

9490 Kilometres Across Mexico

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After several months preparation – consisting mainly of searching for any and all information about where to find about 40 oak species in northern Mexico and planning a feasible itinerary for a three to four week botanic road movie – here I am in Mexico, en route to our first stop...



Quercus carmenensis C. H. Muller 1937

After an eight-hour drive from Monterrey, where I had arrived late two nights before (14 September), yesterday being spent in the car, I have at my feet, from 2335 m, a splendid view of that small piece of the Area Protegida Maderas Del Carmen that we have driven through this morning. We are practically at the American border in that part of the Sierra Madre Oriental (Coahuila) called La Sierra del Carmen.

Quercus carmenensis C. H. Muller grows here (reported also in the Chisos Mts. on the other side of the border). But many other oaks as well, e.g., *Q. gravesii* Sudw., *Q. hypoleuroides* A. Camus, *Q. grisea* Liebm., *Q. mohriana* Buckley ex

Rydb., *Q. arizonica* Sargent, and *Q. intricata* Trel. Climbing up to this pine-oak forest from the grasslands below dominated by *Yucca carnerosana* Trel. and *Y. thomsoniana* Trel., we pass, amongst others, *Cercocarpus*, *Arbutus*, *Buddleja*, *Fraxinus*, *Carya*, *Garrya ovata* Benth., *Juniperus deppeana* Steud., *Pinus cembroides* Zucc., *Salvia*, *Ipomea*, and *Pseudotsuga menziesii* (Mirb.) Franco.

Usually a small shrub or tree from 50 cm to 2 m, *Q. carmenensis* can also grow to 12 m tall. Here, there are quite a few individuals between 3 and 6 m tall. At 2335 m where we start back down there is a magnificent *Q. hypoleucoides* growing against a background of *Abies coahuilensis* Johnst. and *Pinus pseudostrobus* Lindley.

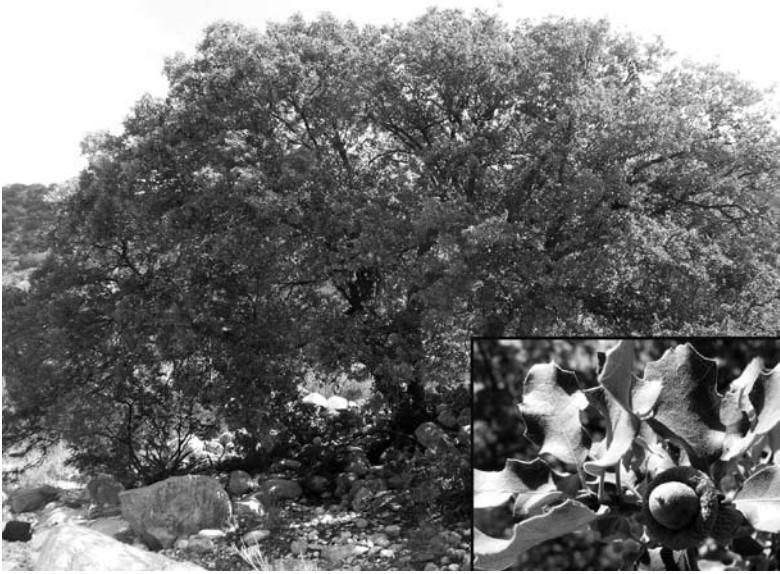
We had spent the night of 15 September at Pilares, the center of operations of the El Carmen Conservation Initiative, a vast project financed by Cemex, a Mexican cement and building materials company. Rubén Maroquín, my guide, driver and companion in this adventure used to be employed by this company and so it is thanks to him that I had the privilege of visiting this spectacular area. The Director, Billy Pat McKinney, explained to us that until recently they had been very discreet in their activities but were keen now to encourage collaboration. For example, the baseline inventory of the flora has not yet been done – wouldn't this be an interesting project for a group of enthusiastic botanists... if only for the oaks?

We leave the Area Protegida Maderas Del Carmen a few hours before nightfall in order to reach the military check-point on the road to Melchior Muzquíz before dark. We are headed towards the Sierra del Gloria near the city of Monclova.



Quercus carmenensis

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Quercus invaginata

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***Quercus invaginata* Trelease 1924**

One of the prettiest little trees I will have seen during this trip, *Q. invaginata* surprises most by its extremely revolute acorn cap and elegant pubescence. It was interesting to see so much variation in the acorn cap of *Q. invaginata*: from the textbook form to those with nearly non revolute margins, and this sometimes on different branches of the same individual.

