



Oak News & Notes

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Quercus muehlenbergii at Frijoles Ranch in Guadalupe Mountains National Park. © Ryan Russell

Michael Meléndrez's Oak Open Days in New Mexico

by Ryan Russell

The Oak Open Days in New Mexico were a six-day whirlwind tour of the state covering more than 1,400 miles. Led by IOS founding member Michael Meléndrez of Los Lunas, NM, attendees were wowed by a dozen species of oaks plus numerous non-oak species.

The first day started with a drive to the east side of the Gila National Forest, a mountain range called the Black Range – in particular the Aldo Leopold Wilderness. We made a quick stop to see Arizona sycamore (*Platanus wrightii*) and gray oak (*Quercus grisea*) on the way. From the ghost mining town of Kingston, we picked up the Percha Creek Canyon where we saw species such as *Q. grisea*, large single-trunk Gambel oaks (*Q. gambelii*), *Q. emoryi*, and monstrous *Q. hypoleucoides*. Other notable species included *Alnus oblongifolia*, *Juniperus deppeana*, and *Juglans major*.

The second day began with a drive further into the Gila to see *Q. rugosa*. We stopped at a scenic lookout and were flanked by shrubby, multi-stemmed *Q. gambelii*. Large Douglas fir (*Pseudotsuga menziesii*) and *Pinus strobiformis* dotted the slopes as we climbed higher in altitude (to 8,100 feet). Leaving the Gila, we headed towards Las Cruces and the Organ Mountain Range. We stopped south of Hillsboro to look at three large Emory oaks growing in a dry streambed called an arroyo. That afternoon, we drove to the Tetons of the Southwest, the Organ Mountains, jutting 5,000 feet into the sky. From the Dripping Springs Visitor Center, we hiked the mile-and-a-half trail (climbing 700 feet) to see *Q. arizonica* and the unusual hybrid *Q. ×organensis* (*Q. arizonica* × *grisea*). Many other species were found here as well such as *Ungnadia speciosa*, *Opuntia engelmannii*, and *Fallugia paradoxa*.



The group under a Texas madrone (*Arbutus xalapensis*). © Ryan Russell

Day three began with a drive to the eastern slope of the Organs. We stopped at the San Augustin pass to see *Q. turbinella*. The hillside was covered with this species, none more than 6 feet tall. We then made a short drive to Aguirre Springs on the east side of the Organs to look at a larger *Q. arizonica* than we had seen on the western side of the range. Then we headed off to Carlsbad Caverns, a 200-mile drive to the east. Along the road to the caverns, we briefly stopped to look at *Sophora secundiflora* and *Quercus mohriana*.

Day four began with a drive to McKittrick Canyon just across the Texas border. This proved to be a highlight of the trip as we were able to see several oak species we had not yet seen. We saw *Q. vaseyana*, *Q. pungens*, *Q. muehlenbergii*, and *Q. mohriana*. Beautiful Texas madrone (*Arbutus xalapensis*) also grows here on the high pH soils. We also saw *Rhus lanceolata*, *Juniperus ashei*, and *Acer grandidentatum*. We then drove to the Frijoles Ranch, an old settlement now owned by the National Parks system, to see huge specimens of chinkapin oak (*Q. muehlenbergii*). Sitting Bull Falls was our final destination of the day. This secluded area features a 150-foot waterfall with a beautiful pool below. Interesting species found here were sandpaper oak (*Q. pungens*), Apache plume (*Fallugia paradoxa*) and little walnut (*Juglans microcarpa*). We stayed the night in Roswell, a city well known for [Area 51](#) and numerous UFO sighting claims.

Day five began with a quick visit to the New Mexico Military Institute to see *Q. fusiformis* and *Q. buckleyi*. From Roswell, we headed to Lincoln, NM, home of the Lincoln County War and the legend of Billy the Kid. We made a quick stop to look at some unusual hybrid oaks just outside of Lincoln. Lacking better description, these "*Q. ×undulata*" are abnormally tall (45 feet tall), with substantial trunks. We spent a few hours touring Lincoln and learning about Billy the Kid and the cast of characters that played a role in the Lincoln County War. Michael made a phone call to local rancher James Sánchez to gain permission to see oaks on his property. His small group of trees has been called Fendler oaks (*Q. ×fendleri*). These trees have the size of the hybrids we had seen down the road, but bark and leaf characteristics were definitely different. Leaving Lincoln, we headed northeast to the

Capitan Mountain Range. Along the way we began to see *Q. oblongifolia* alongside the road. Naturally we had to stop to take photos and admire acorns. We continued on to the Capitans to see some large chinkapin oaks. Along with the chinkapins, we saw more Mexican blue oak (*Q. oblongifolia*) and Gambel oaks. We also found putative hybrids of *Q. gambelii* × *muehlenbergii* and *Q. oblongifolia* × *gambelii*. With daylight fading, we headed to our evening destination of Ruidoso.

Day six began with a drive up the Sierra Blanca Mountain Range, climbing to an elevation of over 10,000 feet. Taking a long hike higher up the mountain, we saw an entirely different set of plant species such as *Pinus albicaulis*, *Picea engelmannii*, *Abies lasiocarpa* var. *arizonica*, and *Acer glabrum*. A devastating fire had taken acres of mature forest, most trees standing charred and dead. Our final destination of the day waited 2 hours north, so we ate a snack in our cars and headed out. Gran Quivira is part of the Salinas Pueblo Missions National Monument. It features ruins that include the remains of structures built centuries ago by ancestors of the Pueblo peoples, as well as what is left of mission churches built by Franciscan missionaries in the 17th century. Here we found *Juniperus monogyna*, *Pinus edulis*, and an unknown (to me) species of *Cylindropuntia*.

