alphabetical order)

Agave bovicornuta – cow horn agave – found west of Yatecuh on Hwy 16, this lime green species to 3’ or more in diameter was the only sign of green in a brown June-dormant tree and scrub landscape, and, yes, the distinctive spines do look like cowhorns. Reported to be marginally hardy but this species has not survived at SFA.



A. celsii – features a 2' wide and tall rosette with thick fleshy light green leaves and was an understory plant and prefers shade although it can tolerate more sun at high elevations and cooler temperatures. This species has been hardy at SFA.



A. flexaspina – hardy century plant - showy colonies found just a bit south of Villa pos Nieves (26° 23.353N, 105° 21.397W, 5590'); this species is diminutive, rarely reaching 18" tall and wide, and features very few fleshy bluish-green leaves as the rosette.

A. lechuguilla – Lechuguilla - was everywhere during our trip and known to be very cold hardy. This short statured, multi-blade and spiny species is known to hybridize with nearby Agaves.



A. lophantha – thorn crested agave – found near Pachuka this 2’ tall and wide Agave has proven to be remarkably hardy in Texas gardens. Each leaf sports a light green stripe running the length of the blade.

A. macroacantha – black-spined agave – while near Metztitlan in a protected preserve, we encountered this Agave which is more commonly found in Oaxaca much further south. A clump-form species, the individual rosettes are 16” wide and quite beautiful.

A. montana – Mountain agave - found in bloom near Monterreal at an elevation of 7984’ this hardy agave features tight rosettes of stiff leaves, to 6’ tall and 9’ wide. The species was on a mountain slope harboring beautiful old specimens of *Arbutus xalapensis*, the madrone tree, one of the most beautiful trees in the mountains of Mexico.



A. parryi – Parry’s agave – this bizarre globular artichoke-looking desert lily was found dotting the hillsides in informal singles and colonies. (29° 21.672N; 106° 28.825 W at 5218’ elevation) Parry’s Agave is a clump-forming species. While there, one of our team noticed that the colony we were photographing seemed to be the exact same spot that



Gentry photographed in 1971 (Gentry, 1982)! Considered very hardy (-20°C), Parry's Agave is modest in size (to 2.5' wide and tall).

A. parryi X *A. durangensis* – a striking colony was found after passing through Bienvendios to San Martin and taking the trail to Mina Sabina. This hybrid was found at 9500' near a cell tower.

A. parryi var. *truncata* – Mescal agave – with a short but obvious trunk this species is similar in form and appearance to Parry's agave.



A. polianthiflora – mescalito - diminutive (1' wide) and scattered on dry rocky slopes near the village of Huajamar on the road to Ocampo; excellent container plant with modest hardiness.



Agave potrerana – this rare Agave was found in bloom near Las Varas on the very first day of the expedition and was perhaps the highlight of the trip. Near Ricardo Flores Migon, we took the toll road to the south, traveled about 12 kms, took an exit to the frontage road, then crossed under the highway, and drove a few minutes north on the frontage road looking for a trail into the mountains.

After a couple of false starts, we found the road we wanted and made our way into the canyon. After an hour of negotiating a

terrible road, and many stops for binocular and scope time, the target was found. On the other side of the narrow canyon and at the top of a rocky slope, an amazing specimen was spotted in full bloom high up on a cliff. After a precarious climb



(precarious to me), we reached the Agave. With a bold sessile red-yellow-orange sessile inflorescence on a 12' stalk, the image struck all of us that this was indeed a fiery dragon leaning out and commanding her craggy domain. The species is found in Coahuila and Chihuahua usually in the 5000' to 8000' range, and is reported hardy into the low-mid twenties. We took many photos, congratulated ourselves for catching such a fine specimen at its peak and then headed down to make camp – all of us convinced that this was a great start for a great trip!

Agave protoamericana – Century plant – found in good numbers north of Galeana, both in the mountains and as fences in the villages. The wide, blue leaf rosettes form large upright clumps to 5' tall x 8' wide and are considered very hardy. They grow fast and offset quickly in Nacogdoches, Texas.



A. salmiana – Pulque agave – giant specimens encountered near Monterreal to 6' tall and 12' wide; this species is the common distilled product of choice in the mountains of the central plateau and should not be consumed without supervision.



A. scabra – common, tough, and hardy – found in many locations from cliff-side habitats to open deserts and performing well in the SFA Mast Arboretum.



A. schidigera – Maguey – to two feet tall and wide with many leaves, this attractive Agave was encountered on a mountain side near Mina Mercurio; I found a variegated form high on a ledge that became the object of much praise. Often confused with *A. multifilifera*.



A. stricta – Hedgehog agave – found in several desert and dry hill locations with a 30-inch rosette of numerous hard, narrow leaves with a pronounced terminal spike, similar to *A. striata* but appeared more symmetrical. In a sea of green Hedgehogs, a few red foliated forms were found.