There were no other oaks growing where we found several groups of these trees. Growing with them : *Vauquelinia corymbosa* Humb. & Bonpl., *Dasyllirion cedrosanum* Trel., *Sophora secundiflora* Lag. ex DC. and *Cercocarpus montanus* Raf., amongst others.

To find *Q. invaginata* we had to drive through an active quarry with huge trucks in constant movement, enormous clouds of thick, white dust and the occasional explosion. After having told us that we had to park our vehicle and continue on foot for about 5 km to reach the canyon we were looking for, the foreman of the quarry, seeing us get out of the car and get our gear together, changed his mind and let us drive a bit further down the road to park "...just past the little shack where we store the dynamite" said he! This shortened our walk nearly 3 kms – not insignificant as the temperature was close to 45° C in the sun and there was no shade anywhere!

We head further south towards the city of Saltillo in the state of Coahuila where we will first meet up with Zilmar Zamora, a student of Dr. Juan Encina (Universidad Autonoma Agraria Antonio Narro) who will prove to be an important asset over the next two days during our explorations in the Sierra Zapalinamé, the Sierra Hermosa, the Sierra Arteaga and the Sierra Duraznillo.

The night before, unfortunately arriving after dark in the town of Melchior Muzquíz, we had the very unpleasant experience of being stopped by the local police and although Saltillo, where we are headed, is a large city and the risk of this kind of behavior is lower, we are keen to arrive before nightfall. According to most Mexicans, of the triad of possible bad encounters in Mexico (police – military – drug dealer) the one to be avoided the most is the police. We will in the weeks to come have several such encounters but thanks to Rubén's tact nothing more serious than an overproduction of adrenalin ever occurred.

***Quercus coahuilensis* Nixon & C. H. Muller 1993**

Leaving Saltillo going south our first stop is at Rancho Los Angeles where we find large populations of *Q. pringlei* Seemen ex Loes, *Q. striatula* Trel. and *Q. cordifolia* Trel. (these last two are considered by some authors as synonymous).

Heading still further south west in the direction of Buñuelos we stop near Carneros in La Sierra de la Concordia in a typical "matorral xerófilo." We find amongst others *Larrea tridentata* Cav., *Prosopis*, *Cylindropuntia imbricata* (Haw.) A. DC., several species of *Yucca* and the treacherous *Agave lechuguilla* Torr. Between ankle and mid-calf height, however careful you are walking about, you can't help but injure yourself on those very pointed leaves. At the end of the day,

from the knee down we all had countless little holes decorating the bottom of our legs. Here we are looking for *Q. intricata* which in the end we do not find.

Continuing south towards Santa Victoria we are on the way to *Q. coahuilensis*. This species was considered to be the same as *Q. hypoxantha* Trel. until 1993. After some difficulty finding the area where we are intending to explore, we arrive very late in the afternoon and have to climb the Canon Piñaliso in the Sierra Playa Madero from about 2100 m to around 2600 m. As it



Quercus hypoxantha

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is late, we agree that at least half an hour before sundown we have to be headed back down. In the end, only Zilmar managed to reach the top in time – bringing down with him leaf samples but no acorns. We drive back to Santa Victoria the way we came, through a magnificent *Q. grisea* woodland.

The oaks of Diamante, Sierra Hermosa

Of all of the different places I was to go in Coahuila, Diamante (where we are headed the next morning) was one of the most interesting and beautiful. As we climb, here we find : *Q. pringlei*, *Q. gentryi* C. H. Muller, *Q. hypoxantha*, *Q. saltillensis* Trel., and *Q. sideroxylo* Humb. & Bonpl. Unfortunately, we are in the pouring rain and it is next to impossible to take notes or photographs.

Q. pringlei is most abundant from 2250 to 2350 m. This species shows enormous variation in leaf form (from completely entire to lobed and with or without teeth) but very little in general habit. *Q. hypoxantha* is a shrub or small tree of up to 7.5 m with a lovely yellow-orange tomentum on the underside of the leaf. The *Q. hypoxantha* populations here are dominant between 2300 and 2500 m and the trees are rarely more than 2 to 3 m tall.