The trip concluded on day seven with a drive from Los Lunas to the Manzano Mountain Range. The Manzanos (meaning apple trees) get their name from the apple orchards that early Spanish settlers planted. We saw three large remnant apple trees alongside the road. The fruit was not too large, but very tasty. The big-tooth maples (*Acer grandidentatum*) at the foothills of



Quercus mohriana, McKittrick Canyon. © Ryan Russell

the mountain were showing beautiful red, orange, and yellow fall color. We saw several large single-stem *Q. gambelii*, large Douglas fir, and *Juniperus scopulorum*. On the way back to Los Lunas, I had to stop to look at the hybrid oaks along the road. Most had a definite *Q. gambelii* influence, but the other potential parent is unclear. Each individual was a bit different in terms of size and shape of the leaves.

These Oak Open Days far exceeded my expectations and my expectations were pretty high. Michael is an excellent tour guide and knows his state far better than I know mine! We would have never found half of these trees on our own. I'd like to thank Michael and Kari Meléndrez and Anna Forster for taking time out of their busy schedule to organize and execute this tour. 🌲🌲🌲

The Hills Are Alive with Oaks

by Rebecca Dellinger-Johnston

Copenhagen Hills Preserve is an ecological gem. With its unique calcium-rich soils, it hosts a plethora of plant communities, ranging from pine forests and prairies to bottomlands and swamps. This cornucopia of habitats is home to many rare and indigenous plants, such as purple cone flower (*Echinacea purpurea*), three-flowered hawthorn (*Crataegus triflora*), and, of course, a variety of uncommon oaks species.

My journey to Copenhagen began as a trip to sample both delta post oak (*Quercus similis*) and Durand oak (*Q. sinuata*). To find these beauties, I enlisted the help of Dr. Lowell Urbatsch of Louisiana State University. Together we began a three-hour trip from Baton Rouge to Caldwell Parish in northern Louisiana. The preserve itself encompasses the Copenhagen Prairie and Ouachita Hills in the north and the Bayou Dan bottoms in the south. The area stretches over 1,000 acres that are owned and maintained by The Nature Conservancy. The property contains a high level of biodiversity and is home to at least 26 rare species. As many as 12 of these species have not been recorded anywhere else in the state. The various habitats of the preserve are diverse as well, including ridgetops, prairies, bottomlands, and swamps near the Ouachita River.

We began our journey driving to the northern portion of the preserve to an area called L's Prairie, just west of the Ouachita River. The path, known as the IP Track, took us through roughly a mile of mixed pine and hardwood forest running alongside an open area of prairie and shrub. Along the road, campers and trailers reminded us that we were to tread cautiously through the forest where local hunters had been looking for wild turkeys earlier that morning. As such, we had access to the preserve from only 10 a.m. till 3 p.m.

The first leg of our hike began through prairie grassland mixed with a tangle of American beautyberry (*Callicapra americana*). The appropriately named elegant blazing star (*Liatris elegans*) stood out amongst the grasses in a delicate spike of lavender. Other fall wildflowers, such as partridge pea (*Chamaecrista fasciculata*), false foxglove (*Agalinis* sp.), and many species of goldenrod (*Solidago* sp.) dotted the pathway, with colorful butterflies flitting in between. It was quite difficult not to stop and survey the surrounding beauty of the prairie, especially when accompanied by Lowell, an expert on *Solidago*.

Eventually the prairie gave way to stands of shortleaf (*Pinus echinata*) and loblolly pine (*P. taeda*) mixed with blackjack oak (*Q. marilandica*). Although this is a common species throughout Louisiana, we stopped for a few photos of a nearby tree brimming with acorns. Soon the woods transitioned into a mixed hardwood of hickory, maple, dogwood, ash, and additional oak species. Along the way, we spotted southern red oak (*Q. falcata*), post oak (*Q. stellata*), Shumard oak (*Q. shumardii*), and white oak (*Q. alba*). Swamp chestnut oak (*Q. michauxii*) and cherrybark oak (*Q. pagoda*) are also known to occur on the preserve, although we didn't catch a glimpse of any around.



Quercus similis in Copenhagen Hills Preserve.

© Rebecca Dellinger-Johnston

Continuing on, the path began to slope downhill where eroding soil uncovered seashells – remnants of an ancient sea bed. These marine relics provide the preserve with rich calcium, creating the unique calcareous forest and calcareous prairie habitats for which Copenhagen Hills is well known. For this reason, the preserve has also served as an important site for geologists and paleontologists studying the geological history of Louisiana. Digs have uncovered shells, shark teeth, and fossilized corals from the Upper Eocene. Scientists at the University of Louisiana have even unearthed ancient whale bones that are estimated to be between 36 and 40 million years old.

As we continued our trek downhill, we hit a hard bend in the path. There, standing like a noble guidepost, was a young Durand oak (*Q. sinuata*) – my first prize. Although there were no acorns to be seen, a few low hanging branches provided me a good look at this oak's puzzling leaves. This species is often misidentified as a hybrid due to the appearance of its leaves, which are sporadically lobed – or often unlobed. Beside the tree, a small footpath led to a more mature Durand oak, stretching high into the canopy. After a half-hour's struggle, we managed to snip off one branch to find most of its leaves, sadly, riddled with holes.



Quercus sinuata in Copenhagen Hills Preserve. © Rebecca Dellinger-Johnston

Undeterred, we ventured further down the track into yet another ecosystem, a bottomland forest. Although the forest was dry, cypress (*Taxodium distichum*) knees peeking out between grassy patches reminded us that this forest floor had been covered in water earlier that spring. Towering above our heads stood my second prize, a much-anticipated delta post oak (*Q. similis*). Moss and lichen clambered up the sides of its scaly bark giving it a shaggy, ancient appearance. Around us, we noticed there were other oaks well at home in the bottomlands. In the distance, my binoculars found what appeared to be a laurel oak (*Q. laurifolia*), although the preserve is also home to willow oak (*Q. phellos*). Closer by, a large overcup oak (*Q. lyrata*) dug its roots into the side of a high creek bank.

The path then led onto a wooden bridge over the creek. I would have loved to venture further into the wood, but our time was running short so we began our trek back up the ridge. However, the local vegetation beckoned me to stay as I nearly backed into the devilishly barbed bark of a Hercules' club (*Zanthoxylum clava-herculis*). After a few photographs of the ostentatious plant, we resumed our walk on towards the prairie. At the calcareous hardwood forest along the way, we encountered yet another distraction, a beautiful chinkapin oak (*Q. muehlenbergii*). This time our tarrying was rewarded with a climb on its strong branches and a sighting of a few shiny black acorns.

