

Sierra Madre Oriental

Mexico's Mysterious East

A Greentours Tour Report

16th November – 1st December 2022

Leaders: Ian Green & Eric Miranda

An amazing tour with around 250 species each of butterfly and bird. And it would have been more if a norther hadn't caused some weather disruption in the first few days, unusual at this time of year. Outstanding scenery, diverse extensive wild natural habitats, and in the background always Mexico's warm welcome and wonderful food.

Day 1 November 16th Arrival

We convened from various flights at the Real Camino Hotel within the airport and joined Eric for dinner.

Day 2 November 17th Bernal Pueblo Magico and to Conca in the Sierra Gorda

After a fine breakfast spread we headed out into Mexico City's legendary traffic. It was actually not too bad but it did take a while to get out into countryside, the city is so huge. Eventually though we were heading off through the high level plains north of the city, flocks of White-faced Ibis, Cattle Egrets and various blackbirds and cowbirds swirling up from the agricultural landscape.

We turned off towards the mountains stopping at the Pueblo Magico of Bernal. This pretty little town sits below a striking rock formation which unfortunately (!) today we didn't have time to climb. We wandered the picturesque streets and Eric told us tales of live in Mexico and then we headed for lunch. Of course we couldn't ignore our first butterflies which included a Black Swallowtail amongst the flowering climbers and a Pink-spotted Swallowtail in the bougainvilleas.

The afternoon was spent gradually climbing into the Sierra Gorda. On the ranges south-facing slopes this took us through some very dry country where cacti started to dominate. When we started to catch sight of huge barrel cactus we just had to stop! We took a walk through the intriguing vegetation. The 'barrels' were *Ferocactus latispinus* and there were large plants of *Cylindropuntia imbricata* and the Desert Christmas Cactus *Cylindropuntia leptocaulis*. *Fouquieria macdougalii* must look amazing in the right season but now there were just one or two blooms and none of the hoped for

Hummingbirds were noted either, though mid-afternoon was not the ideal time to be looking. Bewick's Wrens crouched under the cacti and there were quite a few Dusky-capped Flycatchers in the shrubby trees. Chihuahua Ravens called overhead. We saw our first butterfly of a trip that would be full of them – and of course it was the only place we were to see Hackberry Emperor! Smaller cacti, one or two of which had nice fresh blooms, were *Mammillaria muehlenpfordtii*, *Mammillaria pringlei* and *Myrtillocactus geometrizans*. The tall 'saguerros' were *Stenocereus dumortieri* whilst *Yucca filifera* added more vegetable architecture to the scene.

We stopped again in some dry cactus and thorn scrub a little higher up. Here *Agave triangularis* and *Bursera fagaroides* were noticeable and there was a different 'barrel' – this one *Ferocactus histrix*. Little tufts of grey on the low trees were the bromeliad *Tillandsia recurvata* and on the ground was another bromeliad *Hechtia lepidophylla*. We noted *Karwinskia humboldtiana* whose name commemorates not one but two famous naturalists, and the showy *Erythrostemon laxus*.

Then we just had to get going as there was still a journey to the Misión Conca where we'd stay for the next three nights.

Day 3 November 18th Sierra Gorda: Cascada el Chuveje

We met at seven in the morning and took a walk around the hotel grounds. Initially quiet things soon warmed up. Highlights could have been the two species of Cracker on a tree by the stream; Variable and Gray. Or could have been the Turquoise Crayfish spotted in the stream. Or was it the two magnificent Mexican Gray (also known as Red-bellied) Squirrels chasing each other round and round a tree. Anyhow there were a few birds too – Social Flycatcher, Western Pewee, Eastern Phoebe, Golden-fronted Woodpecker, Masked Tityra, White-throated Thrush, Audubon's Oriole, Yellow-winged Tanager and Western Kingbird.

After breakfast it was to Cascada el Chuveje. Sarah noticed a small deer just before we got there – probably a Red Brocket Deer? We parked up by some small cantinas and started our walk to the waterfall. It was not so far but it took us all morning, indeed we were a little late back for lunch!

Achimenes erecta excited us with its bright red flowers. This lovely *gesnerid* has generated many a common name including Cupid's Bower and Magic Flower! *Dendroviguiera quinqueradiata*, a tall woody composite had heads of yellow flowers which even in the dull conditions that prevailed at the start of our walk were attractive to butterflies and other insects. Here we saw several Ardent Crescents and the cute little Elf which was common. Skippers were very varied and included some very nice species such as Triangle Remella, Mazan's Scallopwing, Variegated Skipper, and the wonderful Death-mask Spurwing. In the dry meadows were Tropical Leafwing and Checkered White. Nigel found the lovely *Cyanopepla bella*, all reds and blues...

The spectacular bromeliad *Aechmea mexicana* was much admired and in the trees was *Tillandsia schiedeana* and soon we spotted some gorgeous pink *Laelia anceps* orchids in huge bunches on the branches above us. Whilst looking for these we spotted an Eyed Sister perched up. Our first Eighty-Eight of the tour, the Orange-striped Eighty-Eight, was a prize find. Painted Redstart flashed brilliant red at us and Audubon's Oriole was seen too. We soon became aware that Mexico is good for *Salvias*, this morning's species included *compsostachys*, *connivens*, *tiliifolia* and widespread *polystachya*. *Begonia gracilis* was everywhere and the damp conditions suited *Calceolaria tripartita*. Flowers continued

with the unusual *Amicia zygozomeris*, some showy white-flowered *Montanoas*, yellow wands of *Echeandia mexicana*, and the showy white morning glory tree *Ipomoea murucoides*. Woody plants were particularly diverse with *Carpodiptera cubensis*, *Juglans mollis*, *Juniperus flaccida*, *Oreopanax xalapensis*, a range of oaks including *Quercus acherdophylla*, *Quercus aristata*, *Quercus magnoliifolia*, *Quercus polymorpha* and *Quercus sartorii*, and there was the showy pinky-red flowered *Erythrina lanata* too. A strange tree with nettle-like leaves and clusters of orange fruit held close to the stems was *Urera caracasana*. Amongst the trees were Ladder-backed Woodpecker and Olivaceous Woodcreeper as well as a single Rose-throated Beccard. We saw a pair of Black-crested Titmouse, and with the many Townsend's and Hermit Warblers there were a few Ruby-crowned Kinglets and a Yellow-breasted Chat.

Continuing, the valley became narrower and narrower until we found ourselves walking through a sublimely beautiful gorge with a small river cascading gently through a fine stand of the local plane tree *Platanus mexicana*. Here we found the delicate palm *Chamaedorea radicalis*, the impressive 'Elephant Ear' *Xanthosoma robustum*, and the Green Dragon *Arisaema dracontium*. A Wood Thrush lurked by the water. Rocks in the little river were festooned with the elegant maidenhair fern *Adiantum poiretii* whilst the shaded walls of the gorge near the waterfall itself was adorned with the lovely purple-pink gesnerid *Achimenes patens* and a whole bunch of ferns such as *Adiantum andicola*, *Blechnum appendiculatum*, *Campyloneurum angustifolium* and *Llavea cordifolia* as well as the bromeliad *Hechtia lundelliorum*. Great Spreadwing (*Archilestes grandis*) flew by the river.

Back at our picnic by the rock Eric was cooking delicious things and excitedly showed us one of the plants he was using in the meal which was growing wild a few metres away. A Red Velvet Ant (*Dasymutilla magnifica*) was much admired.

Departing we made a brief stop where the river crossed the road and here I got quite excited by a beautiful yellow and black lepidopteran which I first thought to be a metalmark butterfly of some sort but then turned out to be a geometer *Smicropus laeta*.

We were already late to go to Tancana an archaeological site in the hills nearby. However ancient sites in the Sierra Gorda are not so well visited so the gatekeepers are not so bothered either. It was all locked up when we got there so we couldn't go in! Round about we introduced ourselves to the distinctive tree *Guazuma ulmifolia* which we would see a lot of during the trip. There was also a nice surprise in the shape of the lovely Red-bordered Pixie, a strikingly-marked metalmark.

The night drive took us up into the hills east of the valley for just over an hour. We only saw one animal but it was a good one – Cacomistle. This gave us great views as it crossed some open ground. We went on quick night walk round the grounds and found the turquoise crayfish active in the stream. In a fruiting fig next to the restaurant we found two cute little Mexican Mouse Opossums and a Virginia Opossum.

Day 4 November 19th Sierra Gorda: Presa Jalpan and to Xilitla

The morning walk around the grounds started in very dull weather but things soon improved and it turned out to be a marvellous sunny day.

Golden-fronted Woodpecker watched us from the top of the dead tree in the carpark. A White-eyed Vireo was a nice find and so too a Bordered Patch that sat quietly for us. There were many White-winged Doves in the trees. We spent a while with the *Bdallophytum americanum* trying to work out what the host plant was. It was either the many Gumbo-limbo (*Bursera simaruba*) or the Mahogany (*Swietenia* sp) but could we rule out the roots of something cleared from the area? As usual Mexican Gray Squirrels were very active. We took Julian to meet the Crackers. Again there were three of them but this time all three were Variable Crackers. Walking back to breakfast the birds became very active with Western, Hepatic and Yellow-winged Tanagers, Eastern Phoebe, Masked Tityra, Yellow-bellied Sapsucker and lots of Clay-coloured Thrushes.

Breakfast was much enjoyed in the lovely setting, birds and squirrels active in the figs by the restaurant. Then it was off to Jalpan and our appointment with the reservoir there. We found it to be a lovely setting, the quiet waters surrounded by slopes covered in a light rather thorny woodland. There was lots of *Ageratum* and other *Asteraceae* flowering along the roadside and as soon as we alighted from the minibuses there were butterflies. And then more butterflies... It was a crazy morning for them. Hardly had we got our cameras out and there was a Two-barred Flasher posing well. Then a Soldier, two Red-Rims and a Zebra Heliconid. Both the latter two would prove to be common this morning. The Red-Rims in particular were more numerous than I have seen at any site. The *Ageratum* proved irresistible to large long-tailed skippers. There were White-striped Longtails, Dorantes Longtails, Brown Longtails, Eight-spotted Longtails, Double-striped Longtails and Esmeralda Longtails and quite possibly others too. There were numerous other skippers too such as Giant Sicklewing, Pale Sicklewing, White-patched Skipper, Chisos Banded-Skipper, Guatemalan Pellicia, Starred Skipper, White Enops, Bold Mylon and the impressive Yellow-tipped Flasher. The 'white skippers' were numerous with Tropical Checkered, Common Checkered, Turk's-Cap and Laviana's all present. Soon we spotted our first Julias and a Polydamus Swallowtail. An Orythion Swallowtail flew past and Malachites started to appear.

We didn't ignore the birdlife. There were Neotropic Cormorants, Snowy Egrets, Pied-billed Grebes, American Coot and a Little Blue Heron out on the water. Laughing and Ring-billed Gulls too. On land Blue-gray Gnatcatchers were common. There was a mixed party that contained Social and Boat-billed Flycatchers, Kiskadees, Scrub Euphonias and Rose-breasted Grosbeak. By the water's edge was a couple of Yellowthroats. Julian photographed a Ringed Kingfisher. There were also a number of dragonflies including the Cerulean Dancer *Argia anceps*.

By the water's edge was a Spotted Sandpiper and in the same spot the sun was warming the mud and soon butterflies were coming down to the water's edge. There were several Crimson Patches as well as a few each of Bordered Patch and Theona Checkerspots were there and quite a few Black Crescents. Later a mixed mud-puddling group had Salome Yellow, Large Orange Sulphur, Southern Dogface and Mimosa Yellows. Malachite were becoming numerous now and there was also Rusty-tipped Page and Pavon Emperor, the latter glowing dark purple. Glaucous Cracker flew about, sometimes trying to land on us. There were also Variable Crackers. Common Mestra in some numbers and a Silver Emperor. Mexican Bluewings were greeted with some oohs and aahs. Ruddy Daggerwings, Many-banded Daggerwings, Cream-banded Crescents, Painted Lady, Spring Azure, American Snout, the variety seemed to go on and on. We saw over a hundred species of butterfly at this site!

Lunch was by the lake under a handy palapa. Eric excelled again with tacos filled with the most tasty pork and fried onions, cacti and peppers.

The afternoon was spent travelling to Xilitla but we did manage time for one stop along the way. This was at Los Lobos. Here one walked around rocks which are embedded with fossils. It was fun to see the oysters and assorted other shells. Greater Pewee called from nearby forest. Under the sparse *Pinus devoniana* was the dark-flowered pea *Phaseolus coccinea*, the showy pink *Crusea hispida*, a member of the *Rubiaceae*, and the equally pink little *Glandularia bipinnatifida*, a member of the *Verbena* family. A little further on we spotted some tall *Dahlia imperialis* flowering by the roadside. Then it was on to Xilitla. Here we entered a lush world of obviously wet forest – very beautiful. The town itself seemed completely immersed in the fog forest. We arrived at the Posada James as dusk fell and settled in.

Day 5 November 20th **Sierra Gorda: Posada James, Edward James' Jardin and Sótano de las Golondrinas**

Most of us were out on the terrace shortly after dawn. What a lovely view, the steep-sided valleys below us cloaked in thick luxuriant forest, houses sometimes showing through the greenery adding splashes of colour. It was easy to see that plenty of moisture was needed to sustain such a forest and unfortunately today was one in which it was being supplied! It was foggy with a persistent drizzle, though the fog was rarely thick. The birdlife was rather subdued and the butterflies today would be almost non-existent in a place that is very good for them. Montezuma's Oropendulas were very obvious, so too Melodious Blackbirds. A family of large and noisy Band-backed Wrens were apparently making a nest in a bromeliad-laden tree on the terrace. In shrubbery near them were a pair of Grey-breasted Wood-wrens. Nigel found a Wedge-tailed Sabrewing which allowed great views. There were also sightings of Squirrel Cuckoo, Black-throated Saltator, Altamira Oriole, and a variety of warblers, before we took a well-earned breakfast. There was a Variable Cracker and a Karwinski's Beauty in the entrance area of the hotel. The black and white striped moth seen here was *Hemeroblemma mexicana* (*Erebidae*) and the hawkmoth was *Protambulyx strigilis* (thanks Nigel).

After breakfast we walked slowly down to the entrance to Edward James's Jardin. We again saw the sabrewing which was feeding on the *Holmskioldia sanguinea* and a Bat Falcon was nice to see by the entrance. *Calophyllum* trees had flowers, and there was *Licaria capitata*, a nice little tree with colourful fruit somewhat reminiscent of acorns, though in fact it is in the *Lauraceae*. The weather was still cold and drizzly so we saw little in the way of butterflies as we were guided round the garden. It was, as intended by its architect and until 1984, owner, a surreal experience. Paths wound up and down the fog forested valley with all manner of strange constructions to walk over, hold on to, or just stand and scratch one's head at! Beautiful would not be the right word though in truth the combination of forest and structure was intriguing. Water cascaded down through the stream. Ferns were everywhere. Many species. We did find one or two flowering orchids the most accessible of which was *Prosthechea cochleata*, incidentally the national flower of Belize! *Begonia nelumbifolia* and *Begonia wallichiana* draped over damp mossy walls and *Codiaeum variegatum*'s foliage looked nice through the sculptures. The huge *Cecropia obtusifolia* leaves would have been nice as umbrellas! *Cojoba arborea* had brilliant red and black fruit. Huge cheeseplants, *Monstera acuminata* and *Monstera deliciosa*, as well as

Philodendron radiatum, rose into the canopy. Walking back up the hill to the Posada for lunch we encountered a couple of good butterflies in the shape of a glowing fresh Erato Heliconian, and a nice Bates' Sister. A Plain Chachalaca was impressive if rather bedraggled.

After a short break we took to the vehicles and journey out to the Sótano de las Golondrinas, the cave of the Swallows. Unfortunately the weather was if anything worse and it rained steadily if lightly while we were there. The sink hole itself was very impressive. Sarah even did the rope thing so she could peer over the edge – it goes down 500m to a floor not visible in the gloaming. The hoped for spectacle of the bats coming out en masse just didn't materialise probably due to weather that meant few insects would have been available for dinner for them. The swallows of the name are not in fact swallows but swifts. They also had not bothered to come out today so we just saw or rather heard a few of them returning to the cave. A few bats came out but that was it. The Green Parakeets at least did give us a show. Walking back up the steps (long way!) several of the group had a close-up experience with three Virginia Opossums.

Then it was the rather lengthy journey back and a fine barbecue hosted by Eric who was masterful in his cooking of the steaks. This was preceded by a board of parma hams, cheese, walnuts and the like. Delicious!

Day 6 November 21st to the Gulf Coast

We met up at decidedly early 06.45 for departure. Today was the long journey that joins the two halves of the tour and we were to spend much of the day travelling. At least the poor weather today was less impactful than the day before! It was indeed still cloudy and often foggy as we drove southeastwards from Xilitla. We stopped after more than two hours for a late breakfast, the plan being to utilise some necessary nosh time to also see some butterflies and birds. The weather though ensured that butterflies were scarce. We did though find a number of Carolina Satyrs and several Banded Peacocks. A Great Southern White and a Dusted Spurwing (a skipper, not as I first thought, a metalmark) were nice. Best was definitely a fine fresh Red-bordered Pixie.

The birds however didn't mind the weather and kept us busy. There were no less than three species of kingfisher close by our breakfast table. A huge Ringed Kingfisher, a fine Amazon Kingfisher and the obviously much smaller Green Kingfisher. Snowy Egret, Tricolored Heron and Little Green Heron joined a bunch of Black-necked Stilts in the rather nice river. Northern Roughwings were catching insects just above the waters' surface sometimes joined by Vaux's Swifts. Best find was probably a Muscovy Duck which actually allowed us a good look – the wild birds are often very shy. Two Roadside Hawks perched on trees along side the river as did a Red-billed Pigeon. There were also Masked Tityras, Golden-fronted Woodpeckers, House Wren and an assortment of warblers. There was a delicate flowering solanaceous vine and Heinz pointed out the naturalised Sweet Potato flowering by the breakfast tables. A very convincing bird dropping turned out to be a caterpillar, probably Giant/Thoas Swallowtail Nigel informed us.