Growing here at the lower altitudes there is *Pinus cembroides*, *Yucca carnerosana*, *Rhus virens* Lindh. ex A. Gray, *Dasyllirion*, *Nolina*, and *Fraxinus*, and as we go higher up we also find *Arbutus glandulosa* Mart. & Gal. and *A. xalapensis* Kunth., *Arctostaphylos*, *Pinus teocote* Schldtl. & Cham., *P. greggii* Engelm. ex Parl., *P. strobiformis* Engelm., and others.

Hurricane Karl, which arrived in Mexico at about the same time as I did, wreaking havoc in the states of Vera Cruz and Tabasco, has also brought enormous amounts of rain in many other parts of Mexico, especially in Nuevo León and Coahuila. Massive erosion, due to abusive building practices, badly engineered sewer systems and poorly managed garbage disposal, transforms the streets of many Mexican cities into small rivers in such rainfall. Thus we find the streets of Saltillo as we head back there to spend our second night in Coahuila.

Quercus saltillensis Trelease 1924

Today we are headed for Mesas de Las Tablas in the Sierra Arteagea. The road we take from Saltillo is lined with *Pinus cembroides*, with here and there different species of *Yucca*, *Arbutus xalapensis* and *Pinus greggii*. A little further on we start to see apple orchards. It was rather a surprise to see mixed plantations of corn and apples.

Shortly after entering San Antonio de los Alazanes we find *Q. mexicana* Bonpl. and *Q. greggii* (A. DC) Trel. growing with *Pseudotsuga menziesii*, *Abies vejarii* Martinez and *Salix babylonica* L. We are at an elevation of 2622 m. Along this beautiful road that goes to Mesas de Las Tablas we find *Q. saltillensis*, *Q. hintoniorum* Nixon & C. H. Muller, *Q. greggii*, *Crataegus mexicana* Moc. & Sessé and *Prunus mexicana* S. Watson, between 2600 and 2850 m. *Q. saltillensis* is a very beautiful, elegant tree with its characteristically striped acorns and glossy green leaves that can be entire or lobed.

At 2836 m we find majestic *Pinus stylesii*, which at the time we identify as *P. ayacahuite* Ehrenb. ex Schldtl. but according to Thierry Lamant, based on the

size of the seeds and the wings, these trees belong to the former, newly-named species.

***Quercus edwardsiae* C. H. Muller 1942**

I spend the morning of 21 September sorting leaf samples and acorns while Rubén goes again to look for *Q. intricata* near Carreros. We leave Saltillo at noon with leaf samples and acorns in good shape but still no *Q. intricata*.

Monterrey is a short drive from Saltillo and when we arrive there we head for the Chipinque Reserva Ecológica. Here the damage due to the massive amounts of rain that have fallen these past few days is enormous. In some places whole pieces of the road have disappeared and there are impressive quantities of fallen rock and trees nearly everywhere.

Here we find many oaks that have become fairly common in cultivation in Europe, and so it is with some emotion that I finally see these species growing in their natural habitat. It is always surprising to see how much variation can be found in taxa that one is used to seeing only in collections, with the limited variation this implies.

Q. canbyi Trel., *Q. laceyi* Small, *Q. rysophylla* Weath., *Q. polymorpha* Schltld. & Cham., and *Q. laeta* Liebm. grow here with *Pinus pseudostrabus*, *P. teocote*, *Cercis canadensis* L. and *Carya*. Here we also find *Q. edwardsiae* - considered

by Susana Valencia as distinct from *Q. laceyi* in Nuevo León. There is a difference in acorn shape and maturation: all of the *Q. laceyi* acorns had already fallen some time ago whereas the acorns of *Q. edwardsiae* were still fairly green and on the trees. We were to find the same thing a few days later in Bosque Escuela in Iturbide (Nuevo León).



Quercus coccolobifolia

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***Q. coccolobifolia* Trelease 1927**

On this, my eighth day in Mexico, we leave Monterrey going south-east on MEX85 towards Allende. It is very muggy in Monterrey and about 90° F. There has

been more rain here in four days than what usually falls in 6 months time. We are going to Vitro Parque El Manzano and then on to La Ciénaga (Nuevo León). It is raining and at 1550 m visibility is not more than 20 m.

At about this altitude there is *Q. sartorii* Liebm., *Q. rysophylla* and *Q. polymorpha*, with the first two being dominant. Also we find *Cornus florida* L., *Taxus globosa* Schltld. and *Arbutus xalapensis*.