Unfortunately, we ran out of time to catch a glimpse of Oglethorpe oak (*Q. oglethorpensis*) and cherrybark oak (*Q. pagoda*) present on land used by the nearby International Paper Company. These two species are currently being managed by The Nature Conservancy in agreement with the paper company. Perhaps a future private tour will allow me to catch a glimpse of these trees and the other rare beauties the preserve harbors. Have I convinced any of you to start planning your own trip?



Hybridization in *Quercus* (as Seen through the Eyes of an Enthusiast)

by Jeroen Braakman

Ever since the genus *Quercus* grabbed my attention, I have been amazed by the ability of oaks to hybridize easily (sometimes too easily), even when the species involved don't share habitat in the wild.

As we know, oaks occur almost exclusively in the Northern Hemisphere, with only a few species occurring south of the Equator. In many cases different species of oak share the same habitat and hybridize frequently, which can make finding a plant that is "true" to type difficult. Especially in mixed forests where different species of the same section occur, many hybrids are known, for example, *Q. ×bebbiana* (*Q. alba* × *macrocarpa*) among White Oaks and *Q. ×heterophylla* (*Q. phellos* × *rubra*) among Red Oaks.

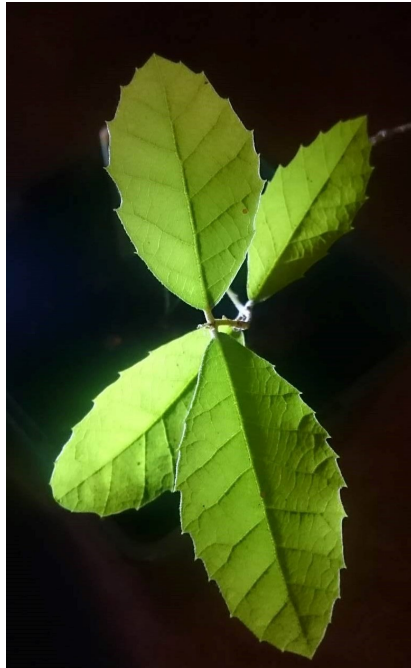
What makes this fascinating is that when oaks are planted together in a city park or, even better, an arboretum, very interesting things can happen! Even when two oaks don't share habitat in the wild, they are able to hybridize. A well-known example is *Q. Pondaime* Group, a group of hybrids resulting from the cross between the East Asian *Q. dentata* and the Caucasian *Q. pontica*. Another example, which as far as I know is the only known case of intersectional hybridization, is *Q. ×kewensis*, where two oaks of different sections seem to have found each other: *Q. cerris* (Section *Cerris*) and *Q. wislizeni* (Section *Lobatae*). A third example, well known in the tree trade, is *Q. ×bimundorum* (*Q. robur* × *alba*), which has proven hybrids can be valuable as well, because some problems can be solved. In this case, the hybrid is resistant to mildew, a notorious problem on *Q. robur* and other species related to it; also, the autumn color has been improved, as *Q. robur* usually does not have good autumn color.

As I said before, the ability of oaks to hybridize easily can also be annoying, because when you plant acorns from an arboretum it is very difficult to raise good offspring, and oaks raised from arboretum seed can be very difficult, or



Quercus 'Chocha', Jardín Botánico de Iturraran, Spain. © Jeroen Braakman

even impossible to identify. For example, *Q. rysophylla*, or loquat-leaved oak, is known to hybridize easily with many deciduous Red Oak species. One of its hybrids has been named *Q. 'Chocha'*, grown from acorns of a specimen of *Q. rysophylla* in Arboretum de Chocha in France. It has slightly leathery leaves that are tardily deciduous and turn orange in autumn, but their shape was inherited from its putative pollen parent, the deciduous *Q. rubra*. Knowing the identity of at least the seed bearing parent is crucial if you like to experiment with open-pollinated seed, like me!



Putative *Quercus phillyreoides* × *franchetii*. © Jeroen Braakman

Last example: during the Post-Conference Tour of the 2012 IOS Conference, I collected some acorns of a *Q. phillyreoides* in Shaun Haddock's Arboretum de la Bergerette. I expected to get normal *Q. phillyreoides* seedlings, as it was in a slightly isolated part of the garden. One seedling, however, was already different when it sprouted its very first leaves, which made me curious enough to give it its own pot and watch it for a while. Recently Shaun told me that earlier that year, in March 2012, his *Q. franchetii*, which was planted very close to the *Q. phillyreoides*, was frozen to the ground. I then realized my seedling is probably a hybrid of *Q. phillyreoides* and *Q. franchetii*, and the latter may have donated its pollen a year earlier (as both oaks mature their seed in two years, the pollination would have taken place in spring 2011).

Planting hybrid acorns can be very interesting, but be careful: if you don't keep data of the seeds you plant, your hybrids will be worthless! 🌱

HISTORIC OAK

The Sacred Oak of Oley

by Plummer Dunkle

Oley Valley lies in the heart of the Old Order Mennonite settlements in Eastern Pennsylvania, sitting ten miles northeast of Reading and forty-five miles north of Philadelphia in Berks County, Pennsylvania. Pennsylvania Dutch was the prominent language until the end of World War II. European settlers, who arrived in the early 1700s, were primarily French Huguenots, German farmers, and Swedes pushed north from their Wilmington, Delaware settlements. The name *Oley* is derived from the germanization

of the Lenape Indian word *olink*, meaning hole or kettle, which is descriptive of the valley's shape. The Lenni Lenape or Delaware Indians had villages in the valley when the European settlers arrived. The geology of the valley presents limestone deposits underlying most of the area. There are approximately 25 old lime kiln sites, two old limestone quarries, three old iron ore mines, and iron furnaces dotting the area, some dating from prerevolutionary days, when iron ore was mined and smelted in the area. The lime kilns as well as the iron furnaces consumed vast quantities of charcoal, which makes the longevity of the subject of this article even more remarkable, since most of the virgin forest in the area fell victim to the axes feeding these local industries.