Then we had a lengthy journey where we just watched the landscapes changing gradually as we dropped steadily to the Vera Cruz coast. Eventually we stopped at the very impressive

archaeological site of El Tajin. No problem with opening hours here though we only get an hour and more time would have been nice. The forest edge had some impressive palms *Attalea buttyracea*, also *Cordia salvadorensis* and the shrubby *Syngonium macrophyllum*. In the ditches grew Papaya but also something that was not Papaya but looked quite like it. This was *Cnidocolus aconitifolius*, the Tree Spinach. We found a number of White Satyrs and Umber Skipper. There were plenty of birds about, mostly common species but we did see another pair of Black-crested Titmouse, and the only Bell's Vireo and Least Flycatcher of the trip. Then it was off to the Gulf of Mexico Coast, Short-tailed Hawk en route, and our comfortable hotel.

Day 7 November 22nd Cienega del Fuerte, Estero Casitas, Playa Maracaiba and to Xalapa

Several of us met down by the shore at the front of the hotel not so long after the sun had got up. A pair of Willets were posing on some rocky debris further up the coast and among the smaller waders there were Sanderlings. Our first Brown Pelicans were seen just offshore. The neighbouring plot of land had coconuts growing in it and there were White-eyed Vireos here.

At eight we drove for fifteen minutes to the entrance track to the Parque Estale Cienago del Fuente. This large tract of mixed mangroves and farmland was good for birds. Particularly raptors. There were lots of vultures of the usual persuasion but here we were able to also see a Yellow-headed Vulture or two. A Laughing Falcon sat upon a tree very close to us before flying off and hiding and then laughing! There were several Roadside Hawks and a nice surprise was an Aplomado Falcon which we spent some time watching. There were few butterflies, it was a bit early and decidedly cool with the 'norther' still affecting us. However we did manage to see a fine Banded Heliconian, and perhaps the highlight of the morning was an unexpected Short-tailed Morpho which suddenly sailed past us only to be attacked from all directions by Western Kingbirds. It seemed somehow to dodge the attacks and soon went into hiding. Woodpeckers featured well this morning with a pair of Pileated Woodpeckers putting on quite a show in a big dead tree, a Golden-fronted Woodpecker also landing there, and later we had good views of a Ladder-backed Woodpecker. In flower along the track was *Pachira aquatica* with large showy blooms, this a member of the Mallow family. It has impressive fruits - the capsules are large, brown, woody, up to 20-30 cm long, rough, and egg-shaped, with a diameter of about 10-15 cm, weigh about 1-1.5 kg, and contain 10-25 nuts! Birding continued with Buff-bellied Hummingbird, Common and Gray-crowned Yellowthroats, Montezuma's Oropendula and Eastern Meadowlark. A flock of Wood Storks circled overhead. Ringed Kingfisher sped by. The impressive ivy-tree *Aralia excelsa* was noted and the Bitter Coralberry *Ardisia compressa* grew alongside the track where *Malpighia mexicana* had pretty flowers and *Malvaviscus arboreus* was smothered in red blooms. We were now in a landscape where fig trees were common, here *Ficus crocata* and *Ficus yoponensis*, both providing homes for the spectacular orange-yellow flowered parasite *Psittacanthus calyculatus*. There was another striking bromeliad in the form of *Aechmea bracteata*. Trailing and climbing plants were a feature here with white *Thunbergia fragrans*, *Vitis tiliifolia*, and the strange bitter melon *Momordica charantia* with its knobbly fruits, all swarming over trees and bushes.

During breakfast we watched Brown Pelicans fly past and an Osprey. A surprise was two Aplomado Falcons which pursued a wader far out over the sea. Three Tricolored Herons flew past then so did two Reddish Egrets.

Breakfasted and packed we headed to Estero Casitas, White Ibises and White-faced Ibises and various egrets were noticeable in the fields. We arrived at the Balneario to be welcomed by some super-friendly dogs. And a fine Great Black Hawk, intent upon something and not bothered about us. By the river we watched Ospreys, Yellow-headed Vulture, Spotted Sandpipers, Blue-gray Tanager, Ruddy Ground Dove, Yellow-crowned Night Heron and Great Blue Heron.

We walked the trail back towards the main road which proved to be a butterfly extravaganza! Conditions didn't seem great, it was cloudy and rain threatened but somehow the butterflies kept coming. Mangrove Buckeye and Mexican Heliconians brightened the day. More stunning still was the Banded Orange Heliconian. Lycaenids, unlike in much of Europe, are often rather scarce in Mexico yet there are very many species, especially hairstreaks. Nonetheless its always a good moment in Mexico when you do encounter one and they are often very beautiful. This morning we managed two - Dusky-blue Groundstreak and the rather wonderful Silver-banded Hairstreak, a type of 'green' hairstreak. In the undergrowth the Broad-tipped Clearwing fluttered gently. There was a whole range of longtail skippers with many Dorantes Longtail and Brown Longtails, but also the Pronus Longtail and the well-named Cobalt Longtail . Skippers were particularly varied and included Common Mellana, Gayra Skipper, and both Veined White-Skipper and Turk's-Cap White-Skipper. The clearwing moth Julian found here was a Scarlet-tipped Wasp Mimic Moth *Dinia eagrus*.

We headed down to Maracaibo Beach at Nautla for lunch but just as we were getting there we stopped for a presumed Tiger-Heron. It was not – instead we found ourselves watching a Pinnated Bittern. This exceedingly stripey bird was right out in the open and we had great views. Then it was down to the beach where some walked the strandline for a while or birdwatched whilst lunch was produced. An immature Common Black Hawk allowed close approach. Willets were along the shore whilst offshore were Brown Pelicans. A Royal Tern flew right over our heads and at least three Caspian Terns flew past offshore. So too did Laughing Gulls and a Franklin's Gull. A flock of forty Pintail flew past. A distant Magnificent Frigatebird was welcome. Osprey flew past. There were some nice plants from the pea family here notably rose-pink *Canavalia rosea* and yellow *Vigna luteola*.

Then it was off to Xalapa which we reached in good time and settled into our hotel.

Day 8 November 23rd Xalapa Botanical Garden and La Isleta Grande

We started the morning with breakfast on the 6th floor of the hotel in Xalapa. This afforded a lovely view out over the city to the forested lands beyond. Behind them rose 4282m Cofre de Perote on the right of our vista and Mexico's highest peak Orizaba at 5636m on the left. This snow-capped volcanic cone is the third highest peak in North America.

After breakfast we headed out to the edge of town and the botanic garden. We arrived in full sunshine. Entering the garden we were immediately surrounded by butterflies. Dr Milton Diaz took us round and gave us a half hour introduction to the garden explaining some of its features, notably the Cycad garden which contained over 90% of all the known Mexican species. Nigel was later to

find the really stunning Mexican Cycadian butterfly there too. Tiger Heliconians drifted around ground, their striking colours sometimes joined by the equally striking Mexican Heliconian.

Brown Jays drifted through the garden but otherwise birds were few and far between. Sarah and Heinz saw Blue-winged Teal in the polluted river. The garden was well labelled so we had a grand chance to get to know the largely local plantings, A Variable Cracker was by the orchid collection. By the entrance was a triumvirate of fine swallowtails. There was the large yellow and black Giant Swallowtail and three black and red species Dual-spotted Swallowtail and both Variable and Pink-spotted Cattlehearts. Ruddy Daggerwing and Many-banded Daggerwing were noted and also seen were Eyed Sister and Confusing Sister. Female Common Banners were very nice to see and we saw fast-flying Orange-spotted Prepona. Clearwings were a feature especially down in the coffee plantation where we found Thick-tipped Gretas and Klug's Clearwings. Surprising Whites were everywhere – except on the ground. In this area we also found the beautiful Blue-crowned Motmot. Julian photographed the unusual Tiger Mimic White.

There were many natural forest relicts still growing in the gardens such as *Clethra macrophylla*, *Erythrina americana*, *Ficus pertusa*, *Quercus xalapensis* (with *Tillandsia punctulata* growing on it), *Ostrya virginiana*, and *Beilschmiedia anay* with its rather wonderful mini-avocado shaped shiny fruits. *Telanthophora grandifolia* impressed with its huge leaves and sprays of golden flowers and there was the striking *Heliconia schiedeana* too.

The garden prides itself on its wide-ranging collection of Mexican plants. One could compare *Abies hickelii* and *Abies religiosa*, enjoy *Acer skutchii*, and see real live Allspice, *Pimenta dioica*, up close. There was a fine range of *Chamaedorea* palms, and the *Quercus* collection gave us a chance to check IDs and look for ones we'd see later. *Magnolia dealbata* and *Magnolia schiedeana* were hardly flowering at this season. *Pyrostegia venusta* formed hedges covered in impressive shows of orange flowers. Others of note are too many to mention (!) but here's a few: *Clusia salvinii*, *Diospyros riojae*, *Ilex socorroensis*, *Inga brevipedicellata*, *Persea cinerascens*, *Pseudobombax ellipticum*, *Sideroxylon socorrense*, *Styrax glabrescens*, the brushholly *Xylosma flexuosa* and the Staphylid *Turpinia insignis*.

At lunch time we headed for La Isleta Grande through sugar cane fields and we had to trundle along behind huge seemingly overloaded trailers carrying immense bundles of the cane to the two cane factories in the village. Past this we reached a quite shady wooded area where Eric and co set up the lunch. Either side of lunch we spent time by the bridge below which were some flowering shrubs. These were alive with butterflies – what a place! It was covered in Isabella Heliconians when we first arrived. But all manner of species came and went. Cecropia Sister and Confusing Sister, whilst a large Rayed Sister flew about. Costa-spotted Mimic Whites were interesting to see. Hairstreaks are always a joy to find and here we found several species. Julian spotted a Tiger's-eye Hairstreak that we would all eventually get a good look at. There was an Aquamarine Greatstreak and a Fine-lined Stripestreak too. Metalmarks were also good at this site. The distinctive Square-spotted Yellowmark was a nice find and we also saw Gray Bluemark, Fatal Metalmark and Bow-winged Tanmark. Guatemalan Patch was new and we saw Smudged Crescent and Guatemalan Tegosas too. Other species noted were Dingy Purplewing, Pearly Leafwing, Broken Silverdrop, Mottled Bolla, Hoary Skipper and Brazilian Skipper. Plantwise *Dracaena ghiesbreghtii* was of particular note, a native Central American Dragon Tree. Birds were good too. Below the bridge was a Canyon Wren, In trees

either side of the bridge were Red-legged Honeycreeper, Baltimore Orioles and various tanagers and warblers.

Day 9 November 24th Ashram del Bosque de Niebla

We met up at dawn to see what bird life might be around in the hotel's extensive grounds. The grounds contain many trees both planted and native and so attract many species. We found a goodly array of species. A family party of Band-backed Wrens were just great fun! Azure-crowned and White-bellied Hummingbirds visited a patch of *Holmskioldia* which was occupied by a bunch of Bananaquits. Yellow-bellied Sapsucker was in trees by our rooms and just above that was Morelet's Seedeater and a superb Gartered Trogon. Already Anna's Eighty-eights were flying about. Red-billed Pigeons sat in treetops and both Mealy Parrots and White-crowned Parrots flew overhead. A Squirrel Cuckoo and a bunch of Brown Jays were entertaining.

After a slightly protracted breakfast we set off for the Ashram. Five minutes up the road and we turned into the University campus and thence into private property beyond all of which proved fascinating. The University Campus here focuses on agricultural innovation. The next property is a commune living in some really oddly designed 'eco-houses'. The next property is an Ashram! We spent the morning walking from the commune to the Ashram and then around the Ashram. It started as it went on with a fine showing of Anna's Eighty-Eights around the commune buildings. These are simply stunning insects and here there were around twenty of them. A Splendid Mapwing was also there. We walked down the hill soon encountering many more Anna's Eighty-Eights. In one spot there were perhaps a hundred of them all together. What a sight it was. Eventually we found Anna's close relative the Navy Eighty-Eight, Nigel spotting one in amongst the Anna's.

During the morning and early part of the afternoon the butterflies just kept coming. Blue Morpho was seen around the Ashram and down by the stream. At the latter spot a Stoplight Catone drew the crowds. Up at the Ashram it was the turn of a Red-headed Firetip to receive the plaudits. There were Isabella Heliconians here and there but also Mexican Heliconians, Tiger Mimic-Queen, Klug's Clearwings, and Smudged Crescents. Checking my photos I find a Clearwing Mimic Queen. Speaking of clearwings there were abundant satyrid Clearwings. There were several species – Salvin's Ticlear, White-spotted Greta, Thick-tipped Greta and the lovely Leila's Ithomia. Common Ur-Satyr was impressive and we also saw Wide-bordered Satyr. Tailed Orange, Salome Yellow and Mexican Yellow were noted. Barred Yellow was common and we also saw quite a few each of Common Melwhite and Surprising White. A Lamplight Actinote was on the *Ageratum* by the Ashram. Rusty Pages, Malachites and Pearly Leafwing were all noted. Skippers were as usual diverse and Nigel added Turquoise Longtail, Ochre Hoary Skipper, Cloud-forest Sicklewing and Inimical Poan to our ever-growing skipper list. Here there were Two-barred Flashers, Lugubrious Blue Skipper, Common Bluevent, Confluent Skipper, Glassy-winged Skipper, Pale Sicklewing and the lovely Emerald Aguna. Birds seen included Slate-throated Redstart, Ringed Kingfisher and Common Chlorospigus. This area is known for *Quercus insignis*, a rare species of oak. We saw quite a few trees around and near the Ashram. Its other claim to fame is its acorns – the largest of any oak species - they are very impressive. They collect the acorns in the Ashram and plant them round the property. There was also *Clethra macrophylla* and quite a few *Liquidambar styraciflua* trees. Most trees

were laden with a thick carpet of epiphytes. There were Begonias, a lovely gesnerid *Moussonia depeana* with bright orange-red flowers, a bedstraw with bright orange berries, and a Fuchsia, even a buttercup *Ranunculus petiolaris*! Here was *Acer skutchii*, *Cestrum roseum*, much *Heliocarpus appendiculatus*, *Hibiscus uncinellus* and the pink pyramidal inflorescences of *Miconia xalapensis*. *Psittacanthus schiedeana* glowed red on the boughs of *Fraxinus uhdei* along stream courses lined with the tree fern *Cyathea myosuroides*.

Along the track were flowers such as *Salvia lasiocephala* and *Stachys boraginoides* as well as the impressively tall *Cirsium ehrenbergii*. In the fields we could see the white pom-poms adorning *Zapoteca portoricensis* and two bromeliads *Tillandsia flavobracteata* and *Tillandsia punctulata* were growing on both *Quercus elliptica* and *Quercus laurina*.

Towards the end of our walk back to the entrance we encountered a rich seam of birds. Though not many were close there was such variety. Every minute a new species appeared. To start with it was Acorn Woodpeckers and there were many of these. Later we saw a Bronze-winged Woodpecker, lots of the common Golden-fronted Woodpecker and a Yellow-bellied Sapsucker or two. There were numbers of Yellow-rumped Warblers. Then there was a Roadside Hawk quickly followed by a Hook-billed Kite. There were Baltimore Orioles in the trees and a few White-crowned Parrots were enjoyed. More distantly we saw Olive-sided Flycatcher and Brown-backed Solitaires. The last spot near the road held House Finches, Black-headed Siskins....

A night drive out towards Tepetla featured no mammals at all however the views we had of both Northern Potoo and Common Pauraque were exceptional.

Day 10 November 25th Tepetla & Laguna de Santo Domingo

Once again we met up at seven and wandered round the hotel grounds. Outside reception was a group of Common Chlorospingus and on the treetops were Red-billed Pigeons. Further around we hit a rich seam of birds with all manner of species in the treetops. There were Baltimore Oriole, Masked Tityras, Yellow-throated Euphonias and Mark even came up with a White-winged Tanager. Yellow-bellied Sapsuckers were again noticeable and a Sharp-shinned Hawk arrowed in to a bed of Heliconias in fine flower and scattered birds hither and thither. There was a Cassin's Vireo and in a treetop sat a lovely female Elegant (Blue-hooded) Euphonia. Social Flycatchers, Boat-billed Flycatchers and Kiskadees sat in a treetop hardly long enough for comparison. Heinz had come out his door and was met by four Plain Chachalacas and we later came across a large group of them actually running around the lawn as if they were a bunch of pheasants in England! The *Holmskioldia* Bush was again host to a fine Azure-crowned Hummingbird and the flock of Bananaquits and this time were joined by House Wren and Squirrel Cuckoo.

Breakfast, pre-ordered, was delivered on time in style. After breakfast we headed into the nearby town and thence westwards on a dirt track, stopping by the last house for photographs of what was a really stunning view. Magnificent Orizaba crowned a series of shapely hills covered in cloud forest with just a little pasture with isolated trees in the foreground. Beautiful. We were to spend the morning in this habitat and it was indeed gorgeous. Though on a fine sunny day we expected rather more butterflies and birds, especially with the butterflies we'd been rather spoilt in the last few days!

We took some paths through the pasture towards a little lagoon. The main entertainment here were actually the cattle, especially a bull who was desperate to get to the heifers the other side of a gate. He seemed quite keen to get one of us to hold the gate open for him but of course we couldn't do that! There were a few Splendid Mapwings about and what was probably a Cecropian buzzed through. The main butterfly action was provided by Dartwhites. First up a Golden-banded Dartwhite was much admired. Later we found one or two more but also a Mexican Dartwhite and quite a number of Narrow-banded Dartwhites. Orange-barred Sulphur was impressive and there were lots of little yellows about. A peaty bog held some interesting plants like *Bejaria aestuans*, *Coccocypselum hirsutum*, the clubmosses *Huperzia reflexa* and *Lycopodiella cernua*, *Myrica lindeniana* and the royal fern *Osmunda spectabilis*. It was interesting to see *Sphagnum meridense* and *Thelypteris palustris* producing a habitat reminiscent of temperate northern hemisphere bogs. Walking along the road we saw two very smart Waiter Daggerwings and more mapwings. Anna's Eighty-Eights almost seemed an after-thought today after yesterday's extravaganza but here they were again and once again one of the commonest butterflies. Today saw few skippers though there were one or two nice species such as Aztec Bentwing and Gold-spotted Aguna. Not as numerous as yesterday but still present in some numbers were the clearwings. Today we saw White-spotted Greta and Leila's Ithomia. Both particularly enjoyed a shadey gully laced with tree ferns. There were a few Isabella's Heliconians, Mexican Heliconians and of course Zebra Heliconians. Klug's Clearwings too. Berylline Hummingbird was noted as we pottered and in the stream amongst the tree ferns a Long-tailed Hermit called. Amongst the many flowers along the road was the orange and yellow *Heterotoma lobellioides*, looking very similar to the unrelated *Lobelia laxiflora*! The lovely *Moussonia deppeana* was again around and *Triumfetta speciosa* was a shrub with striking red-orange 'hummingbird' flowers. The patches of trees included *Clusia lundellii*, *Ficus crassinervia*, lovely red-flowered *Erythrina berenices*, *Quercus laurina* and *Quercus xalapensis* – and *Quercus insignis* which was very common here and with particularly huge acorns. All sorts of plants could be seen growing on the oaks. There was much of the epiphytic cactus *Epiphyllum oxypetalum*, the pretty little orchid *Maxillaria tenuifolia*, the hemiparasitic *Phoradendron galeottii* (*Santalaceae*), two nice *Prosthechea* orchids – *karwinskii* and *ochracea* – and of course bromeliads such as *Tillandsia punctulata*.