At 1554 m we encounter our first group of *Q. coccolobifolia*. These are large trees of over 15 m tall but with no acorns. The leaves are often grouped at the tips of the branches, forming shiny green bouquets in the middle of which the acorns appear to be nesting. Of all of the large-leafed Mexican oaks this species was the easiest to identify, with surprisingly little leaf variation – except on one tree we were to find near Basaseachi in Chihuahua, with very pointed leaves and a dense white tomentum. Hybrid? There were no acorns.

There is fallen rock everywhere along here and in many places the road is in great disrepair. This damage is not due to the heavy rainfall provoked by the recent hurricane Karl (although this cannot have helped) but to hurricane Alex that swept through the north of Mexico in July 2010, devastating many areas in Coahuila, Nuevo León and Tamaulipas.

We find lodgings for the night in a very nice and comfortable log cabin in La Ciénaga after visiting with a family whom Rubén had met many years ago while working in this area. Just behind their house we see a magnificent *Q. coccolobifolia* as well as an equally pretty *Q. rysophylla*.

"Ciénaga" in Spanish means a place filled with mud – not a very poetic name to describe a place filled with small rivers, lakes and water falls (although the connection is obvious). And so it was that to reach the *Q. coccolobifolia*/*Q. rysophylla* forest at about 1550 m we had a steep climb zig-zagging our way up through a small water fall. Two successive fires (one in 1990 and one in 2002, both purportedly due to human activity) have left this place with blackened stumps, toppled trees and for the oaks, vigourous shoots that seem to sprout from everywhere. It is a sad and eery place. There is also *Pinus pseudostrobus* and *P. montezumae* Lamb. "El Ocote" is the common name for this pine and is also the name given to the hardened resin that is found inside a living tree. Villagers here and elsewhere cut this out of the tree to light fires with.

Here also was my first encounter with "el gusano del risofila" (the rysophylla-eating caterpillar). A very beautiful creature about 9 cm long, black with yellow/orange markings and long bristly hairs – but beware! Even just slightly brushing against it is a very painful experience. I still have three little blue marks on the inside of my left arm to remind me.

***Quercus cupreata* Trelease & C. H. Muller 1936**

On the road again going still further south, we are headed for the mythical Cañon de Iturbide and El Bosque Escuela.

Entering Santiago we buy ½ kilo of "chile piquín del monte" (wild *Capsicum annuum* L.) from a street vendor off the side of the road. These are delicious and very strong tiny little chile peppers about the size of a red currant. We have lunch in an off-the-road, make-shift eatery. On the menu, dozens of different, very

authentic, Mexican taco fillings which you order at the counter standing in front of the cooks telling them what you want. Together with the chiles we had bought, this was one of the best meals I had in Mexico.

Leaving Santiago again going south on MEX85 towards Galeana, we are immediately surrounded by magnificent *Q. vaseyana* Buckl. The other oaks we encounter on the road to Iturbide are *Q. polymorpha*, *Q. fusiformis* Small and *Q. canbyi*.

As we reach 1200 m, El Bosque Escuela is on our left (to the east) and we continue onward to the town of Santa Rosa to the official entry to this "School in the Forest." El Bosque Escuela belongs to the Universidad Autonoma de Nuevo León and serves as open class room for the students of the Forestry Sciences Faculty. The road leading to Santa Rosa is devastated, with large portions to be found in the canyon below and in many places this already dangerously winding road is reduced to only one lane. We visit the nursery and then go off on foot down the road that will lead us through El Bosque Escuela and which is no longer practicable – indeed no longer exists in many places – for motorised vehicles.

Growing here are *Cupressus arizonica* Greene, *Pinus pseudostrobus*, *Juniperus flaccida* Schltldl., *Cercis canadensis*, *Arbutus xalapensis*, *Carya*, *Ungnadia speciosa* Endl., *Fraxinus* and *Sophora*. There are also a lot of oaks: *Q. tuberculata* Liebm., *Q. laceyi*, *Q. edwardsiae*, *Q. laeta*, *Q. canbyi* and *Q. cupreata*.



Quercus flocculenta

photo©Béatrice Chassé

We leave to spend the night in Galeana, and along the road that takes us there we find *Q. canbyi*, *Q. pringlei* and *Pinus arizonica* Engelm. Both of the locations we have for *Q. flocculenta* C. H. Muller are at Cerro El Potosí, which is where we are headed tomorrow. It is the highest point of the Sierra Madre Oriental, culminating at 3713 m.