A. striata - Narrow-leaf Agave, Striated Agave – another common very hardy small agave to 3' tall and wide found in northeast Mexico featuring many stiff spiny-tipped leaves that form a round rosette.



A. victorae-reginae ‘Ferdinand form’ – common in the trade, hardy, and quite variable in Mexico from open to tight forms and variation in color and size; at one location we discovered a unique black-tipped form, with the black color bleeding down into the leaf blade.



A. wocomahi – Wocomahi agave – after leaving Hermosillo, we found amazing specimens right before the village of Tomochi.



A. xylonacantha – saw leaf agave – found north of Galeana, we encountered many solitary specimens and a few colonies of this species. Rosettes are open and free and produce fewer leaves than other agaves. The margins of the leaves have broad, flat, papery irregularly spaced spines, reminiscent of a saw blade.



OTHER SPECIES OF MERIT ENCOUNTERED

Aphopelma mooreae - the rare copperheaded tarantula – While not a plant, this was an amazing encounter, first spotted by Rob Nixon in the middle of a high mountain road in the San Madre Occidental mountain range. Smaller-than-a-salad plate with a cobalt-blue body and a



copper colored tail, this spider is not yet in arachnoculture, an arena I didn't even know existed.

To calm the spider, Rob placed his hat over the spider for about a minute, and then quietly edged his hand until it was next to the beast. With a little nudging, the tarantula climbed aboard his hand and had no problem traversing Rob's shoulders, neck and head. By this time, the rest of the team was in the trucks and ready to depart. Rob informed us that there were Germans and Chinese willing to pay thousands of dollars for just one spider like this, even buy the eggs, and, yes, they ship well. The spider was released and a GPS location taken.

Arbutus xalapensis – Texas madrone – encountered at high elevations and always beautiful with exfoliating chocolate and white bark is the striking feature. While hardy, the tree is difficult in humid, wet winter regions of the USA and has failed many times at the SFA Mast Arboretum.



Buddleia marrubifolia (Woolly Butterfly Bush) – found in the San Madre Oriental mountain range at various locations and the plant features white-grayish leaves and a small, somewhat insignificant yellow-orange bloom. In several locations, we also encountered a *Buddleia* (*B. paniculata*-like) species that featured striking black branches and gray-green leaves.

Dasylyrion berlandieri – sotol - in the mountains near Torreon we found striking specimens dotting the roadsides. This species forms a weeping presence with large specimens featuring many leaves that arch strongly and then weep to the ground.

D. quadrangulatum - Mexican grass tree, or Toothless stool - was encountered on the road to Pachuka and this trunk-forming Sotol appeared as giants alone on a white, barren limestone hillside. Hardy forms are reported to come from high mountain stands.



Echinocereus stramineus - Straw-Colored Hedgehog cactus – a large colony in full bloom was encountered near Saltillo. This spiny low-growing cactus sports bright pink flowers.



Escheveria species – a major focus of two of our team members and several rare species were found at previously reported locations and additional finds made, including several *Crassula* and *Peperomia* species.

Ferocactus pilosus var. pringlei -

Mexican Fire Barrel Cactus – found in several mountain side locations in the San Madre Oriental range. Large specimens in bloom are breath taking and strongly protected by Mexico’s conservation agencies.



Leucophyllum species – Cenizo - on the road to Galeana we encountered a single plant in full bloom, a carpet of lavender flowers, with the few adjacent plants showing no bloom at all. *Leucophyllum* is common throughout much of northern Mexico and high mountain forms often feature whiter, more pubescent growing tips and young leaves. Cenizo performs well in the SFA Mast Arboretum but needs full sun and excellent drainage, and is more commonly used as a landscape plant further west into the state.



Mahonia trifoliata - agarita – this silver spiny-leaved evergreen features sweet red fruit which make a great jelly and sports bright yellow flowers in the winter. The species has performed well in the SFA Mast Arboretum. Native to Texas and Mexico, this species has been in the SFA Mast Arboretum for more than 20 years without irrigation on a hot southern face of the art building. Bright yellow flowers in the winter contrast with bluish-silver foliage. Images are of roadside plants near Galeana, Mexico. Mmmm, good.



Opuntia robusta – giant prickly pear cactus
– dinner plate sized blue pads with bright
showy edible fruit. At one location we
encountered an *Opuntia* with green pads
dotted with orange-red spikes that were
striking (WGS84 25o 20.322N, 102o
05.934W)



Pachycereus pringlei – Elephant cactus -
caught near Metztitlan against a foreboding
cliff as a backdrop. Reported to be
sensitive to hard frosts, these 150-year old
specimens seem to be enjoying a gravity-
defying stand amongst the rocks.