At lunch, taken under a spreading epiphyte-laden tree just into the pasture area, there were lots of Acorn Woodpeckers about. We watched as one chiselled out acorns from a trunk and flew off somewhere else with them. Did it think we had spotted the hiding place? As we enjoyed Eric's sausage and cheese tacos there were Vermilion Flycatchers, Great Crested Flycatcher, Eastern Bluebird, Yellow-rumped Warblers and Roadside Hawk to enjoy.

In the afternoon we headed south to the Rio de Dos Puentes which forms a beautiful canyon lined with bromeliad-clad *Pinus lumholtzii*, *Platanus mexicanus* and *Fraxinus uhdei*. It was now murky and dark so hardly a butterfly was flying, though again Eighty-Eights were to the fore. We could also see a bunch of tailed 'yellows' mud-puddling across the river. Parakeets flew off and hummingbirds evaded our ID skills. The horsetails *Equisetum myriochaetum* and *Equisetum praealtum* grew alongside the path, and there was the lovely deep twisted crimson petals of *Hibiscus uncinellus* and the unusual orange-flowered *Ipomaea funis* in the roadside shrubbery. *Polygala paniculata* flowered profusely and *Crusea calocephala* had nice compact heads of purple-blue flowers. We were back at the hotel by around 5pm. The evening meal featured, amongst other dishes, a deep earthenware bowl heated and

with steak (arrachera), sausage, cheese, peppers and onion served in a slightly spicy green salsa – delicious!

Day 11 November 26th Rio Playa La Junta Atoyac and to Tehuacan

We breakfasted very well and then set off on the road south to Cordoba. It took us almost two hours to reach our target, the little 'eco-resort' of Rio Playa La Junta Atoyac nestled in a valley surrounded by mountains whose green cloak shielded our eyes from the 'difficult' limestone terrain underneath them. This is the habitat of Sumichrast's Wren, a species known only from this region. We knew that arriving at 11 was never going to be a great time to look for them and sure enough we did not see them however during lunch the distinctively loud repeated treble-note suddenly came from across the river. We went to the bank... but it never called again. Nice to hear it though. Birds were generally quiet pre-lunch. Morelet's Seedeaters were seen but not much else. Just before for Heinz and just after lunch for the rest of us there was a big bird party by the river with half a dozen Gartered Trogons, several Squirrel Cuckoos and Melodious Blackbirds in it. We also saw Tufted Flycatcher, American Redstart, and by our lunch was a lovely little White-bellied Emerald. Heinz photographed a Band-backed Wren. A Russet-naped Wood-Rail was in residence by the Temascal. Heinz saw some additional species prior to lunch such as Rusty Sparrow, Grayish Saltator, Eye-ringed Flatbill, Olivaceous Woodcreeper and Spot-crowned Woodcreeper.

Butterflies however were another story. Little puddles along the road attracted Emperors. At least three species! The iridescent blue-turquoise uppers of Turquoise Emperor were a sight to behold. There were one or two deep purple Pavon Emperors. And at least a couple of Silver Emperors looking very much like Sisters. Pale-spotted Leafwings, Big-spotted Leafwings and pointed Leafwings were visiting the same puddles and I found a single Yellow-rimmed Eighty-eight down the road a little further. A Gray Cracker was in the sugar cane.

By the river were all sorts of goodies. A Prepona flew past evading identification. Then a Yellow-winged Owl flapped lazily past. Perhaps even bigger was an iridescent Blue Morpho that was seen from time to time. The award for most photographed butterfly of the morning went to the Tiger Leafwing visiting the firestones outside the Temascal. What a fabulous butterfly. Looking very like a large Isabella Heliconian from above but below all leaf camouflage – and what a leafy shape too. There was also the first of a number of Navy Eighty-Eights here, Common Ur-Satyr and a fine White-spotted Leafwing. There were quite a number of Fine-lined Stripe-Streaks about and Cassius Blue. Ruddy Daggerwing and Many-banded Daggerwings were seen. Paul's Oleria was the delicate clearwing by the riverbank. Nigel added Mayan Crescent and Chiapas Stripe-streak to the list.

Back out on the road Nigel and Julian were photographing the distinctive and lovely Crystal-winged Skipper. The Funny Red-eye was attracted to flowers in the garden – it was a pity we didn't know its name when it appeared! Cute *Tillandsia ionantha* bloomed in the garden, small and very cute! The very glaucous, almost white leaves are narrow and curve upwards, and on the flowering shoots these extend and turn a translucent red. Emerging from these are rich purple flowers with yellow anthers, all in a plant just 10cm high or so – gorgeous!

Tithonias attracted both White and Yellow Angled Sulphurs as well as Peach-patched Sulphur and both Erato and Zebra Heliconians. Along the river a Roadside Hawk had caught a pigeon and was plucking it. The maroon chest feathers can only be from Maroon-chested Ground-Dove though this does seem unusually low for this species.

We left at two-fifteen and headed for Orizaba through fine canyonlands before suddenly ascending a foggy pass where the roadsides were covered in flowers. We stopped to admire (the admittedly introduced) *Kalanchoe tuberosa* and there were Asphodels (*fistulosa*?) here too. Over the pass and suddenly the fog cleared and we were in dry country! Cacti, yuccas, oaks... Mexico is like that. One minute you are in moist forest, the next in arid cacti lands!

Day 12 November 27th Jardin Botanico Nelia Bravo Hollis in the Tehuacan-Cuicatlan Biosfera Reserve

The breakfast team were on top form this morning and no sooner was something ordered than it was in front of one!

At nine we were on the road out of town into the amazing cactus landscapes of the central valley where Puebla borders Oaxaca. Almost as soon as we had crossed the main highway out of town we were in amazing cacti country. And not just cacti, all sorts of wonderful architectural vegetation. Who needs flowers! We could have stopped anywhere along the road but didn't as the Jardin Botanico is actually in prime habitat and is mostly exactly that with just some plantings of species around the buildings. In a little over half an hour we were there.

We spent the morning walking the trails that circle and anastomose on the hillside above the entrance. The cacti, both columnar and barrel, were stunning, with many species and some impressive specimens and there were plenty of small species too. Amongst the columnar cacti here there were *Lemairocereus hollianus*, branched *Pachycereus weberi*, *Stenocereus* species (*pruinosis* and *stellaris*), and dominant was *Neobuxbaumia tetetzo* which when young has characteristic black spines, mostly lost as it forms the huge columnar cacti we could see all around. The Barrel cacti were equally spectacular. *Echinocactus platycanthus* was the main large one. A few had the large papery yellow blooms on them. Also quite common was *Ferocactus latispinus* and there were three more of this genus too - *Ferocactus flavovirens*, *Ferocactus hystrix* and *Ferocactus robustus*. There were a number of smaller cacti including *Mammillaria carnea*, *Mammillaria haageana* and *Mammillaria sphacellata*. Other cacti noted were *Cylindropuntias*, *Opuntia depressa* and both *Myrtillocactus geometrizans* and *Myrtillocactus schenckii*. One of the most striking plants was *Beaucarnea gracilis* with its hugely swollen trunk – one plant barely four metres tall was two metres round at its widest! There was a great range of Agaves in this habitat with beautiful glaucous rosettes of *Agave macroacantha*, very fine-leaved almost plumose *Agave stricta* and variable *Agave triangularis* amongst them. There was one fabulous tree of *Ceiba parviflora* smothered in large white blooms. There were quite a few small trees of *Bursera galeottiana* with reddish-brown papery bark and feathery foliage, and two other *Burseras* – *fagaroides* and *biflora*. Other trees (small!) included *Vachellia (Acacia) constricta* with little yellow spherical blooms, *Eysenhardtia polystachya* which had just one or two long white spikes, and *Fouquieria formosa*, leafless now and with the oranges blooms just coming at the branch tips - *Fouquieria ochoteranae* was

also seen. Common shrubs were *Croton ciliatoglanduliferus*, *Jatropha neopauciflora* and *Echinopterys eglandulosa*. Flowers were less noticeable! Nice was the little blue *Evolvulus alsinoides*, red *Justicia candicans*, and the lilac *Ruellia hirsutoglandulosa*. *Laelia albida* was a new epiphytic orchid and among the bromeliads *Tillandsia recurvata* and *Tillandsia tehuacana* was new to us, and there were several *Hechtias* on the ground. The red frangipani *Plumeria rubra* is native here, and we noted the fine yellow-flowered Palo Brea *Parkinsonia praecox*, *Erythrostemon melanadenius* with bright red pea flowers, and the small tree *Euphorbia schlechtendahlia*.

Butterflies in contrast were scarce. There were few flowers to attract them. Gulf Fritillaries and Mexican Fritillaries were noted and quite a lot of smaller yellows. There were dainty Sulphurs, and Orange Barred Sulphur and at least one Boisduval's Yellow. Hairstreaks zipped past from time to time but were difficult to get on, the only one we got a good look at, Gray Hairsreak, was courtesy of a robber fly that had caught it. There were a few crescents – Texan and Mexican – and a fine Walker's Metalmark. Bird activity lessons quite quickly in these arid very warm environments so starting to look after ten o'clock is unlikely to be too productive however over the course of the morning we did come up with some nice birds. There were a couple of parties of busy Boucard's Wrens searching the decaying cacti columns for tasty morsels. Ash-throated Flycatchers were noted a few times. We discussed how Gila Woodpeckers made holes in the cacti and just then one appeared and we had nice views. Both Blue-Gray and the very smart White-lored Gnatchers were in the *Bursera* trees and we also saw Varied Bunting, Warbling Vireo, Plain-breasted Ground-Dove, Inca Dove and House Finches. A Dusky Hummingbird visited the *Convolvulus arborea* trees and overhead Lesser Swallow-tailed Swifts arced through the sky.

After a nice lunch of grilled chicken, rice and salad under shade we headed to Zapotlan's saltpans where Eric and Daniel both bought salt, this salt known for have quite a strong carbonate content. It was intriguing seeing the carefully made salt pans up close. A Rock Wren was seen.

Our last stop was in another area of cacti forest. The early mid-afternoon heat meant that there was no faunal activity however the cacti were good with abundant barrel cacti and here the abundant *Mamillaria haageana* had lots of little purple-pink blooms. The dominant columnar cactus here was *Cephalocereus columna-trajani* which when young had a hairy top and when old was ever so slightly curved. We found the strange *Euphorbia rossiana* with its hooded red and green flowers. There were many *Burseras* including the few-leaved *Bursera linanoe*, *Bursera morelensis* and the very contorted *Bursera arida* and the even more contorted *Bursera schlechtendallii*! We made a last stop for *Yucca periculosa* pictures and we drove past *Escontria chiotilla* with its branched columns, and some lovely rosettes of a large blue-green *Agave*.

Then it was on the road to Oaxaca. This took us into some majestic scenery. For half an hour we drove through wild seemingly untouched country the mountains reaching close to 3000m and covered in wonderful pristine cacti forest – amazing! Then suddenly we were up over a pass and into the flatter more agricultural country that preceded our arrival in Oaxaca.

Day 13 November 28th Presa Piedra Azul & Oaxaca City

We started with a walk round the hotel grounds. These were alive with Yellow-rumped Warblers – they were everywhere – but there was plenty else to see amongst them. There were several Berylline Hummingbirds and a single Ruby-throated Hummingbird. Two fine Gray Silkies were high in the trees (as they almost always are) and there were many Western Tanagers as well as Bullock's, Baltimore and Orchard Orioles. A Bewick's Wren was seen as was Ladder-Backed Woodpecker. White-throated Towhees were approachable. Black-throated Grey Warbler, Townsend's Warbler and Nashville Warblers gave decent views. A couple of fine Mexican Gray Squirrels also were clearly used to people.

After an excellent buffet breakfast we headed off the base of the Sierra Juarez and the Presa Piedra Azul, a prettily located little reservoir in tropical dry/thorn forest though not far below the oak zone. On the water were decent numbers of Lesser Scaup and Ring-necked Duck, and a few Ruddy Ducks and Mexican Ducks. Least Grebes were common and there were a few American Coots and a Common Gallinule. American Pipit was by the shore and there were several waders about: A couple of pairs of Killdeer, Spotted Sandpipers and around forty Least Sandpipers. Just before leaving we found some Baird's Sandpipers too. A Green Kingfisher perched close to Black Phoebes in vegetation in the water. We also saw Green Heron, Little Blue Heron and Great Blue Heron. By the lake shore was *Bacopa monnieri* and *Ludwigia peploides*.

Down below the dam was some nice flowery slopes full of blues and crescents. *Yucca periculosa* was eye-catching and there were cacti in the shape of *Cylindropuntia imbricata*, *Myrtillocactus geometrizans* and *Opuntia streptacantha*. *Hechtia conzattiana* was an interesting terrestrial bromeliad and other plants of note included *Passiflora foetida*, *Salvia purpurea* and *Tithonia tubaeformis*. There were Mexican, Vesta and Phaon Crescents there. Soldiers and Monarchs flew about. A Oaxacan Scintillant was down by the water and there were several fine White-rayed Patches. Red-bordered Metalmark was appreciated.

We spent much of the morning at the top end of the reservoir where butterflies whilst not abundant were still interesting. A Camberwell Beauty was our first of the trip. And so too a Two-tailed Swallowtail that actually allowed Nigel a photograph. Hairstreaks were fairly frequently observed but rarely could we photograph them, they moved so fast! We did see several Creamy Stripe-Streaks well, and a single and very tiny Two-spotted Ministreak paused long enough for a quick photo! There were lots of yellows, latterly mud-puddling, with Salome and Mexican Yellows, Southern Dogface and a few Dainty Sulphurs. Dina Yellows were quite common. There were some very nice skippers. Orange-spotted Sipper was perhaps the highlight though the Cloudy-patched Bentwing was also good. Other skippers included Mauve Bolla, Mottled Longtail and Whirlabout.

Walking up the riverbed we saw a fine large *Wigandia urens* tree. Birds in the bushes here included Slate-throated Redstart, Orange-crowned Warbler and White-throated Towhee. A highlight was a lovely Green-fronted Hummingbird feeding at a *Convolvulus arborea*.

After avocado and onion sandwiches we headed off to Monte Alban with thunderstorms already brewing around. We did go through a little rain but thankfully the storms soon moved on. However the local authorities had other ideas for us and we found Monte Alban closed. Litter clearance

apparently. So instead we headed into Oaxaca centre. We alighted next to the elegant green sandstone cathedral and Eric took us on a little cultural tour of the city. We walked along the Zocolo passing stalls selling local handicrafts and passing tempting looking restaurants. Eric took us into a chocolate-maker so that we could see how they make customised chocolate mixes for people to make their own hot chocolates and mole sauces from. There was an almost overpowering aroma of raw chocolate in the air! Then it was into Mercado Benito Juarez, a covered local market where all sorts of wonderful produce was on offer. Dried chillis, pinyatas (yes.... unicorns!), mescals in all colours and flavours, and of course, abundant cooked grasshoppers. We popped into a Mescal bar to see some amazing murals, and then it was through some really trendy streets full of art galleries and cafes (and Mescal shops), where giant jaguar heads and oversize skeletons decorated the outside of buildings. There were several giant Freda Karlos around too. We finished at the Church of Santo Domingo de Guzman. The interior was exceptional and luckily the lighting was low otherwise it would have been all too much!

Day 14 November 29th Sierra Juarez

The road from Teotitlan up to Benito Juarez is one of those amazing wildlife journeys. It takes one from the Oaxacan 'plain' at around 1600m right up to 3000m and the high plateau of the Sierra Juarez. One passes through classic vegetation zoning en route from dry tropical thorn forest through various levels of oak forest into the pine-oak forest zone before finally reaching the montane forests where firs become prevalent.

However first stop was much lower. Just above the presa one enters a zone dominated by *Quercus castanea*, a rather lovely oak with large rather bright shiny leaves some attaining 'autumn colour'. There was also a little *Quercus greggii* here with small blue-grey leaves as well as *Quercus candicans* whose large leaves have white undersides. We also stopped a little higher in a zone now dominated by *Quercus rugosa* and *Quercus laurina*! Here there were yet more oaks - *Quercus germana*, *Quercus magnoliifolia*, *Quercus obtusata* and *Quercus urbanii*. Other fine plants noted here were the strange cucurbit *Echinopepon pringlei*, the elegant fern *Hemionitis bonariensis* and *Dalea foliolosa*. *Montanoa leucantha arborescens* was showered in white blooms and in the trees was the red-flowered parasitic *Psittacanthus auriculatus*. Indeed tree boughs were home to a diverse selection of bromeliad kind including *Tillandsia gymnotrya*, *Tillandsia recurvata* and *Tillandsia variabilis*. It was reasonably sunny and so butterflies were about. We found some really nice species during the morning. Hairstreaks, unusually, were noticeable. There was the lovely green Greenstreak species which we are unable to ID, the rather plain Ruddy Groundstreak, and red-marked Mallow Scrub-Hairstreak, and many others that failed to stop long enough for us to see them. Best though was probably the Pale-clubbed Greatstreak. The red and black 'beetle' close to the Greenstreak was actually not a beetle but a Froghopper called *Huaina inca*, and the scarab beetle there was *Euphoria canescens*. Metalmarks were also much more noticeable than previously on this trip. Here were various Scintillants, an unknown Tanmark, Zela Metalmark and also the stunning little motley Sinuous Mottlemark. A highlight was the very local Oaxacan Checkerspot. Of course, there was a variety of skippers and crescents too!