***Quercus flocculenta* C.
H. Muller 1936**

We are off to an early start because we intend to go all the way to the top first to find *Pinus culminicola* Andresen & Beamon and driving is very slow on the unpaved road, built for the

microwave relay station that was installed at the summit in the 1960s. I wonder, was there another road in the 1930s when C. H. Muller discovered and described this species ?

It is indeed a breathtaking view the one that looks out over these vast populations of *P. culminicola*. Not quite at the top, but not any less spectacular, the spectral white masses of burnt *P. culminicola* interspersed with patches of green *Abies vejarii*, *Pinus hartwegii* Lindl., and *Pseudotsuga menziesii*. The cloudy sky with intermittent sun bursts light the scene.

There are many, many oaks here. The first *Q. saltillensis* we see is at 2100 m and between there and 2900 m we find populations of varying size of *Q. cordifolia*, *Q. striatula*, *Q. hintoniorum*, *Q. greggii*, and *Q. hypoxantha*. And, at 2771 m, *Q. flocculenta* – what we have come for! It is good that I am writing this now because Thierry Lamant has told me since that *Q. flocculenta* may very well be a synonym of *Q. saltillensis*. To be continued...

A most extraordinary *Agave gentryi*, with a flower stalk nearly 4 m tall, bids us farewell as we leave this place and head back to Galeana for a good night's rest. Tomorrow we are headed for the city of Durango – a 700 km drive across the "altiplanicie mexicana" – obligatory passage in northern Mexico between the Sierra Madre Oriental and the Sierra Madre Occidental.

Quercus resinosa Liebmann 1854

The "altiplanicie mexicana" that we drove through yesterday is, although fairly uneventful for an oak enthusiast, the most significant physiogeographic region in Mexico, constituting as it does ¼ of the country. There are many rare plants to be discovered here. Among the genera that are only found here (and in some places in the southwest of the United States) are *Ariocarpus*, *Grusonia*, *Lophophora* and *Sartwellia*. About 90 km from Durango the countryside is dominated by *Acacia* species with here and there



Quercus resinosa

photo©Béatrice Chassé

some cultivated fields (corn, beans).

After a very comfortable night and good meal in Durango, we head off northwest on MEX23 from the city of Durango in the direction of a place called El Mezquital looking for *Q. depressipes* Trel. and *Q. resinosa*. It is raining with a very overcast sky, but quickly after leaving Durango the sun is shining. A very impressive military check-point has to be crossed to leave the city, and we will fall upon this more and more frequently as we go further west and north in Mexico. A portion of this road is planted with *Q. fusiformis* and the "coco plumosa" (*Syagrus romanzoffiana* (Cham.) Glassman). Very odd.

Here we are in the Sierra Madre Occidental, and at 2200 m the first oaks that we see, growing in sparse clumps in a vast grassland, were later to be identified by Thierry Lamant (with help from Richard Spellenberg and Jeffrey Bacon) as a southern form of *Q. laeta* (that used to be called *Q. transmontana* Trel., considered today only by Govaerta & Froden as a distinct species).

9 km from El Mezquital there are *Q. resinosa* on both sides of the road. It is a very beautiful tree, with massive leaves lit up by a yellow/white tomentum on the underside of the leaf. The very characteristic scaly bark adds to the charm of this tree that outclasses many. The acorns had apparently fallen several months before because the ground was covered with only rotten acorns and dozens of seedlings. Growing here as well is, perhaps, *Q. conzatti* Trel. and several species of pine.

As we head back to Durango to spend a second night, we find the city literally submerged in water, due to all the rain that we happily did not see one drop of. Huge amounts of rain continue to fall during the evening and throughout the night.



Quercus durifolia

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***Quercus durifolia* Seemen ex Loes 1900**

Under a grey sky, light rain and dense fog we leave the city on MEX40 to the southwest towards El Salto and Mazatlan. Along this road we are accompanied by *Pinus engelmannii* Carr, *P. durangensis* Mart., *P. strobiformis*, *P. teocote*, *Arbutus glandulosa*, *Juniperus deppiana*, *Arc-tostaphylos*, *Cupressus arizonica*, *Styrax*... and spectacular views of the

scenery and general ambiance of the Sierra Madre Occidental, esthetically more grandiose than the Sierra Madre Oriental. We spend the day between 2100 and 2800 m.