Two of the more renowned families to have settled the valley were Daniel Boone's parents, whose homestead still sits in the southern end of the valley, and Mordecai Lincoln, the great-grandfather of Abraham Lincoln, whose home, built circa 1730, still stands not far from the Boone family residence.

In the center of this fertile valley stands a majestic old chin-kapin oak (*Quercus muehlenburgii*) known to many residents of the valley and to the Lenni Lenape tribal members as the Sacred Oak. This tree stands on a small farm just off



The Oley Valley Sacred Oak. © Plummer Dunkle

Friedensburg Road. It is at the edge of a field in a recessed area created by the Monocacy Creek as it loops in a 100-ft semicircle around the tree's southern side. It is the proximity to this creek that is perhaps the prime reason for the tree's longevity.

The veneration of the tree is the subject of a presumed Lenni Lenape legend. A Lenni Lenape chieftain's beloved wife was very ill and, since none of the tribal shaman's remedies showed any signs of restoring her to health, the chief went to the old oak and prayed to the Great Spirit to save her. On his return to the village he found his wife cured. Later this same chief, when war with a western tribe was imminent, went again to the old oak and prayed for guidance. He received instructions to take gifts to the other tribe and offer peace. A pact was made and the tree became revered and sacred to the Lenni Lenape people. The local Lenni Lenape tribal elders claim the tree's reverence goes back several hundred years.

But it is not only the Lenni Lenape people that have cherished this old tree. Over the years, many have visited the oak, some to make marriage proposals, others to seek cures or guidance, leaving personal pictures, small notes, or other items as a tribute. Many placed the notes, coins, or personal items in bark crevices on the tree itself. Some too came to perform pagan sacrificial rituals, while others including local school children have come just to admire and wonder at its size and relax or picnic in its shade. A local group of high school students had a commemorative plaque placed near the old oak in 1967 listing its size and proclaiming it



Commemorative plaque placed by high school students near the Sacred Oak.
© Plummer Dunkle

to be the largest in the United States.

The farm where the oak stands was started around 1725 by Swiss immigrant Samuel Hoch and had remained in the Hoch family until Daniel K. Hoch sold it in 1951. It became known as the Sacred Oak Farm during the ownership of Daniel K. Hoch's grandfather Jacob Hoch (1798 - 1878), who started a brick-making business from clay found on the farm. Daniel K. Hoch (1866 - 1960) was well known in the area having served twice in the US House of Representatives and also serving as Berks County Controller. There is a stone monument commemorating him near the Sacred Oak, placed there in 1961 by a local group. There is also an old brick gateway, probably constructed from bricks made

on the farm, which stands where an old road once ran across the northern side of the oak.

The Sacred Oak today stands 87 ft tall, with a girth of 22 ft and a canopy spread of 111 ft, and is estimated to be 500 to 700 years old (no core samples have been taken to certify its age). It has suffered much in recent years from heavy undergrowth that competes for valuable nutrients, and from a lightning strike in 2001 that damaged a large lower limb and caused a split in the main trunk. The current owner Christopher Hartman along with the local township leaders have taken steps to bring the venerated old oak back to good health and to protect it. A tree care company was contacted and they have inspected the tree and made several recommendations including installation of lightning protection and a cable system, and clearing the undergrowth. A further precaution taken by Chris and the township leaders was to supervise public access to the Sacred Oak and to limit it to twice annually, once in the spring and again in mid-fall. They have also asked the public not to leave personal items on or around the tree. The effects of these steps seem to have helped as the trees foliage is much fuller than a few years ago and the acorn production has also improved.

The Township has established a charity fund to help maintain and preserve the Sacred Oak. Donations can be sent payable to Oley Township with Sacred Oak Project written on the memo line of the check. Send the donation to Oley Township Municipal Building, 1 Rose Virginia Road, Oley PA 19547. Anyone seeking further information regarding the Sacred Oak may contact the Oley Valley Heritage Associations at P O Box 401, Oley PA 19547-0401.



Society of Municipal Arborists Tree of the Year 2017: *Quercus montana*

by Ryan Russell

The SMA has announced its tree of the year for 2017 – and they have chosen *Quercus montana*. As the announcement explains, “There’s growing interest in using chestnut oak in the urban environment because it is pH-adaptable, handles dry soils and periods of drought, has a beautiful mature form, requires minimal pruning, and tends to be free of major pests and diseases.”

Q. montana was given high praise by nominator Jocelyn Knerr. She says that she has been using the species to replace EAB-killed ash trees and that it handles alkaline soils and road salts well.

Q. montana is the fifth oak to receive the Tree of the Year status since 1996, more than any other genus. To read all about the SMA tree of the year, visit <http://www.urban-forestry.com/assets/documents/toy-2017-chestnut-oak.pdf>



A Neophyte Revisits the Florida Oaks

by Dirk Giseburt

In January 2011, I made a quick visit to several natural areas in Palm Beach County, Florida while on a business trip and had my first experience with the varied oak habitats of the South Florida coast. Allan Taylor published a short report from that visit in the [Summer 2011 issue of Oak News & Notes](#). I had no working camera on that trip and the photos in the story were provided by a local oak photographer, Shirley Denton.

In January 2017, I had the chance to relive the experience and revisit three of those spots – the High Ridge Scrub, Juno Dunes, and Frenchman’s Forest Natural Areas – this time with camera. I found some of the marvels I remembered from 2011, but the landscapes at High Ridge Scrub and Juno Dunes were substantially altered. The County has initiated use of “mechanical vegetative reduction methods” to partly replicate the effects of the native fire-maintained ecology and otherwise create a “mosaic of natural communities and successional stages.” Actual controlled fires are in the management plans for the future.