Birds were slow to get going with a few sightings of Berylline Hummingbirds and Lincoln's Sparrow and Gray Silkies, but eventually we started to find a few nice species. Notable were the striking local

race of Steller's Jay which is a beautiful bird. And there was a lovely Red-faced Warbler. Western Tanagers were seen and female Flame-coloured Tanager. Warblers included Black-throated Gray Warbler, Townsend's and Orange-crowned.

Towards the top of the pass we were in beautiful flowery forest. Here amongst the pines (*leiophylla*, *pseudostrobus*, *teocote*) were the most beautiful specimens of *Arbutus xalapensis* with coppery peeling bark. Roadside banks were draped in *Lupinus elegans*, orange-red *Stachys coccinea*, red *Salvia elegans* and crimson *Salvia longistyla*. There was occasional *Commelina dianthifolia* and Daniel found pretty *Echeveria montana* and equally orange and yellow *Castilleja tenuiflora*. There were a few plants of *Comarostaphylis discolor* with tassles of white bells. Huge *Agave atrovirens* was seen and most impressive were the 'tufted' Yuccas which I am still unable to give a name to! There was lots of *Pinguicula moranensis* on the shadey mossy banks though none in flower and here was lovely bright red *Lamourouxia pringlei*. Also noted were *Lobelia laxiflora*, *Fuschia paniculata*, and the elegant little fern *Cheilanthes bonariense*. *Aporocactus martianus* was unfortunately not in flower! But the spectacular pink-purple orchid *Laelia furfuracea* more than made up for this. The slight rise in altitude meant a whole different range of bromeliads - *Pitcairnia breedlovei*, huge *Tillandsia prodigiosa* and the classic 'Spanish Moss' *Tillandsia usneoides*. *Salvias* included *elegans*, *hispanica*, *longispicata* and *longistyla*.

In the village at the top of the pass we started to see our first *Abies hickelii* ssp. *oaxacana* which we could see was more numerous in the forest around, mixing with *Pinus hartwegii* and *Pinus veitchii*. *Crataegus mexicana* had large yellow fruits. Here we surprised a local family by turning up for lunch. To be fair others in the village said they ran a restaurant but it looked like the dining table was in their kitchen to me. In just twenty minutes they had rustled up a wonderful meal which we attacked with gusto. It was a great experience and enjoyed by all.

We found many birds around their garden. In the tiny cow paddock a Slate-throated Redstart kept everyone entertained as this bright little fella jumped from fence wire to stick and back again. Even redder was the Red Warbler! In the bushes around the verdant garden were three towhee species, White-throated, Rufous-sided and the lovely high altitude speciality Collared Towhees. They were joined in the same bush by a female Red-headed Tanager, Lincoln's Sparrow and two Yellow-eyed Juncos.

After lunch we walked back along the track a little. Here was tall yellow-flowered *Cirsium ancantholepis* and little *Geranium seemannii*. *Kniphofia uvaria* were impressive but not native! *Cestrum aurantiacum* had bundles of starry orange flowers and we also saw *Lobelia laxiflora*, *Lupinus montanus* and the pretty *Senecio cinerarioides*. A roadside field was so busy with birds we never got any further! There was a flock of Woodhouse's Scrub Jays. A Steller's Jay or two and a mad party of Grey-barred Wrens. All the same towhees were present and this time there was a pair of Chestnut-capped Brush-Finches too. A bunch of Acorn Woodpeckers were in the nearest pines. There was also American Robin, Curve-billed Thrasher, Berylline Hummingbird, Gray-collared Beccard and Black-headed Grosbeak.

We moved back into the forest and stopped by a huge bank of *Salvia*. Predictably this proved popular with hummingbirds. There were several Blue-throated Hummingbirds, and one each of White-eared Hummingbird and Green Violet-ear.

Further down the hill we heard but did not see Long-tailed Wood-Partridge. And the final icing on a very productive day was a bunch of Lesser Nighthawks dancing through the gloaming close to the reservoir.

Day 15 November 30th Sierra Juarez and Monte Alban

Some of us left early in the morning and went high up in the Sierra Juarez. It takes just forty minutes to reach just under 3000m from the Hotel Victoria in Oaxaca. It was a sunny morning but we were early and there was little activity in the beautiful pine-oak forests up by the Cumbre. Just one small flock of Steller's Jays and Grey-barred Wrens were found in an hour. The forest itself was stunning. Lots of flowers including a nice shrubby *Lamourouxia* which had luminous red blooms and *Penstemon roseus* too. We took a look across the road and found a flowery area but too early in the day for butterflies. There were lots of hummingbirds there but mostly hiding from us in the vegetation. We did see one fine Green Violet-ear.

Then it was down to an area of much lower oak scrub where the sun was already warming the slopes nicely at nine. We spent a happy hour searching for birds and butterflies. There were a few Isabella Heliconians, at least a couple of American Ladies, and several Mexican Silverspots. There was a fabulous bright rich blue Zebra Stripe-streak with suitably black and white striped undersides. Two West Mexican Chachalacas made it a two Chachalaca trip! There were quite a few hummingbirds visiting the *Convolvulus* trees. Mostly Berylline but we did find an obliging Beautiful Hummingbird which gave us a chance to study it closely.

Meanwhile Eric had taken most of the group for a morning visit to Monte Alban. They were at the gate at nine and so were first in and had the place to themselves briefly! Eric told tales of olden times as he took them round some of the tales involving chocolate and fire! *Pinus apulcensis* was noted and the *Ceiba aesculifolia* was impressive. Flowering around the site were *Bouvardia viminalis*, *Iresine cassiniiformis* and *Ipomoea arborescens*.

We were all back at the hotel in good time to pack and shower before heading off to the airport. The Oaxaca traffic is something, yet we were again impressed by google's ability to accurately predict a journey time amid the chaos and so we arrived at the airport in good time. Here we said sad farewells to Eric, Beto and Agustín. They were driving back to San Miguel Allende – a journey of around ten hours! Aero Mexico to Mexico City went smoothly and so we arrived in plenty of time to check-in for the BA flight. The flight back across the Atlantic took a full two and a half hours less than on the way out!

Day 16 December 1st Arrive UK or Germany

Itinerary

Day 1 November 16th to Mexico City

Day 2 November 17th Bernal Pueblo Magico and to Conca in the Sierra Gorda

Day 3 November 18th Sierra Gorda: Cascada el Chuveje

Day 4 November 19th Sierra Gorda: Presa Jalpan and to Xilitla

Day 5 November 20th Sierra Gorda: Posada James, Edward James' Jardin and Sótano de las Golondrinas

Day 6 November 21st to the Gulf Coast via El Tajin Archaeological Site

Day 7 November 22nd Cienega del Fuerte, Estero Casitas, Playa Maracaiba and to Xalapa

Day 8 November 23rd Xalapa Botanical Garden and La Isleta Grande

Day 9 November 24th Ashram del Bosque de Niebla

Day 10 November 25th Tepetla & Laguna de Santo Domingo

Day 11 November 26th Rio Playa La Junta Atoyac and to Tehuacan

Day 12 November 27th Jardin Botanico Nelia Bravo Hollis in the Tehuacan-Cuicatlan Biosfera Reserve

Day 13 November 28th Presa Piedra Azul & Oaxaca City

Day 14 November 29th Sierra Juarez

Day 15 November 30th Sierra Juarez and Monte Alban and Departure

Systematic List Number 1 Butterflies

Nomenclature and taxonomic order follow 'Butterflies of Mexico and Central America' (Glassberg, Second Edition 2017).

Papilionidae

Polydamus Swallowtail	<i>Battus polydamus</i>	Presa Jalpan
Pink-spotted Cattleheart	<i>Parides photidus</i>	Xalapa Botanic Garden
Dual-spotted Swallowtail	<i>Mimoides ilus</i>	Xalapa Botanic Garden
Giant Swallowtail	<i>Papilio cresphontes</i>	Xalapa Botanic Garden
Black Swallowtail	<i>Papilio polyxenes</i>	Bernal
Two-tailed Swallowtail	<i>Papilio multicaudatus</i>	Presa Piedra Azul
Ornythion Swallowtail	<i>Papilio ornythion</i>	Presa Jalpan
Pipeline Swallowtail	<i>Battus philenor</i>	a dead one at Presa Jalpan

Pieridae

Gold-banded Dartwhite	<i>Catasticta truncata</i>	Tepetla
Mexican Dartwhite	<i>Catasticta nimbice</i>	Tepetla
Narrow-banded Dartwhite	<i>Catasticta flissa</i>	scattered. Noted on 3 days
Common Green-eyed White	<i>Leptophobia aripa</i>	scattered. Noted on 3 days
Florida White	<i>Appias drusilla</i>	Presa Jalpan & Jardin Botanico Nelia Bravo Hollis in the Tehuacan-Cuicatlan Biosfera Reserve
Great Southern White	<i>Ascia monuste</i>	scattered. Noted on 4 days
Common Melwhite	<i>Melete lycimnia</i>	quite common at La Isleta Grande, Ashram del Bosque de Niebla & Tepetla
Checkered White	<i>Pontia protodice</i>	Cascada el Chuveje
Small White	<i>Pieris rapae</i>	Bernal and Sierra Gorda
Surprising White	<i>Pereute charops</i>	surprisingly common esp in the Huatusco area
Clouded Sulphur	<i>Colias philodice guatemalena</i>	Presa Jalpan
Southern Dogface	<i>Colias cesonia</i>	scattered. Noted on 5 days
Yellow Angled-Sulphur	<i>Anteos maerula</i>	Scattered. Noted on 2 days
White Angled-Sulphur	<i>Anteos clorinde</i>	Scattered. Noted on 3 days
Cloudless Sulphur	<i>Phoebis sennae</i>	Widespread. Noted on 7 days
Large Orange Sulphur	<i>Phoebis agarithe</i>	Scattered. Noted on 4 days
Orange-barred Sulphur	<i>Phoebis philea</i>	Scattered. Noted on 5 days
Apricot Sulphur	<i>Phoebis argante</i>	Presa Jalpan, Xalapa Botanic Garden & La Isleta Grande
Statira Sulphur	<i>Phoebis statira</i>	Presa Jalpan
Straight-line Sulphur	<i>Phoebis trite</i>	Xalapa Botanic Garden
Peach-patched Sulphur	<i>Phoebis boisduvalii</i>	Rio Playa la Junta Atoyac
Barred Yellow	<i>Eurema दौरा</i>	Widespread. Noted on 6 days
Mexican Yellow	<i>Eurema mexicana</i>	Scattered. Noted on 4 days
Boisduval's Yellow	<i>Eurema boisduvaliana</i>	Jardin Botanico Nelia Bravo Hollis in the Tehuacan-Cuicatlan Biosfera Reserve
Salome Yellow	<i>Eurema salome</i>	Scattered. Noted on 5 days
Dina Yellow	<i>Eurema dina</i>	Presa Piedra Azul, but probably elsewhere too!
Mimosa Yellow	<i>Eurema nise</i>	widespread and common
Little Yellow	<i>Eurema lisa</i>	Scattered. Noted on at least 3 days
Sleepy Orange	<i>Eurema nicippe</i>	Presa Jalpan
Tailed Orange	<i>Eurema proterpia</i>	Widespread. Noted on 6 days

Dainty Sulphur	<i>Nathalis iole</i>	dry areas. Noted on 3 days
Tiger Mimic-White	<i>Dismorpha amphione</i>	Julian photographed one in the Xalapa Botanic Gardens
Bold Mimic-White	<i>Enantia jethys</i>	Julian has a picture of one from ?
De la Maza's Mimic-White	<i>Enantia mazai</i>	Tepetla
Costa-spotted Mimic-white	<i>Enantia albania</i>	several at La Isleta Grande

Lycaenidae

Superb Cycadian	<i>Eumaeus childrenae</i>	several at Xalapa Botanic Garden – feeding on the Cycads!
Pale-clubbed Greatstreak	<i>Theritas hemon</i>	Sierra Juarez
Tiger-eye Hairstreak	<i>Rekoa meton</i>	La Isleta Grande
Aquamarine Hairstreak	<i>Oenomaus ortygnus</i>	La Isleta Grande
Creamy Stripe-streak	<i>Arawacus jada</i>	several Presa Piedra Azul and Sierra Juarez
Chiapas Stripe-streak	<i>Arawacus togarna</i>	Rio Playa la Junta Atoyac
Fine-lined Stripe-streak	<i>Arawacus sito</i>	scattered. Noted on 4 days
Zebra Cross-streak	<i>Panthiades bathildis</i>	last morning in the Sierra Juarez
Silver-banded Hairstreak	<i>Chlorostrymon simaethis</i>	Estero Casitas
Greenstreak spp	<i>Cyanophrys</i> sp	one in the Sierra Juarez, though faded, seems not to fit anything in Glassberg
Confused Groundstreak	<i>Ziegleria syllis</i>	Presa Piedra Azul
Ruddy Groundstreak	<i>Electrostrymon sangala</i>	Sierra Juarez
Dusky-blue Groundstreak	<i>Calycopis isobeon</i>	Estero Casitas
Gray Hairstreak	<i>Strymon melinus</i>	a dead one Jardin Botanico Nelia Bravo Hollis in the Tehuacan-Cuicatlan Biosfera Reserve
Mallow Scrub-Hairstreak	<i>Strymon istapa</i>	Sierra Juarez
Two-spotted Ministreak	<i>Ministrymon zilda</i>	truly mini! Presa Piedra Azul
Pale Ministreak	<i>Ministrymon una</i>	Estera Casitas
Cassius Blue	<i>Leptotes cassius</i>	Cascada el Chuveje & Rio Playa la Junta Atoyac
Ceraunus Blue	<i>Hemiargus ceraunus</i>	Scattered. Noted on at least 3 days
Cyna Blue	<i>Zizula cyna</i>	Presa Jalpan & Ashram del Bosque de Niebla
Eastern Tailed Blue	<i>Everes comyntas</i>	Scattered. Noted on at least 3 days
Spring Azure	<i>Celastrina ladon</i>	Scattered. Noted on at least 4 days
Reakirt's Blue	<i>Hemiargus isola</i>	Jardin Botanico Nelia Bravo Hollis in the Tehuacan-Cuicatlan Biosfera Reserve
Marine Blue	<i>Leptotes marina</i>	Presa Piedra Azul

Riodinidae

Dusky Sombremark	<i>Euselasia eubule</i>	1 La Isleta Grande
Satyr Eyemark	<i>Leucochimona lepida</i>	many fluttering like little white moths 5m or above the ground at the stream crossing at Ashram del Bosque de Niebla
Square-spotted Metalmark	<i>Baeotis zonata</i>	La Isleta Grande
Cell-barred Geomark	<i>Mesene pharius</i>	Tepetla – thought it was a moth!
Fatal Metalmark	<i>Calephelis nemesis</i>	Sierra Juarez, probably elsewhere too
Rounded Metalmark	<i>Calephelis perditalis</i>	Presa Piedra Azul (Julian)
Hoary Scintillant	<i>Calephelis</i> sp.	Presa Piedra Azul
Oaxacan Scintillant	<i>Calephelis</i> sp.	Presa Piedra Azul
Red-bordered Metalmark	<i>Caria ino</i>	Presa Piedra Azul
Somber Bluemark	<i>Lasaia sessalis</i>	Ashram del Bosque de Niebla
Gray Bluemark	<i>Lasaia maria</i>	La Isleta Grande

Red-bordered Pixie	<i>Melanis pixe</i>	singles Cascada el Chuveje and at the river a couple of hours north of el Tajin
Sinuuous Mottlemark	<i>Calydna venusta</i>	Little stunner! Sierra Juarez
Falcate Metalmark	<i>Emesis tenedia</i>	La Isleta Grande
Tanmark sp		Sierra Juarez. Fits nothing in Glassberg.
Bow-winged Tanmark	<i>Emesis tegula</i>	scattered
Zela Metalmark	<i>Emesis zela</i>	Sierra Juarez
Walker's Metalmark	<i>Apodemia walker</i>	1 Jardin Botanico Nelia Bravo Hollis in the Tehuacan-Cuicatlan Biosfera Reserve

Nymphalidae

American Snout	<i>Libytheana carinenta</i>	scattered. Noted on 4 days
Lamplight Actinote	<i>Actinote ozomene</i>	Ashram del Bosque de Niebla & Rio Playa la Junta Atoyac
Gulf Fritillary	<i>Agraulis vanillae</i>	widespread. Noted on 6 days
Mexican Silverspot	<i>Dione moneta</i>	widespread . Noted on 8 days
Banded Orange Heliconian	<i>Dryadula phaetusa</i>	Estero Casitas
Julia Heliconian	<i>Dryas iulia</i>	widespread. Noted on 7 days
Isabella Heliconian	<i>Euides Isabella</i>	common in the cloud forests between Xalapa and Cordoba. Noted on 4 days
Tiger Heliconian	<i>Heliconius ismenius</i>	only seen at Xalapa Botanical Garden
Zebra Heliconian	<i>Heliconius charithonia</i>	widespread and often common
Erato Heliconian	<i>Heliconius erato</i>	scattered. Noted on 3 days
Mexican Heliconian	<i>Heliconius hortense</i>	La Isleta Grande & Rio Playa la Junta Atoyac
Variiegated Fritillary	<i>Euptoieta claudia</i>	only seen north of Bernal
Mexican Fritillary	<i>Euptoieta hegesia</i>	scattered. Noted on 3 days
Theona Checkerspot	<i>Chlosyne theona</i>	noted on 2 days on the Sierra Gorda
Oaxacan Checkerspot	<i>Chlosyne cynisca</i>	Sierra Juarez
Crimson Patch	<i>Chlosyne janais</i>	widespread and locally common
Bordered Patch	<i>Chlosyne lacinia</i>	scattered. Noted on 3 days
Guatemalan Patch	<i>Chlosyne erodyle</i>	La Isleta Grande
White-rayed Patch	<i>Chlosyne ehrenbergii</i>	Presa Jalpan and Presa Piedra Azul
Elf	<i>Microtia elva</i>	locally frequent Cascada el Chuveje and Presa Jalpan
Claudina's Tegosa	<i>Tegosa claudina</i>	what looks like this species photographed at La Isleta Grande
Guatemalan Tegosa	<i>Tegosa guatemalena</i>	scattered. Noted on 3 days
Smudged Crescent	<i>Castilia eranites</i>	scattered. Noted on 3 days
Elada Checkerspot	<i>Texola elada</i>	noted on 2 days on the Sierra Juarez
Mayan Crescent	<i>Castilia myia</i>	Rio Playa la Junta Atoyac
Orange-patched Crescent	<i>Phyciodes drusilla</i>	Presa Jalpan & Rio Playa la Junta Atoyac
Ardent Crescent	<i>Phyciodes ardys</i>	Cascada el Chuveje
Chestnut Crescent	<i>Phyciodes argentea</i>	scattered. Noted on 3 days
Brown Crescent	<i>Phyciodes atronia</i>	Tepetla
Notched Crescent	<i>Phyciodes dracaena</i>	Tepetla
Blurry Crescent	<i>Phyciodes nebulosa</i>	Sierra Juarez
Pale-banded Crescent	<i>Phyciodes tulcis</i>	Presa Jalpan
Texan Crescent	<i>Phyciodes texana</i>	Presa Jalpan
Vesta Crescent	<i>Phyciodes vesta</i>	Presa Piedra Azul
Mexican Crescent	<i>Phyciodes pallescens</i>	Jardin Botanico Nelia Bravo Hollis in the