The oaks are magnificent and numerous: *Q. durifolia*, *Q. cordifolia*, *Q. coccolobifolia*, *Q. sideroxyla*, *Q. resinosa*, *Q. rugosa* Née and *Q. scytophylla* Liebm. *Q. durifolia* is one of those Mexican oaks of the section *Lobatae* whose elegance equals that of the oaks of the subgenus *Cyclobalanopsis*. Of most of these species we find both very tall trees as well as bushy forms in some places because of great disturbance to the ecosystem from one human activity or another (especially for *Q. coccolobifolia* and *Q. resinosa*). We find *Q. sideroxyla* as 15m tall trees in one place and elsewhere as spindly little trees growing under different pines. *Q. scytophylla*, another extremely elegant tree, has quite variable leaves, from entire to slightly lobed, but is always easily identifiable with its characteristic thick white pubescence on the underside.

Easy identification was, however, not to be the case for numerous oaks of section *Quercus* found here and even more so in Chihuahua in the days to follow. A cloud of frustrating confusion looking somewhat – but never quite enough – like *Q. arizonica*, *Q. grisea*, *Q. laeta*, *Q. deserticola* Trel., *Q. chihuahuisensis* Trel... ? I owe many thanks to Francisco Garin, Jean-Louis Hélardot, Thierry Lamant (and through Thierry, to Richard Spellenberg and Jeffrey Bacon in Mexico) for looking at photographs of these curious creatures to try to produce names or ideas. The moral of the story: much field work is needed in these parts of Mexico!

We arrive back in El Salto fairly late in the evening and decide to spend the night there. It is raining so hard we need to shout to be heard! The next morning we are headed back north with the intention of driving to Delicias (Chihuahua) where we will be looking for *Q. deliquescens* C. H. Muller. Arriving in the city of Durango we decide that we need a break : we have travelled thus far 3627 km in 14 days and still have a long way to go. We spend the day in Durango, happy to not be in our Toyota Land Cruiser, catching up on e-mails, sorting notes and samples and mostly... sleeping!

***Quercus deliquescens* C. H. Muller 1979**

Day 15 is spent driving the 650 km between Durango and Delicias, on MEX45. Along this road the hillsides are covered with *Q. emoryi* Torr. Before turning on CHIH22, we find a Chinese restaurant, owned by a man whose mother was Chinese and whose father was Mexican. Aside from the roasted, whole Jalapeno peppers on the menu, everything else is Chinese cuisine (as that is found in America) except that we don't get chopsticks. Much as was the case earlier on in the United States, at the end of the 19th century the Mexican government actively encouraged Chinese immigrants to come because cheap labour was needed to build railroads and such.

"Recent heavy concentration of collecting efforts in the Chihuahuan Desert region of Mexico... have yielded much new information on the flora and its distribution. Among the novelties is a striking species of *Quercus* here described as new." Here was the bait that lured us to Delicias. Writing in *Phytologia*, Vol. 42 (1979), pp 289-291, C. H. Muller goes on to give a very precise description of where



Quercus deliquescens

photo©Béatrice Chassé

to find this new species, *Q. deliquescens*. "Chihuahua: south slope and top of Sierra del Roque, approached from Minas Las Playas via Rancho El Saucito." Leaving the paved road that leads out of the town of Julimes, there are 40 kms of very difficult terrain that take us nearly two hours to do: the Chihuahuan desert with here and there tiny abandoned villages of broken adobe-type structures and very old and weathered sign posts indicating various "ranchos." If Clint Eastwood had appeared on the horizon it wouldn't have surprised me...

We finally stop along one of these abandoned villages, at the foot of a canyon. My GPS tells us that we are but a few hundred metres from the coordinates I had programmed (C. H. Muller : 28°.39'-28° 40' N ; 105° 18'-105° 19') and have to climb up the canyon. It is extremely hot and we are drenched in dust and sweat, with only the occasional *Ungnadia speciosa* to offer a bit of shade. Luckily we do not have far to go before falling almost exactly on these coordinates and finding our first clump (there are no other oak species here). There are only a few dried acorns and the trees are covered with a very slender kind of wasp - but further up there is a larger group with a few healthy acorns. Although we are in the precise location indicated by Mr. Muller, this resembles *Q. pungens*. There are no other oaks around.

Back across the desert to Julimes we drove, and then from there to the city of Chihuahua where we will spend the night on our way further southwest towards Tomochi and, finally, Yecora in Sonora. We have had nothing to eat all day long for some reason and so it was quite funny that upon leaving the desert the first place to eat we see is called El Milagro.