High Ridge Scrub

High Ridge Scrub Natural Area preserves a fragment of a sand ridge that formerly divided coastal from inland lake systems and is located outside the City of Boynton Beach. The property was used as a “sand mine” in decades past – as much as 10 to 11 meters of sand were removed from the southern part of the area.

Five oak species are present, per the County’s management plan: *Quercus chapmanii*, *Q. geminata*, *Q. myrtifolia*, *Q. pumila*, and *Q. virginiana*. (I wish I had an expert’s eye for the distinctions among species in the *Virentes* group, but alas I am bound to have been mistaken in some identifications.)



Pollen flowers on a wavy-lobed *Quercus chapmanii* (?). © Dirk Giseburt

In 2011, I described a “shady bottomland below the ridge.” It’s gone! In 2015 and again in December 2016 the understory of oaks and other plants was “mechanically reduced,” leaving broad swaths of new oak shoots less than 1 meter tall in bright or filtered sunshine amongst the pines. In that area in 2011, I saw a “lush *Q. chapmanii* with leaves up to 13-14 cm long,” which I remember as a tree maybe 4 m tall or more – and I think I found it. There are now multiple short shoots surrounding the shredded old stem. It was (is?) a special plant, since standard references say the leaves of the species typically reach only 8-9 cm.

In areas of the preserve where the oaks have not been cut down, the path can be like a canyon or even a tunnel among 2-4 m shrubs and short trees. There are *Q. virginiana* and/or *Q. geminata* with big (10 cm plus), heavy leaves. Unique in my limited experience was a *Q. myrtifolia* (or hybrid): a vine-festooned shrub with pubescent new leaves – older leaves retain the pubescence on the undersides.

Spring had already come in January to High Ridge Scrub, with occasional flowers opening especially on *Q. chapmanii* individuals. The wavy-lobed leaves of the plant in the photo above are atypical but not unique at this location, and I saw similar plants in other locations. Could they be non-natives, escaped from the garden? Of the taxa listed in the County’s management plan, *Q. chapmanii* is the only option.

Juno Dunes

I explored just a fraction of the 578-acre Juno Dunes Natural Area in Jupiter, Florida this year – skipping the high dune ridge facing the Atlantic (covered with one-meter-tall *Q. geminata*) and the pine woods at the area’s western edge along the Coastal Waterway. I walked only the broad dune scrub in the center of the preserve.

The dune scrub is primarily an assemblage of short *Q. chapmanii*, *Q. geminata*, and *Q. myrtifolia*. No garden designer would purposefully create this palette of three plants, all with “bitty leaves.” But there are also vignettes of fetching beauty, as where a *Q. geminata* is host to epiphytic *Tillandsia* and backed by saw palmetto (*Serenoa repens*) at a height under 1 m.



High Ridge Scrub: a portion of the elevation from the mined area to the remaining ridge crest. © Dirk Giseburt

The County has mowed the south side of the main path across the dune scrub apparently with different mechanics from High Ridge Scrub – the shredded stems are not in evidence here. The oaks are only about half a meter tall in the mowed area and it seemed that mostly *Q. geminata* was present – maybe mowing close to the soil level is more damaging to the other species. The leaves of this oak in the mowed areas seem diminished in size relative to the plants on the other side of the path, at least for now.

There is a sharp and interesting shift in soil moisture where the scrubbiest scrub gives way to soils that support *Q. virginiana* and pines and where the saw palmettos become a bigger component.

In 2011, I followed a turn in the path to the north and came upon a line of striking, erect *Q. virginiana*, like a line of short poplars (3-5 m tall) standing out from the rest of the landscape, and holding abundant ripe acorns. Six years later, other plants have grown around them and they have spread their crowns a little – altogether a less remarkable scene. No acorns were to be seen, but a few pretty cupules still shone in the sun.

Frenchman's Forest

Five to six kilometers southwest of Juno Dunes is the Frenchman's Forest Natural Area, a wetter area ranging from swamp to dense forest to rather open woods. There are bald cypresses (*Taxodium distichum*) here with their knees, and *Q. laurifolia* growing next to the swamp boardwalk. The north side of the laurel oak's trunk sports a healthy white fungal growth in the damp.

Some *Q. virginiana* grow big and heavy here, while others are more spare and open. Here also grows at least one *Q. myrtifolia* near its maximum height, about 9-10 m, but quite spare and not readily photographed among the neighboring trees. Some leaves were at eye level, though.

What a pleasure it was to renew the acquaintance of these old friends, even if rather changed, over a quick 5 hours on a bright January day. 🌿

BOOK REVIEW

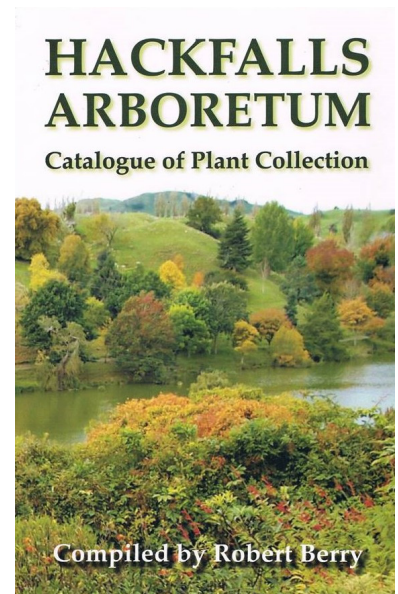
Hackfalls Arboretum, Catalogue of Plant Collection. Robert Berry, privately published, 2016. 436 pages.

by Roderick Cameron

The Hackfalls Arboretum Catalogue documents an outstanding achievement. New Zealand farmer, dendrologist, and IOS member Bob Berry has amassed a collection of over 3,000 taxa at the homestead of his family farm in Tiniroto, near Gisborne, and now has published his database, including many photos of trees and close-ups of leaves. The book is a record of his life's work and was published in 2016, the year Bob turned 100.