Pearl Crescent	<i>Phyciodes tharos</i>	Tehuacan-Cuicatlan Biosfera Reserve & Presa Piedra Azul
Phaon Crescent	<i>Phyciodes phaon</i>	gulf coast
Black Crescent	<i>Phyciodes ptolyca</i>	Presa Piedra Azul
Square-tipped Crescent	<i>Eresia phillyra</i>	Presa Jalpan
American Lady	<i>Vanessa virginiensis</i>	Rio Playa la Junta Atoyac
Painted Lady	<i>Vanessa cardui</i>	Sierra Juarez
Mourning Cloak	<i>Nymphalis antiopa</i>	Presa Jalpan
Common Buckeye	<i>Junonia coenia</i>	Presa Piedra Azul
Mangrove Buckeye	<i>Junonia evarete</i>	scattered records
Banded Peacock	<i>Anartia fatima</i>	Estero Casitas
White Peacock	<i>Anartia jatrophae</i>	widespread and sometimes common
Splendid Mapwing	<i>Hypanartia godmanii</i>	widespread and common
		Presa Jalpan and cloudforests from Huatesco to Cordoba
Malachite	<i>Siproeta stelenes</i>	locally common, especially Presa Jalpan
Rusty-tipped Page	<i>Siproeta epaphus</i>	widespread in usually low numbers
Confusing Sister	<i>Adelpha iphicleola</i>	Xalapa Botanical Garden
California Sister	<i>Adelpha bredowii</i>	Sierra Juarez at 2600m
Band-celled Sister	<i>Adelpha fessonia</i>	small. Presa Jalpan where frequent
Eyed Sister	<i>Adelpha paroeca</i>	Cascada el Chuveje & Xalapa Botanical Garden
Cecropia Sister	<i>Adelpha phylaca</i>	La Isleta Grande
Bates' Sister	<i>Adelpha paraena</i>	Edward James' Jardin
Rayed Sister	<i>Adelpha lycorica</i>	very different from the others sisters and large
Four-spotted Sailor	<i>Dynamine postverta</i>	scattered. Noted on 3 days
Anna's Eighty-eight	<i>Diaethria anna</i>	A tour highlight when it was the most abundant butterfly in the Huatesco area with hundreds a day! Noted on 4 days in total
		'Turquoise-spotted'. 1 at Ashram del Bosque de Niebla and several Rio Playa la Junta Atoyac
Navy Eighty-eight	<i>Diaethria astala</i>	Cascada el Chuveje
Orange-striped Eighty-eight	<i>Diaethria pandama</i>	1 Rio Playa la Junta Atoyac (IG only)
Yellow-rimmed Eight-eight	<i>Callicora texa</i>	Presa Jalpan and Jardin Botanico Nelia Bravo
Common Mestra	<i>Mestra amymone</i>	Hollis in the Tehuacan-Cuicatlan Biosfera Reserve
		Mision Conca and Rio Playa la Junta Atoyac
Gray Cracker	<i>Hamadryas februa</i>	Presa Jalpan
Glaucous Cracker	<i>Hamadryas glauconome</i>	the most frequently encountered cracker
Variable Cracker	<i>Hamadryas feronia</i>	Rio Playa la Junta Atoyac
Blomfield's Beauty	<i>Smyrna blomfieldia</i>	scattered. Noted on 4 days
Kawinski's Beauty	<i>Smyrna karwinski</i>	scattered. Noted on 3 days
Common Banner	<i>Epiphele adrasta</i>	Rio Playa la Junta Atoyac (Nigel)
Little Banner	<i>Nica flavilla</i>	Ashram del Bosque de Niebla & Rio Playa la Junta Atoyac
Stoplight Catone	<i>Catonephele numilia</i>	Rio Playa la Junta Atoyac
White-edged Red-ring	<i>Pyrrhogyra otolais</i>	Presa Jalpan
Mexican Bluewing	<i>Myscelia ethusa</i>	Presa Jalpan & Xalapa Botanical Garden
Dingy Purplewing	<i>Eunica monima</i>	Presa Jalpan
Plain Purplewing	<i>Eunica sydonia</i>	common at Presa Jalpan and 1 Rio Playa la Junta Atoyac
Red Rim	<i>Biblis aganisa</i>	scattered. Noted on 3 days
Waiter Daggerwing	<i>Marpesia coresia</i>	

Many-banded Daggerwing	<i>Marpesia chiron</i>	scattered. Noted on 4 days
Ruddy Daggerwing	<i>Marpesia petreus</i>	scattered. Noted on 5 days
Two-spotted Prepona	<i>Archaeoprepona demophoon</i>	?probably this species Rio Playa la Junta Atoyac
Orange-spotted Prepona	<i>Archaeoprepona deiphile</i>	Xalapa Botanical Garden
Tropical Leafwing	<i>Anaea aidea</i>	frequent at Cascada el Chuveje & Presa Jalpan
Angled Leafwing	<i>Anaea glycerium</i>	Ashram del Bosque de Niebla
Pale-spotted Leafwing	<i>Anaea pithyusa</i>	frequent at Rio Playa la Junta Atoyac
Big-spotted Leafwing	<i>Anaea perenna</i>	Julian has definitive photographs from Rio Playa la Junta Atoyac
Pointed Leafwing	<i>Anaea eurypyle</i>	Xalapa Botanical Garden & at Rio Playa la Junta Atoyac
Aureole Leafwing	<i>Anaea aureola</i>	Rio Playa la Junta Atoyac
Scarce Leafwing	<i>Anaea herbacea</i>	Peter has photos from Rio Playa la Junta Atoyac
Corner-spotted Leafwing	<i>Anaea xenocles</i>	Jardin Botanico Nelia Bravo Hollis in the Tehuacan-Cuicatlan Biosfera Reserve
Tiger Leafwing	<i>Consul fabius</i>	Rio Playa la Junta Atoyac - a tour highlight!
Pearly Leafwing	<i>Consul electra</i>	scattered. Noted on 4 days
Hackberry Emperor	<i>Astercampia celtis</i>	north of Bernal on the first day
Silver Emperor	<i>Doxocopa laure</i>	1 at Presa Jalpan and 2 Rio Playa la Junta Atoyac
Turquoise Emperor	<i>Doxocopa laurentia</i>	1 Presa Jalpan and 2 Rio Playa la Junta Atoyac
Pavon Emperor	<i>Doxocopa pavon</i>	Presa Jalpan & Rio Playa la Junta Atoyac
Yellow-fronted Owl Butterfly	<i>Caligo telamonius</i>	1 Rio Playa la Junta Atoyac
Common Morpho	<i>Morpho helenor</i>	Ashram del Bosque de Niebla, Tepetla & Rio Playa la Junta Atoyac
Short-tailed Morpho	<i>Morpho theseus</i>	Estero Casitas
Starred Oxeo	<i>Oxeoschistus tauropolis</i>	Xalapa Botanical Garden
Terrestrial Satyr	<i>Cissia terrestris</i>	Cascada el Chuveje
Plain Satyr	<i>Cissia pompilia</i>	Ashram del Bosque de Niebla (Nigel)
White Satyr	<i>Pareuptychia ocirrhoe</i>	el Tajin
White-banded Satyr	<i>Pareuptychia metaleuca</i>	Xalapa Botanical Garden
Carolina Satyr	<i>Hermeuptychia sosybius</i>	Widespread and common
Wide-bordered Satyr	<i>Satyrotaygetis satyrina</i>	Xalapa Botanical Garden
Common Ur-Satyr	<i>Taygetis thamyra</i>	Xalapa Botanical Garden and Ashram del Bosque de Niebla
Soldier	<i>Danaus eresimus</i>	scattered. Noted on 6 days
Queen	<i>Danaus gilippus</i>	Presa Jalpan & Rio Playa la Junta Atoyac
Monarch	<i>Danaus plexippus</i>	scattered, mostly in the Sierra Gorda
Tiger Mimic-Queen	<i>Lycorea cleobaea</i>	Ashram del Bosque de Niebla & Tepetla
Clearwing Mimic-Queen	<i>Lycorea ilione</i>	1 Ashram del Bosque de Niebla
Klug's Clearwing	<i>Dircenna klugii</i>	locally very common, especially in Huatusco area
Salvin's Ticlear	<i>Episcada salvinnia</i>	common at Ashram del Bosque de Niebla
Broad-tipped Clearwing	<i>Pteronymia cotytto</i>	Estero Casitas & Rio Playa la Junta Atoyac
White-spotted Greta	<i>Greta annette</i>	common at Ashram del Bosque de Niebla & Tepetla
Thick-tipped Greta	<i>Greta morgane oto</i>	scattered. Noted on 3 days
Paul's Oleria	<i>Oleria amalda</i>	Rio Playa la Junta Atoyac

Leila Ithomia

Ithomia leila

common at Ashram del Bosque de Niebla

Hesperidae

Red-headed Firetip

Pyrrhopyge phidias

1 Ashram del Bosque de Niebla

Funny Scarlet-Eye

Cephise nuspesez

1 Rio Playa la Junta Atoyac

Broken Silverdrop

Epargyreus exadeus

La Isleta Grande

White-striped Longtail

Chioides catillus

frequent in the Sierra Gorda

Mottled Longtail

Typhedanus undulatus

Presa Piedra Azul

Eight-spotted Longtail

Polythrix octomaculata

Presa Jalpan

Dark-spotted Polythrix

Polythrix asine

Jardin Botanico Nelia Bravo Hollis in the Tehuacan-Cuicatlan Biosfera Reserve

Gold-spotted Aguna

Aguna asander

Tepetla

Emerald Aguna

Aguna claxon

Ashram del Bosque de Niebla

White-crescent Longtail

Codatractus alceus

Presa Jalpan

Hysterical Skipper

Codatractus hyster

Presa Jalpan (Julian)

Long-tailed Skipper

Urbanus proteus

La Isleta Grande

Double-striped Longtail

Urbanus belli

Presa Jalpan

Esmeralda Longtail

Urbanus esmeraldus

Presa Jalpan

Dorantes Longtail

Urbanus dorantes

the most frequently encountered longtail

Brown Longtail

Urbanus procne

scattered

Plain Longtail

Urbanus simplicius

scattered

Teleus Longtail

Urbanus teleus

scattered

Cobalt Longtail

Urbanus viterboana

Estero Casitas

Pronus Longtail

Urbanus pronus

Estero Casitas

Turquoise Longtail

Urbanus evona

Nigel photographed one at Ashram del Bosque de Niebla

Two-barred Flasher

Astraptes fulgurator

frequent – noted on 5 days

Yellow-tipped Flasher

Astraptes anaphus

Presa Jalpan

Chisos Banded-Skipper

Autochton cincta

Presa Jalpan

Potrillo Skipper

Cabares potrillo

frequently encountered

Guatemalan Pellicia

Pellicia arina

Presa Jalpan

Starred Skipper

Arteurotia tractipennis

Presa Jalpan

Red-studded Skipper

Noctuana stator

scattered

Mottled Bolla

Bolla clytius

La Isleta Grande (Nigel)

Obscure Bolla

Bolla brennus

Rio Playa la Junta Atoyac (Julian)

Mauve Bolla

Bolla eusebius

Rio Playa la Junta Atoyac & Presa Piedra Azul

Golden-snouted Scallopwing

Staphylus vulgata

Rio Playa la Junta Atoyac

Mazans Scallopwing

Staphylus mazans

Cascada el Chuveje

Lugubrious Blue Skipper

Quadrus lugubris

Ashram del Bosque de Niebla

Variegated Skipper

Gorgythion begga

Cascada el Chuveje

White Enops

Polyctor cleta

Presa Jalpan

Black-veined Mylon

Mylon maimon

scattered in the Sierra Gorda

Bold Mylon

Mylon lassia

Presa Jalpan

Orange-spotted Skipper

Atarnes sallei

Presa Piedra Azul

Ochre Hoary Skipper

Carrhenes callipetes

Ashram del Bosque de Niebla (Nigel)

Hoary Skipper

Carrhenes canescens

La Isleta Grande (Nigel) & Rio Playa la Junta Atoyac

Crystal-winged Skipper

Onenses hyalophora

Rio Playa la Junta Atoyac

Glassy-winged Skipper

Xenophanes tryxus

widespread

Dusted Spurwing

Antigonus erosus

el Tajin

Death-mask Spurwing

Antigonus nearchus

Cascada el Chuveje

Sickle-winged Skipper	<i>Achlyodes thraso</i>	Presa Jalpan and ???Julian scattered
Pale Sicklewing	<i>Achlyodes pallida</i>	La Isleta Grande & Julian
Giant Sicklewing	<i>Achlyodes busirus</i>	Ashram del Bosque de Niebla (Nigel)
Cloudforest Sicklewing	<i>Doberes anticus</i>	Ashram del Bosque de Niebla
Common Bluevent	<i>Anastrus sempiternus</i>	Tepetla
Aztec Skipper	<i>Cycloglypha thrasibulus</i>	Presa Jalpan & Presa Piedra Azul
Cloud-patch Bentwing	<i>Theagenes aegides</i>	Presa Jalpan
White-patched Skipper	<i>Chiomara asychis</i>	scattered
Hermit Skipper	<i>Grais stigmaticus</i>	widespread
Tropical Chequered Skipper	<i>Pyrgus oileus</i>	Presa Jalpan
Common Chequered Skipper	<i>Pyrgus orcus</i>	Estero Casitas
Veined White-Skipper	<i>Heliopetes arsalte</i>	Presa Jalpan & Estero Casitas
Turk's-Cap White-Skipper	<i>Heliopetes macaira</i>	Presa Jalpan
Laviana White-Skipper	<i>Heliopetes laviana</i>	Presa Jalpan
Violet-patched Skipper	<i>Monca tyrtaeus</i>	Rio Playa la Junta Atoyac (Nigel)
Gray-brown Skipper	<i>Mnasicles hicetaon</i>	Tepetla
Potosi Skipper	<i>Anatrytone potosiensis</i>	Cascada el Chuveje
Triangle Remella	<i>Remella vopsicus</i>	Cascada el Chuveje & Presa Piedra Azul
Tropical Least Skipper	<i>Ancyloxypha arene</i>	Presa Jalpan & Sierra Juarez
Clouded Skipper	<i>Lerema accius</i>	last morning in the Sierra Juarez
Gold-flocked Skipperling	<i>Piruna kemneri</i>	scattered
Fiery Skipper	<i>Hylephila phyleus</i>	scattered
Sachem	<i>Atalopedes campestris</i>	Presa Piedra Azul
Whirlabout	<i>Polites vibex</i>	La Isleta Grande (Nigel)
Common Glassywing	<i>Pompeius pompeius</i>	Presa Jalpan
Banded Poan	<i>Paratryone omiltemensis</i>	el Tajin (Nigel)
Umber Skipper	<i>Poanes melane poa</i>	Ashram del Bosque de Niebla (Nigel)
Inimical Poan	<i>Poanes inimca</i>	Sierra Jurez
Evergreen Poan	<i>Poanes monticola</i>	Estero Casitas (Nigel)
Common Mellana	<i>Quasimellana eulogius</i>	Presa Piedra Azul
Mimic Skipper	<i>Quinta cannae</i>	La Isleta Grande (Nigel)
Brazilian Skipper	<i>Calpodetes ethlius</i>	Presa Jalpan
Evans' Skipper	<i>Panoquina fusina</i>	Presa Jalpan
Purple-washed Skipper	<i>Panoquina sylvicola</i>	Ashram del Bosque de Niebla
Confluent Skipper	<i>Tirynthia conflua</i>	Estero Casitas (Nigel)
Gayra Skipper	<i>Vacerra gayra</i>	

Systematic List Number 2

Birds

Nomenclature and taxonomic order follow Howell and Webb's 'A Guide to the Birds of Mexico' (1995).