***Q. macvaughii* R. Spellenberg 1992**

MEX16 takes us to Cuauhtémoc and through our most worrying incident with the police. After stopping us, and saying something about our car being involved in some matter, they tell us to follow them and stop where they stop. 15



Quercus macvaughii

photo©Béatrice Chassé

or 20 minutes later down the road, Rubén sees them in the center of the highway and manoeuvres to stop where they are and they ... simply wave us on with a nod of the head.

Cuahtémoc is a city where one out of every 4 or 5 vehicles - including very large trucks - does not have a license plate. As we go further west, this was to remain true. The general ambiance in these parts of Mexico is one of unease and suspicion and one has to be careful with camera and notebook. Mexico is the country with the highest assassination rate for journalists.

Travelling towards Tomochi, we encounter the first in a series of the different oaks here that are very difficult for us to identify - many of which will have to await my return to France to receive a name, or even a clue. We just called them *Quercus* sp? or, more fondly, by a collective nickname of Rubén's: "los odios" (the hated ones!). The populations we find here have been tentatively identified as hybrids of *Q. arizonica* and *Q. grisea*. I'm not convinced though



Quercus chihuahuensis x *grisea*

photo©Béatrice Chassé

that they have nothing to do with *Q. chihuahuensis*. A little bit further down the road we find equally problematic populations that will later be identified as a hybrid between *Q. chihuahuensis* and *Q. grisea*. Along this way we find our first *Q. macvaughii* (2177 m). It is hard to believe that this spectacular species was only discovered in 1989 and described in 1992. There are only a few acorns on the ground and they obviously have fallen some time ago. *Q. macvaughii* is very common in these parts, unlike a similar species, *Q. fulva* Liebm., which is also on our Chihuahuan list but that we will fail to find.

We arrive in Tomochi – an unpleasant town where it is not recommended to go out after dark. Fortunately, Rubén, who had a project near here the year before, knows a simple but very comfortable little hotel run by a very kind elderly lady who had the weathered face of someone who has seen a lot and the bright eyes to show that she had made some sense of at least some of it.

The following morning after a night of torrential rain we leave Tomochi in the direction of Yakuirachi slightly to the northwest, passing through the Ejido Tatuaca and the hamlet of Valacillo. There are many oaks here: *Q. durifolia*, *Q. sideroxyla*, *Q. macvaughii*, *Q. rugosa*, several of "los odios" – but no *Q. fulva*.

Quercus perpallida Trel. 1924

We have spent the night in Basaseachi right near one of the two entrances to El Parque Natural Cascada de Basaseachi, from where we leave this morning to see what oaks we can find here and further down the road on the way to Yecora (Sonora). We leave on the road that goes to San Juanito and very quickly (2000 m), are amongst *Q. coccolobifolia*, *Q. sideroxyla*, *Q. macvaughii*, several of these bothersome little white oaks and, luckily for us, *Q. perpallida*. The only other location we have for this oak is in La Sierra el Encinal, to the north and west of Yecora, and for safety reasons we had previously decided not to go there.



Quercus perpallida

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Spectacular scenery abounds in the Natural Park, where we find our "pointy-leaved *coccolobifolia* (?) hybrid" plus a pretty little *Quercus* sp? which still remains a mystery. It looks to me to be a variation of *Q.*

depressipes. We also find what, according to Thierry, is a kind of *Q. aff toumeyi*, but it will have to wait for a final verdict because apparently this taxon is being revised to be split into two. This is a beautiful place with extraordinary sculptured cliffs and gorges covered in oak and pine – as is this whole area that we have driven through since a bit before Tomochi, two days ago.

Back on MEX16 going towards Yecora, *Q. glaucoides* Mart. & Gal. is very dominant and gives a blueish hue to the countryside. Here also, magnificent *Q. durifolia*, *Q. scytophylla*, *Q. coccolobifolia* and our first *Q. viminea* Trel. We also find quite a lot of another strange little oak which looks like *Q. deserticola* (not known in Chihuahua) or an introgressed or local form of *Q. laeta* (also not reported in this state) or *Q. arizonica*.

Just past the border into the state of Sonora we see another large-leafed oak: is it *Q. tarahumara* Spellenberg or is it *Q. conzattii*? The bases of the leaves suggest the latter, but the size of them, the former.

***Quercus albocincta*
Trelease 1924**

After a night in Yecora – another fairly uneasy place to be – we head back east to cover the same area as



Quercus sideroxyla

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Quercus aff toumeyi

photo©Béatrice Chassé



Quercus albocincta photo©Béatrice Chassé



Quercus coffeicolor photo©Béatrice Chassé

yesterday afternoon which we had gone through fairly quickly in order to arrive in Yecora before dark. Breathtakingly beautiful countryside with the only gloomy note being that the oaks in Sonora are not being very acorn-cooperative this year.