A concise introduction provides historical background, tracing the development of the sheep and cattle station since European settlement and the previous events that shaped the land and vegetation. Also included are key facts regarding climate, topography, and soil. A few lines at the end provide a hint of the treasures to come: "During the 1980s I made several seed collecting trips to Mexico... The reason for so many trips was that some oak species do not seed every year and some seed lots did not germinate." Hackfalls Arboretum's most salient feature is its collection of Mexican oaks, the largest in the Southern Hemisphere, and the catalogue records not only information as to seed origin but also taxonomical discussion. In 2004, Allen Coombes, former IOS President and at the time botanist at Hillier Gardens and Arboretum in the UK, sojourned in Hackfalls and checked the identification of the oaks in the collection. Many of his corrections and comments are included in the catalogue.

The list of plants includes scientific names and, in the case of species, native range. Additional information includes precise location in the arboretum and measurements (estimated height and actual trunk diameter, taken in 2004) and source from which the plant material was acquired. For the quercophile, the most interesting section of the book would be found under the letter Q, but the quantity and variety of other plants is staggering: over 400 taxa of *Rhododendron*, over 100 each of *Acer* and *Populus* (one of Bob's first interests), over 70 each of *Magnolia*, *Camelia*, and *Prunus*, and over 50 each of *Eucalyptus* and *Sorbus*, to name a few of the 467 genera in the collection. (Roses are written off in a single line: "About 100 cultivars and a few species in the three gardens at Hackfalls.")



Quercus geminata leaves on a resprouted plant following mowing in Juno Dunes Natural Area. © Dirk Giseburt

The section on *Quercus* takes up about a third of the book, due of course to the number of trees listed (292) but also to the many photographs included and the detailed notes. Many origin notes testify to relationships with nurseries and arboreta around the world, but especially with Eastwoodhill Arboretum, New Zealand's National Arboretum created by Douglas Cook. Bob Berry donated many of the Mexican oaks in Eastwoodhill's collection and also catalogued the trees there. The richest detail is found under Bob's Mexican collections, including precise information on where the seed was sourced and in many cases taxonomical discussion resulting from Allen Coombes's work identifying the various taxa. Bob recognizes Allen as "the current European expert on Mexican oaks" in his introduction to the book, but on occasion chooses to respectfully disagree with his opinions. The entry for *Quercus affinis* f. *subintegra* (ADC.) Trel. is a good example: "wild seeds from Berry #8413 from near Zacualtipan, Hidalgo, Mexico. Allen Coombes said that this is not now regarded as distinct from *Q. affinis*. However, the seed came from the locality where Trelease found and named the form, these two trees and the parent tree in Mexico are identical in leaf to his description." In other instances, the notes include observations made after Allen's visit, which may alter the identification. Under *Quercus candicans* × *xalapensis*?, he notes: "I had it as *Q. orizabae*, corrected by Allen Coombes as *Q. candicans* × *sartorii* but another non-hybrid seedling from the same seed source ... has now fruited with similar biennial acorns and is obviously *Q. xalapensis*. The original tree in Mexico had entire leaves." The notes also record telling details: different specimens of *Q. obtusata* are shown to have young leaves that are red in some cases and green in others, with the clarification that the latter may be the form previously named *Q. panduriformis*. And we also find useful information regarding the behavior of this species in Hackfalls's climate: *Q. oleoides* is described as "the only true evergreen of the Mexican oaks at Hackfalls, all others are semi-evergreen and lose their old leaves in late spring."

Do not expect sophisticated layout or even editorial diligence, but you will find in the Hackfalls Catalogue a down-to-earth approach, rich in facts and detail, which reflects Bob's personality. In an interview published in [Oak News & Notes Vol. 14, No. 2](#), when asked what oak species he would like to be, he answered: "I have never thought of such a thing! I don't even hug trees. My attitude is entirely scientific and intellectual. I leave mysticism to others." The catalogue of the plant collection at Hackfalls Arboretum earns its place in a dendrologist's library, both as a source of information on Mexican oaks and as a record of a remarkable life's work that will serve as an inspiration to many.

A copy of the book can be ordered from Peter Jackman, 672 Back Ormond Rd, R D 1, Gisborne, New Zealand. Email: pjackman@clear.net.nz (Cost 120 New Zealand Dollars + postage)



Oak Conservation Efforts in Latin America

by Audrey Denvir

The Oaks of the Americas Conservation Network (OACN) was founded at the International Workshop on Oak Conservation held at the Escuela Nacional de Estudios Superiores at UNAM in Morelia, Mexico, and co-hosted by The Morton Arboretum, in March 2016. The purpose of this network is to enable collaborations and foster conservation action for threatened oak species in Central America and Mexico, the global center of oak biodiversity.

Based on the outcome of the workshop and recommendations by OACN members, The Morton Arboretum has developed multiple projects aimed at filling knowledge gaps and conserving threatened oaks in Mexico and Central America. The projects include: the integrated research and conservation of *Quercus brandegeei*, the development of a conservation strategy for *Q. insignis*, and a taxonomic workshop and field work for rare Mexican oak species.



Quercus brandegeei. © Dr. Jose Luis Leon de la Luz, CIBNOR

Integrated conservation of the narrow endemic *Quercus brandegeei*

Q. brandegeei is a narrowly endemic, endangered oak species that is limited to a very small range on the southern tip of the Baja California Peninsula in northwest Mexico. The species faces major ecological barriers to regeneration in this area, undermining its long-term viability. In fact, researchers estimate that there are no trees younger than 100 years old present in the range. As such, this species is facing the urgent threat of significant population decline due to a complete lack of seedling recruitment. According to BGCI's PlantSearch, there are only three collections that report having *Q. brandegeei*. Since oaks are exceptional species and cannot be seed banked, living collections are extremely important conservation measures for preserving genetic diversity of rare species.

The Morton Arboretum, in collaboration with UNAM and Jardín Botánico de Vallarta, is working on an integrated conservation and research project that involves: (1) a demographic study and propagation experiments to determine what is preventing regeneration in the wild, (2) acorn collection and distribution in order to increase ex-situ representation of this species, and (3) formation of in-situ reintroduction and restoration plans that are informed by the findings of our research.