Muscovy Duck	<i>Cairina moschata</i>	river a couple of hours north of el Tajin
Mexican Duck	<i>Anas diazi</i>	several Presa Piedra Azul – very few records this far south
Blue-winged Teal	<i>Anas discors</i>	most wetlands. Noted on 3 days
Northern Pintail	<i>Anas acuta</i>	Playa Maracaiba
Green-winged Teal	<i>Anas crecca</i>	2 Presa Piedra Azul
Ring-necked Duck	<i>Aythya collaris</i>	Noted Presa Piedra Azul
Lesser Scaup	<i>Aythya affinis</i>	Common Presa Piedra Azul
Ruddy Duck	<i>Oxyura jamaicensis</i>	4 Presa Piedra Azul
Plain Chachalaca	<i>Ortalis vetula</i>	4 at Posada James, Xilitlan, 1 at Mision los Cocuyos, Huatusco
West Mexican Chachalaca	<i>Ortalis poliocephala</i>	2 Sierra Juarez on last morning
Long-tailed Wood Partridge	<i>Dendrortyx macroura</i>	Heard in the Sierra Juarez
Least Grebe	<i>Tachybaptus dominicus</i>	Presa Piedra Azul
Pied-billed Grebe	<i>Podilymbus podiceps</i>	most wetlands. Noted on 3 day
Wood Stork	<i>Mycteria americana</i>	Cienega del Fuerte
Magnificent Frigatebird	<i>Fregata magnificens</i>	1 Playa Maracaiba
Neotropic Cormorant	<i>Phalacrocorax brasilianus</i>	most wetlands. Noted on 3 days
Brown Pelican	<i>Pelecanus occidentalis</i>	quite a few flocks Playa Maracaiba
Pinnated Bittern	<i>Botaurus pinnatus</i>	1 Playa Maracaiba
Great Blue Heron	<i>Ardea herodias</i>	2 Cienega del Fuerte and 1 Presa Piedra Azul
Great Egret	<i>Carcharodius albus</i>	most wetlands. Noted on 4 days
Snowy Egret	<i>Egretta thula</i>	most wetlands. Noted on 4 days
Little Blue Heron	<i>Egretta caerulea</i>	most wetlands. Noted on 3 days
Tricolored Heron	<i>Egretta tricolor</i>	river a couple of hours north of el Tajin and several Playa Maracaiba
Reddish Egret	<i>Egretta rufescens</i>	several Estero Casitas
Cattle Egret	<i>Bubulcus ibis</i>	Widespread
Green Heron	<i>Butorides virescens</i>	1 river a couple of hours north of el Tajin and 1 Presa Piedra Azul
Yellow-crowned Night-Heron	<i>Nyctanassa violacea</i>	2 Estero Casitas
White Ibis	<i>Eudocimus albus</i>	Gulf Coast. Noted on 2 days
White-faced Ibis	<i>Plagadis chihi</i>	en route out of Mexico City and Cienega del Fuerte
Black Vulture	<i>Coragyps atratus</i>	Widespread and very common
Turkey Vulture	<i>Cathartes aura</i>	Widespread and very common
Lesser Yellow-headed Vulture	<i>Cathartes burrovianus</i>	Cienega del Fuerte and Estero Casitas
Osprey	<i>Pandion haliaetus</i>	3 on the Gulf Coast
Hook-billed Kite	<i>Chondrohierax uncinatus</i>	1 Ashram del Bosque de Niebla
Sharp-shinned Hawk	<i>Accipiter striatus</i>	singles Tepetla and Sierra Juarez
Cooper's Hawk	<i>Accipiter cooperii</i>	1 Oaxaca City
Common Black Hawk	<i>Buteogallus anthracinus</i>	1 immature Playa Maracaiba
Great Black Hawk	<i>Buteogallus urubitinga</i>	1 adult Estero Casitas
Roadside Hawk	<i>Buteo magnirostris</i>	frequent, seen on 6 days
Short-tailed Hawk	<i>Buteo brachyurus</i>	1 near el Tajin and 1 Sierra Juarez
Swainson's Hawk	<i>Buteo swainsoni</i>	1 Sierra Juarez
Zone-tailed Hawk	<i>Buteo albonotatus</i>	Jardin Botanico Nevia Bravo Hollis

Red-tailed Hawk	<i>Buteo jamaicensis</i>	2 days in the Sierra Juarez
Crested Caracara	<i>Caracara plancus</i>	scattered. Noted on 4 days
Laughing Falcon	<i>Herpetotheres cachinnans</i>	singles Cienega del Fuerte and Tepetla
American Kestrel	<i>Falco sparverius</i>	scattered throughout. Noted on 6 days
Aplomado Falcon	<i>Falco femoralis</i>	1 Cienega del Fuerte and 2 over the sea
		offshore of Playa Maracaiba!
Bat Falcon	<i>Falco ruficularis</i>	by the entrance to Edward James's Jardin
Gray-necked Wood Rail	<i>Aramtides cajaneus</i>	1 Rio Playa la Junta Atoyac
Common Gallinule	<i>Gallinula galeata</i>	Presa Piedra Azul
American Coot	<i>Fulica americana</i>	most wetlands. Noted on 3 days
Limpkin	<i>Aramus guarauma</i>	1 Cienega del Fuerte
Black-necked Stilt	<i>Himantopus mexicanus</i>	river a couple of hours north of el Tajin
Northern Jacana	<i>Jacana spinosa</i>	1 Cienega del Fuerte
Killdeer	<i>Charadrius vociferus</i>	4 Presa Piedra Azul
Spotted Sandpiper	<i>Actitis macularia</i>	scattered. Noted on 4 days
Willet	<i>Tringa semipalmata</i>	frequent along the Gulf Coast
Sanderling	<i>Calidris alba</i>	a few along the Gulf Coast
Baird's Sandpiper	<i>Calidris bairdii</i>	2 at Presa Piedra Azul
Least Sandpiper	<i>Calidris minutilla</i>	many at Presa Piedra Azul
Western Sandpiper	<i>Calidris mauri</i>	several at Presa Piedra Azul
Laughing Gull	<i>Leucophaeus atricilla</i>	Presa Jalpan and some on the Gulf Coast
Franklin's Gull	<i>Leucophaeus pipixican</i>	1 Playa Maracaiba
Ring-billed Gull	<i>Larus delawarensis</i>	1 Presa Jalpan
Caspian Tern	<i>Sterna caspia</i>	3 on the Gulf Coast
Royal Tern	<i>Thalasseus maximus</i>	1 Playa Maracaiba
Rock Dove	<i>Columba livia</i>	Feral Pigeon widespread around habitation
Red-billed Pigeon	<i>Patagioenas flavirostris</i>	scattered. Noted on 6 days
Band-tailed Pigeon	<i>Patagioenas fasciata</i>	both days on the Sierra Juarez
White-winged Dove	<i>Zenaida asiatica</i>	scattered. Dry areas. Noted on 3 days
Inca Dove	<i>Columbina inca</i>	widespread. Noted on 12 days.
Common Ground-Dove	<i>Columbina passerina</i>	Sierra Juarez
Plain-breasted Ground-Dove	<i>Columbina minuta</i>	Gulf Coast and Jardin Botanico Nevia Bravo
		Hollis
Ruddy Ground-Dove	<i>Columbina talpacoti</i>	noted in the Sierra Gorda
Maroon-breasted Ground-Dove	<i>Claravis mondetoura</i>	one caught by a roadside hawk at Rio Playa la
		Junta Atoyac. Unusually low altitude for this
		species?
White-tipped Dove	<i>Leptotila verreauxii</i>	scattered, esp Oaxaca area. Noted on 4 days
Collared Dove	<i>Streptopelia decaocto</i>	widespread
Squirrel Cuckoo	<i>Piaya cayana</i>	Scattered. Noted on 4 days
Groove-billed Ani	<i>Crotophaga sulcirostris</i>	Scattered. Noted on 4 days
Lesser Nighthawk	<i>Chordeiles acutipennis</i>	several at Presa Piedra Azul
Common Pauraque	<i>Nyctidromus albicollis</i>	5 on night drive to Tepetla
Northern Potoo	<i>Nyctibius jamaicensis</i>	2 on night drive to Tepetla
Vaux's Swift	<i>Chaetura vauxi</i>	noted in the Sierra Gorda on two days
Lesser Swallow-tailed Swift	<i>Panyptila cayennensis</i>	Jardin Botanico Nevia Bravo Hollis
Long-billed Hermit	<i>Phaeothornis longirostris</i>	heard at Tepetla
Green Violet-ear	<i>Colibri thalassinus</i>	both days in the Sierra Juarez
Rivoli's Hummingbird	<i>Eugenes fulgens</i>	was Magnificent Hummingbird. Two days in
		the Sierra Gorda
Amethyst-throated Mountain-gem	<i>Lampornis amethystinus</i>	1 in the Sierra Juarez

Blue-throated Mountain-gem	<i>Lampornis clemenciae</i>	3 in the Sierra Juarez
Beautiful Hummingbird	<i>Calothorax pulcher</i>	1 last morning in Sierra Juarez
Ruby-throated Hummingbird	<i>Archilochus colubris</i>	1 at the Hotel Victoria in Oaxaca
Black-chinned Hummingbird	<i>Archilochus alexandri</i>	1 in the Sierra Juarez
Wedge-tailed Sabrewing	<i>Campylopterus curvipennis</i>	gardens of the Posada James, Xilitla
White-eared Hummingbird	<i>Basilinna leuctois</i>	Sierra Juarez.
White-bellied Emerald	<i>Amazilia candida</i>	Tepetla
Dusky Hummingbird	<i>Phaeoptila sordida</i>	Jardin Botanico Nevia Bravo Hollis and Hotel Victoria in Oaxaca
Azure-crowned Hummingbird	<i>Amazilia cyanocephala</i>	scattered. Noted on three days
Beryline Hummingbird	<i>Amazilia beryllina</i>	most widespread hummer
Green-fronted Hummingbird	<i>Amazilia viridifrons</i>	Presa Piedra Azul
Slaty-tailed Trogon	<i>Trogon massena</i>	A female at Guacamayas
Black-headed Trogon	<i>Trogon melanocephalus</i>	6 seen at Rio Playa la Junta Atoyac
Gartered Trogon	<i>Trogon caligatus</i>	both mornings at Mision los Cocuyos, Huatusco (treated as Violaceous Trogon in Howell and Webb)
Blue-crowned Motmot	<i>Momotus coeruliceps</i>	1 at Xalapa Botanical Garden
Green Kingfisher	<i>Chloroceryle americana</i>	scattered. Noted on 3 days
Amazon Kingfisher	<i>Chloroceryle amazona</i>	1 at river a couple of hours north of el Tajin
Belted Kingfisher	<i>Ceryle alycon</i>	1 at Xalapa Botanical Garden
Ringed Kingfisher	<i>Ceryle torquata</i>	widely scattered. Noted on 5 days
Acorn Woodpecker	<i>Melanerpes formicivorus</i>	locally abundant. Noted on 4 days
Golden-fronted Woodpecker	<i>Melanerpes aurifrons</i>	Widespread and common. Noted on 9 days
Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	scattered. Noted on 4 days
Ladder-backed Woodpecker	<i>Picoides scalaris</i>	Cascada el Chuveje & Hotel Victoria in Oaxaca
Bronze-winged Woodpecker	<i>Colaptes aeruginosus</i>	Ashram del Bosque de Niebla & Tepetla
Lineated Woodpecker	<i>Dryocopus lineatus</i>	2 Cienega del Fuerte
Green Parakeet	<i>Aratinga holochlora</i>	Sótano de las Golondrinas
Aztec Parakeet	<i>Aratinga nana</i>	on the pass west of Xilitla
White-crowned Parrot	<i>Pionus senilis</i>	Mision los Cocuyos, Huatusco & Tepetla
Red-lore Parrot	<i>Amazona autumnalis</i>	Presa Jalpan
Mealy Parrot	<i>Amazona farinosa</i>	scattered. Noted on 3 days
Olivaceous Woodcreeper	<i>Sittasomus griseicapillus</i>	singles at Cascada el Chuveje & Rio Playa la Junta Atoyac
Spot-crowned Woodcreeper	<i>Lepidocolaptes affinis</i>	Rio Playa la Junta Atoyac (Heinz)
Yellow-Olive Flycatcher	<i>Tolmomyias sulphurescens</i>	Rio Playa la Junta Atoyac (Heinz)
Tufted Flycatcher	<i>Mitrephanes phaeocercus</i>	widely scattered in higher areas. Noted on 4 days
Greater Pewee	<i>Contopus pertinax</i>	singles at Mision Conca and Mision los Cocuyos, Huatusco
Western Wood-Pewee	<i>Contopus sordidulus</i>	Sierra Gorda
Olive-sided Flycatcher	<i>Contopus cooperi</i>	1 Ashram del Bosque de Niebla
Least Flycatcher	<i>Empidonax minimus</i>	el Tajin
Dusky Flycatcher	<i>Empidonax oberholderi</i>	Jardin Botanico Nevia Bravo Hollis
	<i>Empidonax spp.</i>	Others unidentified
Black Phoebe	<i>Sayornis nigricans</i>	Scattered waterside records
Eastern Phoebe	<i>Sayornis nigricans</i>	Scattered. Noted on 6 days
Vermilion Flycatcher	<i>Pyrocephalus rubinus</i>	Widespread. Noted on 10 days
Dusky-capped Flycatcher	<i>Myiarchus tuberculifer</i>	Sierra Gorda
Ash-throated Flycatcher	<i>Myiarchus tuberculifer</i>	scattered. Dry areas. Noted on 3 days

Nutting's Flycatcher	<i>Myiarchus nuttingi</i>	Hotel Victoria in Oaxaca & Sierra Juarez
Great Crested Flycatcher	<i>Myiarchus crinitus</i>	Mision Conca
Great Kiskadee	<i>Pitangus sulphuratus</i>	Widespread. Noted on 7 days
Boat-billed Flycatcher	<i>Megarhynchus pitangua</i>	scattered. Noted on 6 days
Social Flycatcher	<i>Myiozetetes similis</i>	Widespread and locally common. Noted daily
Cassin's Kingbird	<i>Tyrannus vociferans</i>	Mision los Cocuyos, Huatusco & Presa Piedra Azul
Tropical Kingbird	<i>Tyrannus melancholicus</i>	gulf coast on both days
Western Kingbird	<i>Tyrannus verticalis</i>	scattered. Noted on 4 days
Masked Tityra	<i>Tityra semifasciata</i>	widespread. Noted on 9 days
Gray-collared Becard	<i>Pachyramphus major</i>	Sierra Juarez
Rose-throated Becard	<i>Pachyramphus aglaiae</i>	Cascada el Chuveje
White-eyed Vireo	<i>Vireo griseus</i>	frequent in the Sierra Gorda. Noted on 5 days
Bells' Vireo	<i>Vireo bellii</i>	El Tajin
Dwarf Vireo	<i>Vireo nelson</i>	Sierra Juarez
Cassin's Vireo	<i>Vireo cassinii</i>	Mision Conca
Blue-headed Vireo	<i>Vireo solitarius</i>	Sierra Gorda where noted on 2 days
Warbling Vireo	<i>Vireo gilvus</i>	frequent in Oaxaca area
Brown Jay	<i>Cyanocorax morio</i>	Widespread and numerous in the lowlands
Steller's Jay	<i>Cyanocitta stelleri</i>	both days in the Sierra Juarez
Woodhouse's Scrub Jay	<i>Aphelocoma woodhouseii</i>	Sierra Juarez
Chihuahua Raven	<i>Corvus cryptoleucas</i>	heard north of Bernal
Common Raven	<i>Corvus corax</i>	Presa Piedra Azul & Sierra Juarez
Northern Rough-winged Swallow	<i>Stelgidopteryx serripennis</i>	scattered. Noted on 5 days
Barn Swallow	<i>Hirundo rustica</i>	only noted once on the Gulf Coast
Black-crested Titmouse	<i>Baeolophus atricristatus</i>	Cascada el Chuveje and El Tajin
Rock Wren	<i>Salpinctes obsoletus</i>	1 at the salt pans in the Tehuacan-Cuicatlan Biosfera Reserve
Canyon Wren	<i>Catherpes mexicanus</i>	La Isleta Grande (IG only)
Sumichrast's Wren	<i>Hylorchilus sumichrasti</i>	heard only at Rio Playa la Junta Atoyac
House Wren	<i>Troglodytes aedon</i>	Scattered records. Noted on 5 days
Bewick's Wren	<i>Thryomanes bewickii</i>	scattered. Noted on 2 days
Band-backed Wren	<i>Campylorhynchus zonatus</i>	scattered. Noted on 3 days
Grey-barred Wren	<i>Campylorhynchus megalopterus</i>	both days in the Sierra Juarez
Boucard's Wren	<i>Campylorhynchus jocusus</i>	Jardin Botanico Nevia Bravo Hollis
Grey-breasted Wood-Wren	<i>Henicorhina leucophrys</i>	Posada James, Xilitla
Blue-gray Gnatcatcher	<i>Polioptila caerulea</i>	Widespread. Noted on 13 days
White-lored Gnatcatcher	<i>Polioptila albiloris</i>	Jardin Botanico Nevia Bravo Hollis
Ruby-crowned Kinglet	<i>Regulus calendula</i>	Cascada el Chuveje
Eastern Bluebird	<i>Sialia sialis</i>	1 Tepetla
Brown-backed Solitaire	<i>Myadestes occidentalis</i>	several at both Ashram del Bosque de Niebla and Tepetla. Also heard both days in the Sierra Juarez
Wood Thrush	<i>Catharus mustelinus</i>	1 Cascada el Chuveje
Clay-colored Thrush	<i>Turdus grayi</i>	scattered. Common in the Sierra Gorda
White-throated Thrush	<i>Turdus assimilis</i>	Mision Conca and Ashram del Bosque de Niebla
American Robin	<i>Turdus migratorius</i>	1 at the top of the Sierra Juarez
Gray Catbird	<i>Dumetella carolinensis</i>	scattered. Noted on 3 days.
Blue Mockingbird	<i>Melanotis hypoleucaerulescens</i>	Presa Jalpan