Quercus polymorpha – Monterrey oak was found in the mountains near Galeana and huge trees dotted the lower slopes and ravines of canyons. This species had done well in Nacogdoches, Texas, as has *Q. risophylla*, loquat leaf oak, *Q. canbyi*, Canby oak, *Q. grisea*, gray oak, and a host of “unknown” oaks from Mexico.

Salvias, Penstemons - and other herbaceous perennials – numerous showy species dot the roadsides, hills and valleys of the mountains. *Salvia patens* and *S. regla* were in full bloom in several locations. A colony of *Penstemons* in bloom in the high mountains always



stopped the caravan. Numerous members of Asteraceae were in bloom. Janet used Mason and Mason’s Handbook of Mexican Roadside Flora to make quick identification easier (Mason and Mason, 1987).

Taxodium distichum var. mexicanum – Montezuma cypress – encountered in several river-side locations including below the dam at Pres San Frisco Zunca in the state of Durango (25° 16.646 N, 103° 45.598W, 3925’ elevation) and a wonderful army of large trees along the



river in Durango (image). Montezuma cypress is more salt and alkalinity tolerant than the baldcypress of the southern USA. It forms a broader often-irregular form, does not form knees and has performed well in the SFA Mast Arboretum.

Tecoma angustifolia – golden bells – A tree form in full bloom was found at a park in El Raycho. George Hull has had much success in improving the species through hybridization of superior parents.

Yucca filifera – St. Peter's Palm or tree yucca - the oldest specimens are a sight to behold in a desert landscape backlit with a setting sun.



Yucca faxoniana – Eve's needle – features lime-green, bayonet-like, 2' long x 2" wide, pea-green leaves and forms a thick trunk specimen to 15' tall. Hardy to -20°C. On road from Torreon to Saltillo, took a rocky road to the east into the mountains. We encountered many giant specimens of *Y. filifera* and *Y. faxoniana*. (WGS84 25° 20.322N, 102° 05.934W)

Y. linearifolium – confused taxonomically, but specimens found on a mountain road north of Galeana featured many leaves to make a symmetrical head on a short trunk. Just now entering the nursery trade, this species should be hardy into zone 7.



MEXICO PLANTS PERFORMING WELL IN THE SFA MAST ARBORETUM.

The following are species that can trace their heritage back to Mexico and have performed well in the SFA Mast Arboretum for years.

Acer skutchii – Mexico's mountain sugar maple is now a 40' specimen at the SFA Mast Arboretum and features flaming red/orange/yellow foliage in the fall and white smooth bark. We are distributing seedlings of this tree throughout the south.

Clethra pringlei – Mexico's summersweet – has been surprisingly hardy in the SFA Mast Arboretum for years and acts almost fully evergreen with a heavy bloom show that attracts a host of bees, flies, and butterflies.

Cornus florida var. *pringlei* – Mexico's mountain dogwood features lantern-shaped blooms, and has yet to make seed in the SFA Mast Arboretum

Ilex decidua – deciduous holly – a form derived from seed of a San Madre Oriental mountain range provenance that is almost fully evergreen in the Mast Arboretum.

Myrospermum sousanum – Arroyo sweetwood – discovered first by Lynn near Bustamente over thirty years ago and was in commerce in Texas before it was actually botanically described. A small tree form legume with white flowers.

CONCLUSIONS

The mountains and deserts of northern Mexico are packed with magic vistas, habitats, plants and people. There are a few simple rules for plant hunting in Mexico. Have the passport, visa and a birth certificate within easy reach. Traveling as a group is usually better than alone. Three or four vehicles are great insurance if there's a breakdown. Walkie-talkies are a smart idea. It's helpful if someone speaks Spanish. Be prepared for challenges to the stomach and carry bottled water and food. Be polite and respectful to the citizens encountered and expect fine hospitality

to be the norm. Camping out in the mountains is often the rule and few report problems. For botanists and horticulturists wishing to import plant materials, a permit is required. It's important to understand the rules and what is permitted and what's not. Seed are much easier than plants with roots. In fact, USDA APHIS has a recently instituted "Small Lots of Seeds" rule that has greatly increased the opportunity for successful seed importation into the USA. A web search for the 12-packet, 50-seed rule will yield directions on this new program.

It has taken me a long time to warm to the charm of desert plants with needle tips and horrible spines. However, I've come to accept desert lilies as a whole new order of landscaping in the southern and eastern portions of the USA. Keys to success include picking the right plants, providing excellent drainage and the right kind of exposure. As communities become more and more water-conscious, woody lilies and other dry-loving desert species may generate a whole new audience of enthusiasts. Across the south, landscapers can count on never having to water. Most important, it is our experience that many desert lilies are remarkably tolerant of Glyphosate, but only as long as the spray is directed well away from the center of the rosette. Agave snout weevil is a growing pest problem in the southwestern USA and can be controlled by an annual application of several systemic insecticides. As I tell my students, there really is a point to Agaves in the landscape.

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