Development of international conservation strategy for *Quercus insignis*

Q. insignis is a threatened oak species that has some of the biggest acorns in the world. Although this species' range extends from Mexico to Panama, its populations are small, highly fragmented, and under increasing deforestation pressure. It is considered Critically Endangered in Mexico, Endangered in Panama, and Near Threatened in Guatemala. Currently in Mexico there are some research and conservation efforts underway to support this species. These efforts include seedling establishment research, reforestation projects, and efforts to maintain *Q. insignis* within shade-grown coffee plantations. While these efforts are promising, they are few and far between, and have not been adopted in other countries. There is great potential for expertise exchange between the different stakeholders and researchers involved in these efforts, which as yet are uncoordinated.

The Morton Arboretum aims to hold a collaborative workshop with conservation experts from countries across *Q. insignis*' range to exchange ideas about the conservation of *Q. insignis* within the larger contexts of cloud forest ecological restoration and sustainable shade-grown coffee agriculture. This type of networking is crucial to the survival of *Q. insignis* because the range is wide but populations are sparse. A concerted effort will be made to develop strategies that can be coordinated across international borders. It is anticipated that this workshop will launch longer-term conservation projects. Future funding proposals will be focused on further implementation of conservation strategy on the ground.

Identification, field survey, and threat assessment of rare Mexican oaks

One of the top priorities identified at the International Workshop on Oak Conservation in March was the need to

fill knowledge gaps about the taxonomic diversity and the threats facing oak species in Mexico. Mexico is a global diversity hot spot for oaks, with around 180 native species. However, many species are very poorly understood: distributions are unknown, threats have not been characterized, and many rare species are known just from a single herbarium voucher.

The Morton Arboretum is working with Benemérita Universidad Autónoma de Puebla Botanic Garden and several members of the IOS to hold a workshop for both professionals and experts on the tricky taxonomy of rare oak species found in Mexico. In addition to a workshop, we are supporting field collecting for priority rare and threatened oak species found in the state of Puebla.

If you are interested in learning more about any or all of these projects, please contact Audrey Denvir, the Tree Conservation Project Coordinator for Latin America at The Morton Arboretum (adenvir@mortonarb.org).



New Gap Analyses of Ex-Situ Collections and In-Situ Conservation Needs for US Oak Species

by Emily Beckman

Through support from the United States Forest Service and [BGCI U.S.](#), [The Morton Arboretum](#) has begun work delving into provenance-level accessions data for US native oaks, with plans to form the most holistic analysis of oak collections' conservation value currently available. A comparison will be drawn between the representation of ex-situ collections versus the natural range of every threatened US oak species. These data will be incorporated with research regarding in-situ distributions to create a shortlist of priority species, followed by proposed conservation actions within key areas of need. We are excited to share these findings in a publication at the end of the year and hope to create innovative and replicable methods, leading the way for similar studies among different regions and taxa.

We are currently requesting accessions data, including provenance information, from all gardens that maintain oak species. Please send us a full electronic export (Excel spreadsheet or CSV preferred) from your collections database for the genus *Quercus*. All data contributions will be managed confidentially.

Please contact Emily Beckman with data, questions, and/or comments at ebeckman@mortonarb.org.

The deadline for providing collection information for this analysis is **February 28th**. Please pass this request on to your colleagues and other institutions with *Quercus* collections.

Visit <http://www.bgci.org/news-and-events/news/1387/> for more information. 

Share your passion for oaks!

A special and unique gift for family and friends, offering an International Oak Society membership also means that you are helping to support your Society and increase awareness about the importance of trees.

Write to

membership@internationaloaksociety.org

for more information.

Society News

Tours Update

Our first outing of 2017 is in the Czech Republic, a country that the IOS has not visited before, and it is shaping up to be a most memorable occasion, given that there will be a banquet during the event to celebrate the 25th birthday of the IOS. I am delighted to say that already three of our US members and two from Uruguay are planning to cross the Atlantic to attend, which leaves absolutely no excuse for our European members not to be there! It will be a wonderful opportunity to meet old friends and make new ones (oh, and to look at oaks, of course!).

The event is based at the Quercetum of keen IOS member Dušan Plaček, whom many of you will already have met, as he attends IOS functions widely. Accommodation will be booked in hotels near the arboretum in the town of Poděbrady (an entire 22-room hotel has already been booked, but more rooms will be found in the town if necessary) and later in Prague.

The itinerary is planned as follows:

21 July 2017: Arrival in Prague, transfer to Poděbrady (a pleasant spa town 50 km east of Prague), with accommodation in Poděbrady. Evening visit to an area with wild *Quercus pubescens* at Oškobrň.

22 July: Visit to Plaček Quercetum in Kanin.

Evening celebration of the 25th anniversary of the IOS with a banquet in Poděbrady (just to put you at ease, I can confirm that the banquet will NOT require formal wear!). Guy Sternberg, a founder member of the IOS, will reminisce on the early days of the IOS.

23 July: Transport from Poděbrady to Prague Průhonice Park (a very interesting wild collection – planted between 1910 and 1935) <http://www.pruhonicypark.cz/en/castle/>, with accommodation in Prague and a possible night city tour.

24 July: Departure from Prague for those attending solely the Oak Open Days – a morning city tour can be arranged for those who are interested.

However, in addition, Dušan's team are willing to help with arrangements for a longer tour of up to a week – in particular for those coming from afar, but all will be welcome.

(If you haven't already, you can read all about Dušan's Quercetum and Průhonice Park in *International Oaks*, No. 26, pp. 77-88.)

To help you estimate a price for the tour: firstly, Dušan has very generously offered to sponsor all transport during the event and additionally the Anniversary Banquet. Participants will thus be responsible for their hotel costs, their travel to and from Prague, and for the other meals (but, see

below, breakfast is included in the hotel price). Hotel costs for the 22-room hotel are as follows: a single room is 53 EUR per night, and a double-occupancy room 61 EUR per night (room-sharing may be possible). Both prices include breakfast. To see more: <http://www.hotelgolfi.cz/en/>

To join those already registered for the event, contact tours@internationaloaksociety.org, mentioning if you would wish to room-share and/or participate in a longer tour in the Czech Republic.