Northern Mockingbird	<i>Mimus polyglottis</i>	Jardin Botanico Nevia Bravo Hollis & Sierra Juarez
Curve-billed Thrasher	<i>Toxostoma curvirostre</i>	1 at the top of the Sierra Juarez
Ocellated Thrasher	<i>Toxostoma longirostre</i>	1 Jardin Botanico Nevia Bravo Hollis
American Pipit	<i>Anthus rubescens</i>	1 Presa Piedra Azul
Gray Silky-flycatcher	<i>Ptilogonys cinereus</i>	1 Ashram del Bosque de Niebla and frequent in Oaxaca and Sierra Juarez
Loggerhead Shrike	<i>Lanius ludovicianus</i>	Singles twice in Oaxaca region
Northern Waterthrush	<i>Seiurus noveboracensis</i>	Presa Piedra Azul
Louisiana Waterthrush	<i>Seiurus motacilla</i>	scattered. Noted on 3 days
Black-and-White Warbler	<i>Mniotilta varia</i>	Widespread, seen most days
Orange-crowned Warbler	<i>Oreothlypis celata</i>	scattered throughout. Moted on 6 days
Nashville Warbler	<i>Vermivora ruficapilla</i>	frequent in Oaxaca area
Gray-crowned Yellowthroat	<i>Geothlypis poliocephala</i>	Presa Jalpan & 1 at Rio Playa la Junta Atoyac
Common Yellowthroat	<i>Geothlypis trichas</i>	Presa Jalpan & Estero Casitas
American Redstart	<i>Setophaga ruticilla</i>	1 at Rio Playa la Junta
Northern Parula	<i>Setophaga americana</i>	Sumidero, Usumacinta, Palenque
Yellow Warbler	<i>Setophaga petechia</i>	1 Mision los Cocuyos, Huatusco
Yellow-rumped Warbler	<i>Setophaga coronata</i>	widespread from Xalapa to Oaxaca
Townsend's Warbler	<i>Setophaga townsendi</i>	Cascada el Chuveje, Oaxaca and Sierra Juarez
Hermit Warbler	<i>Setophaga occidentalis</i>	Cascada el Chuveje and Sierra Juarez
Black-throated Gray Warbler	<i>Setophaga nigrescens</i>	1 Mision los Cocuyos, Huatusco
Black-throated Green Warbler	<i>Setophaga virens</i>	common from Sierra Gorda to Huatusco
Rufous-capped Warbler	<i>Basileuterus rufifrons</i>	Jardin Botanico Nevia Bravo Hollis & Sierra Juarez
Wilson's Warbler	<i>Wilsonia pusilla</i>	Widespread and common – seen daily
Red-faced Warbler	<i>Cardellina rubrifrons</i>	1 in the Sierra Juarez
Red Warbler	<i>Cardellina rubra</i>	2 in the Sierra Juarez
Painted Redstart	<i>Myioborus pictus</i>	Cascada el Chuveje
Slate-throated Redstart	<i>Myioborus miniatus</i>	scattered. Noted on 5 days
Yellow-breasted Chat	<i>Icteria virens</i>	Cascada el Chuveje
Blue-grey Tanager	<i>Thraupis episcopus</i>	scattered. Noted on 3 days
Yellow-winged Tanager	<i>Thraupis abbas</i>	widespread in small numbers. Noted on 8 days
Red-legged Honeycreeper	<i>Cyanerpes cyaneus</i>	Isleta Grande
Cinnamon-bellied Flowerpiercer	<i>Diglossa baritula</i>	Sierra Juarez (Nigel)
Morelet's Seedeater	<i>Sporophila moreletti</i>	Mision los Cocuyos, Huatusco
Bananaquit	<i>Coereba flaveola</i>	Mision los Cocuyos, Huatusco
Grayish Saltator	<i>Saltator coerulescens</i>	Rio Playa la Junta Atoyac (Heinz)
Buff-throated Saltator	<i>Saltator maximus</i>	Guacamayas and Bonampak
Black-headed Saltator	<i>Saltator atriceps</i>	Posada James, Xilitla, & Isleta Grande
Chestnut-capped Brushfinch	<i>Arremon brunneinucha</i>	2 Sierra Juarez
Collared Towhee	<i>Pipilo ocai</i>	4 Sierra Juarez
Rufous-sided Towhee	<i>Pipilo erythrophthalmus</i>	Sierra Juarez
White-throated Towhee	<i>Pipilo albicollis</i>	Oaxaca area
Rusty Sparrow	<i>Aimophila rufescens</i>	Rio Playa la Junta Atoyac (Heinz)
Lincoln's Sparrow	<i>Melospiza lincolni</i>	2 Ashram del Bosque de Niebla and both days on the Sierra Juarez
Yellow-eyed Junco	<i>Junco phaeonotus</i>	Sierra Juarez
Common Chlorospingus	<i>Chlorospingus flavopectus</i>	Mision los Cocuyos, Huatusco, & Ashram del Bosque de Niebla
Hepatic Tanager	<i>Piranga flava</i>	Sierra Gorda on two days

Western Tanager	<i>Piranga ludoviciana</i>	scattered. Noted on 4 days
Flame-coloured Tanager	<i>Piranga bidentata</i>	a female in the Sierra Juarez
White-winged Tanager	<i>Piranga leucoptera</i>	Mision los Cocuyos, Huatusco
Red-headed Tanager	<i>Piranga erythrocephala</i>	a female in the Sierra Juarez
Northern Cardinal	<i>Cardinalis cardinalis</i>	1 Presa Jalpan
Rose-breasted Grosbeak	<i>Pheucticus ludovicianus</i>	scattered. Noted on 3 days
Black-headed grosbeak	<i>Pheucticus melanocephalus</i>	Sierra Juarez
Varied Bunting	<i>Passerina versicolor</i>	2 Jardin Botanico Nevia Bravo Hollis
Eastern Meadowlark	<i>Sturnella magna</i>	Cienega del Fuerte
Melodious Blackbird	<i>Dives dives</i>	scattered. Noted on 6 days
Brewer's Blackbird	<i>Euphagus cyanocephalus</i>	between Mexico City and Bernal
Great-tailed Grackle	<i>Quiscalus mexicanus</i>	Widespread and very common. Seen daily
Brown-headed Cowbird	<i>Molothrus ater</i>	between Mexico City and Bernal
Orchard Oriole	<i>Icterus spurius</i>	1 Hotel Victoria, Oaxaca
Bullock's Oriole	<i>Icterus bullockii</i>	Oaxaca area where seen on 2 days
Altamira Oriole	<i>Icterus gularis</i>	1 Posada James, Xilitla
Audubon's Oriole	<i>Icterus graduacauda</i>	1 Cascada el Chuveje
Baltimore Oriole	<i>Icterus galbula</i>	scattered. Noted on 4 days
Montezuma's Oropendula	<i>Psarocolius montezuma</i>	Common in lowlands. Noted on 6 days
Yellow-throated Euphonia	<i>Euphonia hirundinacea</i>	Mision los Cocuyos, Huatusco
Scrub Euphonia	<i>Euphonia affinis</i>	Mision Conca & Presa Jalpan
Elegant Euphonia	<i>Euphonia elegantissima</i>	1 Mision los Cocuyos, Huatusco
House Finch	<i>Haemorhous mexicanus</i>	scattered. Noted on 5 days
Black-headed Siskin	<i>Carduelis notata</i>	3 Ashram del Bosque de Niebla
Lesser Goldfinch	<i>Carduelis psaltria</i>	scattered. Noted on 3 days
House Sparrow	<i>Passer domesticus</i>	rather scarce. Noted on 4 days

Systematic List Number 3 Mammals

Order and nomenclature follow Reid (1997) *Mammals of Central America and south-east Mexico*. We started well but saw very few mammals in the second week.

Virginia Opossum	<i>Didelphis virginiana</i>	some at the Mision Conca and some of the group had a close encounter at Sótano de las Golondrinas
Mexican Mouse Opossum	<i>Marmosa mexicana</i>	2 of these cute little opossums in the same fig tree in the grounds of the Mision Conca on both nights we were there
Gray Fox	<i>Urocyon cinereoargenteus</i>	1 in the grounds of the Mision Conca
Cacomistle	<i>Bassariscus sumichrasti</i>	1 in the hills behind Mision Conca while we were on a night drive
Red Brocket Deer	<i>Mazama americana</i>	Sarah saw what may have been this species close to the Cascada el Chuveje
Mexican Gray Squirrel	<i>Sciurus aureogastor</i>	Also known as Red-bellied Squirrel. Widespread

Systematic List Number 4 Flora

Plant identifications by Dr. Heinz Klöser (nugrade@gmx.net). The following list has been generated on a site by site basis.

Mexico City

11. 11. 2022

Ruderal vegetation on a road site in the northern outskirts

Ambrosia cumanensis
Cosmos bipinnatus
Dyssodia papposa
Eleusine indica
Grindelia tricuspis
Melilotus albus
Senecio prionoapterus
Simsia amplexicaulis
Solanum angustifolium
Vachellia vernicosa

Rancho Ellorio (2 sites)

17. 11. 2022

Dry Cactus and thorn scrub (lower site at dry arroyo)

Ambrosia cordifolia
Croton leucophyllus
Cylindropuntia imbricata
Cylindropuntia leptocaulis
Ferocactus latispinus
Fouquieria macdougalii
Guaiacum coulteri
Jatropha dioica
Leucophyllum pringlei
Mammillaria muehlenpfordtii
Mammillaria pringlei
Mimosa aculeaticarpa
Myrtillocactus geometrizzans
Opuntia streptacantha
Prosopis laevigata
Sarcomphalus mexicanus
Stenocereus dumortieri
Vachellia schaffneri
Vachellia vernicosa
Yucca filifera

Dry Cactus and thorn scrub (higher site at slopes)

Agave triangularis
Bursera fagaroides
Cnidoscolus angustidens
Erythrostemon laxus

Ferocactus histrix
Fouquieria macdougalii
Hechtia lepidophylla
Karwinskia humboldtiana
Opuntia microdasys
Tillandsia recurvata

Maguey Verde
18. 11. 2022

Open dry Juniper Woodland

Barleria oenotheroides
Heimia salicifolia
Juniperus deppeana
Larrea tridentata
Opuntia robusta
Quercus sp.
Wigandia urens
Yucca periculosa

Misión Conca
18. & 19. 11. 2022

Semi-dry lower montane forest, scrub and open ground (including cultivated species)

Acmella repens
Adenophyllum cancellatum
Ageratina havanensis
Ageratum corymbosum
Asclepias curassavica
Azadirachta indica
Bauhinia divaricata
Bdallophytum americanum
Bursera simaruba
Caesalpinia pulcherrima
Ceiba pentandra
Colubrina greggii
Cordia boissieri
Ipomoea purpurea
Montanoa tomentosa
Opuntia cochenillifera
Parthenium hysterophorus
Salvia misella
Sanvitalia procumbens
Swietenia macrophylla
Tithonia thurberi
Tournefortia capitata
Tradescantia pallida
Tridax procumbens

Urvillea ulmacea

Small Creek

Hydrocotyle umbellata

Nymphaea gracilis

Pterocarpus acapulcensis

Saururus cernuus

Taxodium mucronatum

Xanthosoma robustum

Salto El Chuveté

18. 11. 2022

Steep slopes of the valley

Achimenes erecta

Aechmea mexicana

Amicia zygozomeris

Anoda cristata

Archibaccharis schiedeana

Asplenium adiantum-nigrum

Asclepias curassavica

Begonia gracilis

Bidens schaffneri

Bocconia frutescens

Boerhavia coccinea

Brickellia secundiflora

Calceolaria tripartita

Carpodiptera cubensis

Cnidioscolus multilobus

Clematis grossa

Coffea arabica

Colubrina greggii

Dendroviguiera quinqueradiata

Dioscorea convolvulacea

Echeandia mexicana

Erythrina lanata

Hemionitis hintoniorum

Hemionitis leucopoda

Hymenostephium cordatum

Ipomoea murucoides

Juglans mollis

Juniperus flaccida

Laelia anceps

Lantana hirta

Lopezia racemosa

Montanoa grandiflora

Montanoa karwinskii

Oreopanax xalapensis

Pecluma bourgeauana

Peperomia tetraphylla
Pleopeltis acicularis
Psidium guajava
Quercus acherdophylla
Quercus aristata
Quercus magnoliifolia
Quercus polymorpha
Quercus sartorii
Ricinus communis
Salvia compositachys
Salvia connivens
Salvia polystachya
Salvia tiliifolia
Sclerocarpus divaricatus
Selaginella polyptera
Tillandsia schiedeana
Tithonia thurberi
Urera caracasana
Vachellia farnesiana
Vachellia pennatula

Gorge leading to the Water Fall

Achimenes antirrhina
Anemia mexicana
Arisaema dracontium
Chamaedorea radicalis
Laportea canadensis
Megalastrum atrogriseum
Peperomia alata
Phenax mexicanus
Platanus mexicanus
Pteridium latiusculum
Rumfordia floribunda
Selaginella hoffmannii
Tectaria transiens
Verbesina sphaerocephala
Xanthosoma robustum

Rocks in the creek

Adiantum poiretii

Shadowy rock wall

Achimenes patens
Adiantum andicola
Asplenium nigripes
Blechnum appendiculatum
Campyloneurum angustifolium
Campyloneurum xalapense

Hechtia lundelliorum
Llavea cordifolia
Nephrolepis pendula
Phlebodium decumanum
Selaginella hoffmannii

Tancana
18. 11. 2022

Dry open woodland
Ageratum corymbosum
Guazuma ulmifolia
Lantana velutina
Melanthera nivea
Montanoa tomentosa
Opuntia cochenillifera
Plumbago zeylanica
Sclerocarpus uniserialis
Senegalia macilenta
Teucrium cubense

Preso Jalpan
19. 11. 2022

Semidry Thornscrub with dominant Acacias
Adenophyllum cancellatum
Ageratina havanensis
Buddleja cordata
Colubrina greggii
Colubrina triflora
Guazuma ulmifolia
Ipomoea corymbosa
Ipomoea hederacea
Karwinskia humboldtiana
Lysiloma divaricatum
Montanoa tomentosa
Nahuatlea magna
Phoradendron quadrangulare
Plumbago zeylanica
Salvia coccinea
Senegalia macilenta
Solanum citrullifolium
Urvillea ulmacea
Vachellia pennatula
Vernonanthura liatroides

El Madronyo
19. 11. 2022

Pine forest on red soil
Ageratina ligustrina

Arbutus xalapensis
Baccharis heterophylla
Crusea hispida
Eriobotrya japonica
Glandularia bipinnatifida
Gnaphaliothamnus salicifolius
Juniperus flaccida
Phaseolus coccinea
Pinus devoniana
Pleopeltis mexicana

Ahuacatlan

19. 11. 2022

Rocky roadside

Dahlia imperialis
Hymenostephium cordatum
Pecluma plumula
Peteravenia schultzei

Xilitla

20. 11. 2022

Subtropical rain forest with additional ornamentals in the Jardin Surrealistico

Aechmea mexicana
Arthrostemma ciliatum
Begonia nelumbifolia
Begonia wallichiana
Calliandra houstoniana
Cecropia obtusifolia
Chamaedorea elegans
Christella dentata
Codiaeum variegatum
Cojoba arborea
Cyathea tuerckheimii
Erythrina lanata
Goeppertia inocephala
Goeppertia ornata
Guadua inermis
Haploclathra paniculata
Heliconia schiedeana
Holmskioldia sanguinea
Hymenostephium cordatum
Licaria capitata
Monstera acuminata
Monstera deliciosa
Musa ornata
Nephrolepis cordifolia
Peperomia glabella
Peponopsis adhaerens

Philodendron radiatum
Phlebodium decumanum
Piper hispidum
Prosthechea cochleata
Roystonea regia
Sanchezia nobilis
Selaginella oaxacana
Telanthophora grandifolia
Tithonia diversifolia
Urera caracasana
Zebrina pendula

Sotano de las Golondrinas

20. 11. 2022

Plants on rock shoulder at a dolina

Phlebodium pseudoaurum

Rio Tampaón

21. 11. 2022

Riverine Forest

Anoda cristata
Baccharis salicifolia
Bursera simaruba
Christella dentata
Cojoba arborea
Ficus insipida
Ipomoea purpurea
Lygodium venustum
Populus mexicana
Rhipsalis baccifera
Ricinus communis
Salix humboldtiana
Syngonium macrophyllum
Syngonium podophyllum
Thunbergia fragrans
Xanthosoma robustum

River Banks

Aldama palmeri
Asclepias curassavica
Bidens alba
Cenchrus purpureus
Crotalaria spectabilis
Cyperus alternifolius
Egletes viscosa
Hydrocotyle umbellata
Ipomoea batatas

Ludwigia octovalvis
Melampodium divaricatum
Mimosa albida
Mimosa pudica
Persicaria segetum
Ruellia simplex
Rumfordia alcortae
Tagetes erecta

El Tajin
21. 11. 2022

Forest around the archeological site

Attalea buttyracea
Cnidocolus aconitifolius
Cordia salvadorensis
Guazuma ulmifolia
Cenchrus purpureus
Panicum virgatum
Syngonium macrophyllum

Tecolutla
22. 11. 2022

Ruderal vegetation on an abandoned plot above an eroding beach

Bidens alba
Chamaecrista chamaecristoides
Chamaesyce anychioides
Citharexylum ellipticum
Crotalaria incana
Croton argenteus
Cynodon dactylon
Dactyloctenium aegyptium
Datura discolor
Ficus pertusa
Hamelia patens
Lygodium venustum
Mitracarpus hirtus
Rivina humilis
Ruellia ciliatiflora
Solanum erianthum
Tridax procumbens

Rio Filobobos
22. 11. 2022

River marsh and pasture – some woodland

Aechmea bracteata
Alfaroa costaricense
Aralia excelsa
Ardisia compressa

Attalea buttyracea
Bauhinia divaricata
Calliandra houstoniana
Canna indica
Commelina erecta
Dalechampia magnistipulata
Ficus crocata
Ficus yoponensis
Gouania lupuloides
Ipomoea triloba
Malpighia mexicana
Malva viscus arboreus
Melanthera nivea
Momordica charantia
Oxalis jacquiniana
Pachira aquatica
Piper hispidum
Psittacanthus calyculatus
Syngonium sagittatum
Tabernaemontana alba
Thunbergia fragrans
Vitis tiliifolia

Freshwater ponds and ditches

Cyperus articulatus
Ludwigia octovalvis
Nymphoides humboldtiana
Persicaria acuminata
Pistia stratioides

Nautla
22. 11. 2022

Dunes and Beach

Canavalia rosea
Croton punctatus
Ipomoea pes-caprae
Macroptilium atropurpureum
Panicum amarum
Sesuvium portulacastrum
Vigna luteola

Xalapa Botanical Garden
23. 11. 2022

Natural Forest Relicts

Beilschmiedia anay
Blechnum polypodioides
Chamaedorea sartorii
Clethra macrophylla

Cordia salvadorensis
Erythrina americana
Ficus pertusa
Heliconia schiedeana
Hoffmannia excelsa
Ostrya virginiana
Piper hispidum
Quercus xalapensis
Selaginella oaxacana
Telanthophora grandifolia
Tillandsia punctulata