We find large populations of magnificent *Q. albocincta* and also *Q. glaucooides*, *Q. viminea*, *Q. sideroxyla* and *Q. macvaughii*. There are of course many pines and other genera here, but after nearly 3 weeks and 5341 km, it seems I only have eyes for *Quercus*!

Back in Basaseachi we spend another night before heading southeast towards Creel (Chihuahua) and the Sierra Tarahumara. We have been lucky with the rain in that, except for one day early on (in Diamante), it always falls at night.

Quercus coffeicolor
Trelease1924

The road to Creel is in the process of being cut out of the mountain in some places, and with all of the rain that has fallen recently driving is difficult but well worth the trouble. *Pinus durangensis*, *P. engelmannii*, *P. teocote*, *P. arizonica*, *P. ayacahuite*, *P. leiophylla* var. *chihuahuana* and *Picea chihuahuana* Martinez line the way. We visit the Vivero Forestal Bosque Modelo Chihuahua (in Bocoimba), where the Director, Saul Silva, is an acquaintance of Rubén's. They

specialise in growing pines but also some oaks – mostly *Q. emoryi* Torr. because the acorns are a food source here and are sold at local markets.

After a quick lunch in Creel we head off to El Parque Natural Baranca del Cobre. Spectacular scenery lines the way, and not infrequently, a thin line of bright colour weaves up the surrounding mountains. These are the Tarahumara indian women with their brightly coloured skirts and tops, going home somewhere hidden in the Sierra. We note along the way most of the conifers we saw this morning and *Q. rugosa*, *Q. conzattii* (?), *Q. sideroxyla*, and *Q. durifolia* plus a new mystery oak that has since been tentatively identified as being one of the geographic forms of *Q. laeta* that used to have species status (*Q. obscura* Trel.).

We spend a very comfortable night in Creel and start off in the morning in the direction of the town of Guachochi (CHIH25), although we will turn around before arriving there to come back to Creel and spend another night before heading north to the city of Chihuahua.

This was one of the last of such beautiful Mexican roads that I was to drive, and so it seems fitting that it delivered up a wonder-

Quercus viminea



Quercus tarahumara photo©Béatrice Chassé





Quercus conzattii

photo©Béatrice Chassé

ful surprise: *Q. coffeicolor*, although we were not sure. Positive identification had to wait for Francisco Garin. Many species of pine, *Q. macvaughii*, *Q. viminea*, *Q. durifolia*, *Q. coccolobifolia*, *Q. scytophylla* and assorted section *Quercus* headaches are part of what surrounds us. We

turn around at a place called Tatatuichi, heading back to Creel to spend the night.

***Quercus depressipes* Trelease 1924**

Most of yesterday was spent driving back north to the city of Chihuahua where we spend the night. In the morning we are headed to El Parque Nacional Cumbres de Majalca where we hope to find *Q. subspathulata* Trel. and *Q. depressipes*. A very pretty drive takes us through large clumps of *Q. emoryi* (we are at 1575 m). At around 2000 m, the first *Q. rugosa* appear, and a bit further, pretty little *Q. depressipes*. We drive far up the canyon with huge *Q. emoryi* looming over us and end up in a very dense *Q. grisea* woodland. There is a lot of *Q. rugosa* here but we do not find any *Q. subspathulata*.



Quercus depressipes

photo©Béatrice Chassé

The end of the road

After another night in Chihuahua we set off to do at least a part of the 818 km between here and Monterrey. We stop in Torreón – a city that smells of gasoline everywhere and all the time – for

the night and are in Monterrey the next day, late afternoon. Zilmar had informed us that he has found *Q. intricata* and had samples for us and so we decide to meet back in Saltillo the following day. After a bit of sight-seeing and finally returning the Land Cruiser, I say good-bye to Rubén and the north of Mexico as I board what will turn out to be a very comfortable bus to sleep in whilst being driven to Puebla to visit with Allen and Maricela Coombes. It was a pleasant farewell from Mexico – good food, excellent company – during which time I will have the opportunity to see *Q. trinitatis* Trel. and *Q. frutex* Trel. with Allen.



Quercus trinitatis photo©Béatrice Chassé

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Quercus frutex photo©Béatrice Chassé