Other events in 2017:

Michael Meléndrez is planning another tour in the US Southwest in August, starting in New Mexico and moving into Arizona for the bulk of the trip. As you will see from the report on the event he organised last year (<http://bit.ly/2kSH5qf>), he knows the oaks of the Southwest and their locations as few others do, so his tours are superb and not to be missed.

Although I wouldn't want to discourage anyone from crossing from the USA to attend the Czech OOD and banquet, Guy Sternberg will also be holding a celebration event at Starhill Forest Arboretum in Menard Co., Illinois on September 2. This will most probably take the form of an arboretum tour of the most complete collection of cold-tolerant oaks in the USA followed by a supper where, we hope, Guy will repeat his reflections on the early days of the IOS. For more information and to register, please contact Guy directly at guy.sternberg@mail.ic.edu. Parking may limit numbers for this event, so book early!

One of the main venues of the IOS Irish Tour has requested that the Tour be held later in the year than the projected June date, so for those of you who have expressed interest (and for those who are about to express interest – via tours@internationaloaksociety.org please!) more information will be provided as it is confirmed, but late September or October is likely.

I hope very much to see you in the Czech Republic!

Shaun Haddock, Tour Director.

The Michael Heathcoat Amory Award

Call for Applications

The International Oak Society invites individuals with research projects contributing to advancing our knowledge about, or appreciation of, oaks or their conservation to submit applications for the Michael Heathcoat Amory Award.

Applications may be obtained at <http://www.internationaloaksociety.org/content/mha-award-application>

Completed applications must be submitted to mhaaward@internationaloaksociety.org by 30 April 2017.

More information: <http://bit.ly/2iWmhPV>

From the Board

2017 marks the 25th anniversary of the International Oak Society (see here: <http://bit.ly/2jBE4wQ>) and we will celebrate this anniversary in more than one way.

In June 2016, in London, at Michael Heathcoat Amory's memorial service, a little more than £2,000 was collected. Arabella, Michael's wife, decided to donate that money to the IOS. The Society will award this sum in the form of a scholarship, research grant, or like project in memory of Michael in 2017, year of our 25th anniversary. More about The Michael Heathcoat Amory Award here: <http://bit.ly/2iWmhPV>.

Two of our Oak Open Days events will also be occasions to celebrate our 25th anniversary. The first one will take place during our Czech Republic OOD organized by Dušan Plaček (see <http://bit.ly/2iNLdpr>). We will have an Anniversary Banquet on July 22 in Poděbrady, close to Dušan's Quercetum. The second event is planned on September 2 in Petersburg, Illinois. We will visit Starhill Forest Arboretum and spend an evening there to celebrate our anniversary. I know members of the Society are spread all over the globe, but I hope nevertheless that a good number of us will be able to attend the events.

We now include a printed membership form with the January issue of *Oak News & Notes* for members who need to renew their membership. You can use that paper form to renew by sending it back to our treasurer, Jim Hitz, or you can renew online. Our online payment system is PayPal which allows payment through a PayPal account or by credit card. Remember that the Society is run by volunteers and late renewals create more paper work, which is not plantspeople's favorite activity. If you do not intend to renew, please drop us a note at:

membership@internationaloaksociety.org. Note that if you have not received our membership renewal notices, it means that we have no email address on file for you or that your SPAM filter blocks our emails.

I wish you a great year 2017. To contact me, please write to charles@internationaloaksociety.org.

Charles Snyers, President



IOS Survey Results

During the second half of 2016, the Board ran a brief survey with questions relating to IOS Conference venues and Tour destinations. While the response rate was relatively low and there are no definite conclusions to be drawn, we would like to share the results. We received 89 responses, which represents about 22% of current membership, with the majority of responses coming from those who have been members for some time (over 5 years). On the other hand, most respondents had attended only one Conference, or none. Here is a summary of the responses to each ques-

tion in the survey, with the answers ranked in order of preference.

Importance of selection criteria for Conference venue (average score in brackets, where 5 is "Very important" and 1 is "Not important at all"):

- #1 - Diversity of *Quercus* species that can be seen in the wild during Field Trips and Tours (3.88)
- #2 - Availability of arboreta and oak collections to be visited on Field Trips and Tours (3.76)
- #3 - It should provide low-cost conference facilities and accommodation (3.56)

How likely would you be to attend a Conference in...? (average score in brackets):

- #1 - Western US (e.g., California, Oregon) – (3.75)
- #2 - Southern Europe (e.g., Spain, Italy) – (3.70)
- #3 - Eastern US (e.g., Massachusetts, Georgia) – (3.67)
- #4 - Mid-western US (e.g., Missouri) – (3.53)
- #5 - Northern Europe (e.g., Scandinavia, UK) – (3.52)
- #6 - Mexico & Central America (e.g., Costa Rica) – (3.38)
- #7 - Eastern & Central Europe (e.g., Czech Rep.) – (3.31)
- #8 = Far East (e.g. China, Taiwan, Korea) and Western Asia (e.g. Turkey, Armenia) – (both 3.25)

Would you be likely to participate in an IOS Tour (not a Pre- or Post-Conference Tour) to any of these regions? (number of positive responses in brackets):

- #1 - Mexico (49)
- #2 = Eastern US, Western US and Southern Europe (all 48)
- #4 - Mid-western United States (43)
- #5 - Western Asia (42)
- #6 - Far East (40)
- #7 = Northern Europe and Eastern & Central Europe (both 37)

Many respondents added comments under "Anything you would like to add?". Most of them detailed personal preferences, but two themes were predominant:

- travel costs and time constraints are limiting factors, so Tours should be long enough to justify the expense
- support for Far East (China in particular) as a destination

Two comments brought up areas that were not included in the Survey but merit attention:

- Southern United States (Alabama, Mississippi, Louisiana)
- South Asia (Himalayas)

A detailed breakdown of the responses can be viewed on our website here: <http://bit.ly/2kygcfe>

The Board

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Submissions for the Journal

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