Cultivated Mexican

Abies hickelii
Abies religiosa
Acer skutchii
Ardisia compressa
Casimiroa edulis
Chamaedorea elegans
Chamaedorea klotzschiana
Chamaedorea sartorii
Chamaedorea seifrizii
Chamaedorea tepejilote
Chusquea circinata
Clethra macrophylla
Clusia salvinii
Diospyros riojae
Guettarda insularis
Hesperocyparis lusitanica (as Cupressus benthamica)
Ilex socorroensis
Inga brevipedicellata
Juglans mollis
Magnolia dealbata
Magnolia schiedeana
Oecopetalum mexicanum
Oreomunnea mexicana
Otatea nayeeri
Persea cinerascens
Picea martinezii
Pimenta dioica
Pinus chiapensis
Pinus patula
Pinus rudis
Pithecolobium arboreum
Platanus mexicanus
Pseudobombax ellipticum
Pseudolmedia oxyphyllaria
Pyrostegia venusta

Quercus candicans
Quercus corrugata
Quercus insignis
Quercus germana
Quercus laurina
Quercus paxtalensis
Quercus sartorii
Quercus xalapensis
Rhipidocladum pittieri
Sideroxylon socorrense
Stemmadenia galeottiana
Styrax glabrescens
Talauma mexicana
Tapirira mexicana
Taxus globosa
Turpinia insignis
Ulmus mexicana
Viburnum tiliaefolium
Xylosma flexuosa
Zea perenne

Cultivated Non-Mexican

Brunfelsia grandiflora
Chamaedorea costaricana
Citrus paradisi
Citrus reticulata
Coccoloba pubescens
Dombeya cayeuxii
Howea belmoreana
Lycianthes rantonnetii
Phoenix roebelinii
Psidium littorale
Roystonea regia
Solandra maxima
Tetrapanax papyriferus
Wodyetia bifurcata

National Cycad collection

Ceratozamia becerrae
Ceratozamia decumbens
Ceratozamia huastecorum
Ceratozamia microstrobila
Ceratozamia mixeorum
Ceratozamia vovidesii
Cycas clivicola
Cycas media
Cycas wadei
Dioon angustifolium

Dioon argenteum
Dioon califanoi
Dioon holmgrenii
Dioon mejiae
Dioon purpusii
Dioon rzedowskii
Dioon spinulosum
Dioon tomasellii
Encephalartos transvenosus
Zamia cremnophila
Zamia debilis
Zamia fischeri
Zamia furfuracea
Zamia inermis
Zamia paucijuga
Zamia prasina
Zamia sparteae

Isleta Chica(La Isleta Grande)

23. 11. 2022

Forest and Scrub above a gorge

Aldama dentata
Ageratina areolaris
Bidens alba
Bursera simaruba
Dracaena ghiesbreghtii
Heliocarpus appendiculatus
Milleria quinqueflora
Mimosa albida
Mirabilis jalapa
Podocarpus matudae
Pseudobombax ellipticum
Salvia coccinea
Sansevieria trifasciata
Serjania mexicana
Thunbergia alata
Tillandsia juncea
Verbesina lottiana

Huatusco – Las Canyonadas

24. 11. 2022

Cloud Forest around “Ashram”

Acer skutchii
Cestrum roseum
Clethra macrophylla
Cyathea myosuroides
Heliocarpus appendiculatus
Hibiscus uncinellus

Hoffmannia excelsa
Liquidambar styraciflua
Lopezia racemosa
Magnolia dealbata
Miconia xalapensis
Pteridium caudatum
Quercus insignis
Quercus sartorii
Selaginella oaxacana
Sticherus ferrugineus

Riverine Forest

Brugmansia suaveolens
Cecropia obtusifolia
Cyathea myosuroides
Fraxinus uhdei
Heliconia schiedeana
Heterocentrum subtriplineroum
Liquidambar styraciflua
Lobelia purpusii
Moussonia deppeana
Peperomia glabella
Phlebodium pseudoaureum
Piper auritum
Piper hispidum
Platanus mexicanus
Psittacanthus schiedeanus
Selaginella oaxacana
Tithonia tubaeformis

Pasture and Scrub and some relict tree stands

Aldama dentata
Arthostemma ciliatum
Begonia gracilis
Cirsium ehrenbergii
Clematis rhodocarpa
Clibadium arboreum
Crusea calcephala
Echeveria rosea
Erigeron karvinskianus
Guadua angustifolia (cultivated)
Heterocentrum subtriplineroum
Hypoxis mexicana
Ipomoea cholulensis
Mimosa albida
Moussonia deppeana
Oreomunnea mexicana
Passiflora adenopoda

Phlebodium pseudoaureum
Piper auritum
Pleopeltis mexicana
Quercus elliptica
Quercus laurina
Ranunculus petiolaris
Richardia scabra
Salvia lasiocephala
Stachys boraginoides
Tillandsia flavobracteata
Tillandsia punctulata
Tithonia diversifolia
Vachellia pennatula
Verbesina turbacensis
Zapoteca portoricensis

Huatusco – Laguna de Santo Domingo
25. 11. 2022

Forest Relics between Pasture

Aldama dentata
Ageratum corymbosum
Campyloneurum phyllitidis
Cirsium ehrenbergii
Clethra macrophylla
Clusia lundellii
Cnidocolus aconitifolius
Epiphyllum oxypetalum
Erythrina berenices
Ficus crassinervia
Heterocentrum subtriplinerovum
Hibiscus uncinellus
Koanophyllon albicaule
Laelia anceps
Liquidambar styraciflua
Lobelia purpusii
Maxillaria tenuifolia
Megalastrum atrogriseum
Moussonia deppeana
Nephrolepis biserrata
Olmeca reflexa
Phlebodium pseudoaureum
Phoradendron galeottii
Piper auritum
Pleopeltis plebeia
Prosthechea karwinskii
Prosthechea ochracea
Psidium guajava
Pteridium caudatum

Quercus insignis
Quercus laurina
Quercus xalapensis
Rubus verae-cruzis
Salvia purpurea
Selaginella oaxacana
Solanum myriacanthum
Stachys boraginoides
Sticherus ferrugineus
Telanthophora grandifolia
Tillandsia punctulata
Triumfetta speciosa
Vachellia sphaerocephala
Verbesina turbacensis
Vismia camparaguey
Woodwardia semicordata
Yucca periculosa
Zapoteca portoricensis

Wetland at a lake – partly peat bog

Bejaria aestuans
Coccocypselum hirsutum
Fraxinus uhdei
Huperzia reflexa
Liquidambar styraciflua
Lycopodiella cernua
Myrica lindeniana
Osmunda spectabilis
Phragmites berlanderi
Rhynchospora jubata
Sphagnum meridense
Thelypteris palustris

Huatusco - Rio de Dos Puentes

25. 11. 2022

Riverine Forest at the bottom and rock faces of a narrow Canyon

Acmella repens
Anoda cristata
Bocconia arborea
Canavalia glabra
Canna tuerckheimii
Cenchrus purpureus
Chromolaena collina
Crusea calocephala
Cuphea nitidula
Equisetum myriochaetum
Equisetum praealtum
Fraxinus uhdei

Hibiscus uncinellus
Ipomoea funis
Ipomoea nil
Melampodium divaricatum
Pilea mexicana
Pinus lumholtzii
Platanus mexicanus
Polygala paniculata
Pteridium caudatum
Renealmia mexicana
Rubus rosifolius
Salvia purpurea
Sechium mexicanum
Sigesbeckia agrestis
Tillandsia deppeana
Yucca periculosa

Orizaba
26. 11. 2022

Suptropical seasonal forest along a river and river border

Aldama dentata
Biophytum dendroides
Bursera simarouba
Cenchrus purpureus
Christella dentata
Cucurbita argyrosperma
Cyclanthera carthagenensis
Heliconia spissa
Hymenocallis litoralis
Inga oerstediana
Laelia anceps
Malvastrum coromandelicum
Peperomia rotundifolia
Thunbergia alata
Tillandsia usneoides

Cultivated Plants

Ficus benjamina
Luffa cylindrica
Megaskepasma erythrochlamys
Saccharum officinarum
Zingiber spectabile

Tehuacan
26. 11. 2022

Roadside dry scrub

Ageratina deltoidea

Bauhinia chapulhuanicana
Bryophyllum delagoense
Critoniopsis uniflora
Heimia salicifolia
Lycium geniculatum
Maurandya scandens
Mimosa aculeaticarpa

Tehuacan Cuicatlan – Botanical Garden and vicinity
27. 11. 2022

Dry cactus and thorn scrub, dominated by *Neobuxbaumia tetetzo*

Agave karwinskii
Agave macroacantha
Agave peacockii
Agave stricta
Agave triangularis
Beaucarnea gracilis
Bouteloua aristidoides
Bursera biflora
Bursera fagaroides
Bursera galeottiana
Calpicola parvifolia
Castela tortuosa
Ceiba parvifolia
Coryphanta pallida
Cnidoscolus tehuacanensis
Cylindropuntia imbricata
Cylindropuntia tunicata
Erythrostemon melanadenius
Euphorbia rossiana
Euphorbia schlechtendahlia
Ferocactus flavovirens
Ferocactus histrix
Ferocactus latispinus
Ferocactus robustus
Fouquieria formosa
Fouquieria ochoterena
Gymnosperma glutinosum
Hechtia bracteata
Hechtia colossa
Hechtia roseana
Ipomoea arborescens
Ipomoea conzattii
Jatropha neopauciflora
Justicia ramosa
Karwinskia humboldtiana
Laelia albida

Lemaireocereus hollianus
Lippia graveolens
Mammillaria carnea
Mammillaria haageana
Mammillaria sphaecellata
Mimosa aculeaticarpa
Mimosa luisana
Myrtillocactus geometrizans
Myrtillocactus schenckii
Neobuxbaumia tetetzo
Opuntia depressa
Parkinsonia praecox
Pilosocereus chrysacanthus
Plumeria rubra
Prosopis laevigata
Stenocereus pruinosus
Stenocereus stellaris
Vachellia constricta
Vachellia pennatula
Tillandsia recurvata
Tillandsia tehuacana
Trixis Mexicana
Viguiera dentata
Zaluzania augusta
Zinnia peruviana

Zapotitlan – Salinas and vicinity

27. 11. 2022

Dry cactus and thorn scrub, dominated by *Cephalocereus columna-trojani*

Actinocheita potentillifolia
Agave triangularis
Beaucarnea gracilis
Bouteloua aristidoides
Calcicola parvifolia
Ceiba parvifolia
Cephalocereus columna-trojani
Coryphanta pallida
Dasyllirion acrotriche
Euphorbia rossiana
Euphorbia schlechtendahlia
Ferocactus flavovirens
Ferocactus histrix
Ferocactus latispinus
Fouquieria formosa
Gymnosperma glutinosum
Hechtia podantha
Hechtia pueblensis
Ipomoea arborescens

Mammillaria haageana
Mimosa luisana
Neobuxbaumia tetetzo
Pedilanthus calcaratus
Pilosocereus chrysacanthus
Wedelia acapulcensis
Yucca mixtecana
Yucca periculosa
Zinnia peruviana

Oaxaca
28. 11. 2022

Dry seasonal Forrest

Ipomoea intrapilosa
Jacaranda mimosiifolia
Leucaena leucocephala
Mansoa verrucifera

Tiotitlan – Piedra Azul
28. 11. 2022

Dry open cactus scrub on slopes

Brickellia paniculata
Buddleja sessiliflora
Cnidoscolus multilobus
Cylindropuntia imbricata
Dalea foliolosa
Dyssodia decipiens
Gymnosperma glutinosum
Hechtia conzattiana
Ipomoea arborescens
Myrtillocactus geometrizzans
Opuntia streptacantha
Sanvitalia procumbens
Schinus molle
Senna holwayana
Solanum angustifolium
Vachellia schaffneri
Yucca periculosa

Riverine Gallery Forrest on rocky or pebbly ground

Ageratina brevipes
Baccharis salicifolia
Buddleja cordata
Cascabela thevetia
Chromolaena collina
Dodonaea viscosa
Ipomoea arborescens
Jacaranda mimosiifolia

Leonotis nepetifolia
Leucaena leucocephala
Montanoa leucantha arborescens
Nicotiana glauca
Passiflora foetida
Pluchea carolinensis
Salix bonplandiana
Salvia purpurea
Senna holwayana
Solanum erianthum
Vachellia pennatula
Wigandia urens

Pebble banks in the river and at the river mouth

Argemone ochroleuca
Bidens pilosa
Datura stramonium
Leonotis nepetifolia
Nicotiana glauca
Phytolacca icosandra
Salix humboldtiana
Sanvitalia procumbens
Solanum candidum
Tagetes foetidissima
Tithonia tubaeformis

Muddy flats and shallow pools at the lake shore, subject to changing water levels

Bacopa monnieri
Chara vulgaris
Cyperus bipartitus
Eleocharis minima
Heteranthera reniformis
Ludwigia peploides

Road from Tiotitlan to Benito Juarez

29. 11. 2022

Lower Quercus-Pinus Mountain Forrest

Agave cupreata
Ageratum conyzoides
Annona cherimola
Arctostaphylos pungens
Buddleja cordata
Cylindropuntia imbricata
Dalea foliolosa
Dodonaea viscosa
Dyssodia decipiens
Echeveria montana
Echinopepon pringlei

Hemionitis bonariensis
Ipomoea arborescens
Leonotis nepetifolia
Lopezia racemosa
Malacomeles psilantha
Malvastrum coromandelicum
Mammillaria karwinskiana
Montanoa leucantha arborescens
Nicandra physalodes
Pinus apulcensis (= *Pinus strobiformis* var. *apulcensis*)
Psittacanthus auriculatus
Quercus candicans
Quercus castanea
Quercus germana
Quercus laurina
Quercus magnoliifolia
Quercus obtusata
Quercus rugosa
Quercus urbanii
Salvia purpurea
Sedum dendroideum
Senna holwayana
Solanum lanceolatum
Tecoma stans
Ternstroemia lineata
Tillandsia gymnotrya
Tillandsia recurvata
Tillandsia variabilis
Vachellia pennatula
Verbesina turbacensis
Wigandia urens

Upper Quercus-Pinus Mountain Forrest

Adiantum braunii
Anagallis arvensis
Aporocactus martianus
Arbutus xalapensis
Arctostaphylos pungens
Alnus acuminata
Bidens alba
Bocconia frutescens
Buddleja cordata
Castilleja arvensis
Castilleja tenuiflora
Desmodium pringlei
Echeveria montana
Eryngium mexiae
Fuchsia arborescens

Hemionitis bonariensis
Hemionitis intramarginalis
Hemionitis myriophylla
Iresine diffusa
Juglans mollis
Laelia furfuracea
Lamourouxia pringlei
Lippia umbellata
Muhlenbergia rigida
Pinguicula moranensis
Pinus devoniana
Pinus maximinoi
Pitcairnia breedlovei
Quercus candicans
Quercus crassifolia
Quercus laurina
Quercus rugosa
Quercus sartorii
Quercus sideroxyla
Rubus urticifolius
Salvia elegans
Salvia hispanica
Salvia longispicata
Salvia longistyla
Selaginella lepidophylla
Tagetes tenuifolia
Tillandsia prodigiosa
Tillandsia usneoides
Verbesina turbacensis

High elevation Woodland around Benito Juarez

Abies hickelii
Alchemilla orbiculata
Buddleja cordata
Castilleja integrifolia
Cestrum aurantiacum
Cirsium acantholepis
Coreopsis petrophila
Crataegus mexicana
Hesperocyparis lusitanica
Kniphofia uvaria
Lobelia laxiflora
Lupinus montanus
Nephrolepis pectinata
Pinus hartwegii
Pinus veitchii
Roldana petasites
Salvia longispicata
Senecio cinerarioides

Monte Alban

28. 11. 2022

Dry seasonal Forrest around the archeological site

Bouvardia viminalis

Iresine cassiniiformis

Ceiba aesculifolia

Ipomoea arborescens

Pinus apulcensis (= *Pinus strobiformis* var. *apulcensis*)

Internet

American Conifer Society 1983: Conifers. www.conifersociety.org/conifers/

Board of Trustees of the Royal Botanic Gardens, Kew 2022: Plants of the World online. www.powo.science.kew.org

California Academy of Sciences 2022: Naturalista Mexico. www.naturalista.mx

Earle CJ (ed) 2022: The Gymnosperm Database. www.conifers.org/zz/gymnosperms.php

Nevarez-Prado LO, Rocha-Gutiérrez BA, Neder-Suarez D, Cordova-Lozoya MT, Soto JGA, Balderrama MIS, Anchondo TdJR, Hernandez-Ochoa LR 2021: El género *Fouquieria*: descripción y revisión de aspectos etnobotánicos, fitoquímicos y biotecnológicos. <https://vocero.uach.mx/index.php/tecnociencia>

Red de Herbarios del Noroeste de México. www.herbanwmex.net/portal/index.php

Rzedowski J 2006: Vegetación de México.

www.biodiversidad.gob.mx/publicaciones/librosDig/pdf/VegetacionMx_Cont.pdf (with links to chapters)

Vibrans H, Lezama PT, Alipi AMH, Pichardo JM 2012 Malezas de México.

www.conobio.gob.mx/malezasdemexico/2inicio/paginas/lista-plantas.htm

Literature

Challenger A 1998: Utilización y conservación de los ecosistemas terrestres de Mexico. Pasado, presente y future. ISBN 970-9000-02-0

Fradera MS ed 2002 Herbolaria Mexicana - La Herbolaria en el Noroeste de México: Guías prácticas nr. 4. Editorial México desconocido, México City.

Kershner B, Mathews D, Nelson G, Spellenberg R, Purinton T, Block A, Moore G, Thieret JW 2008 National Wildlife Federation Field Guide to Trees of North America. ISBN 978-1-4027-3875-3

Knapp R 1965: Die Vegetation von Nord- und Mittelamerika und der Hawaii-Inseln. Gustav Fischer Verlag. Stuttgart.

RomeroRangel S, RojasZenteno EC, RubioLicona LE 2015: Encinos de México (*Quercus*, Fagaceae) 100 especies. ISBN 978-607-02-6650-8