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Private Journal

E. A. Goldman

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No. 255

ME

WM. E. STOCKETT & CO.,
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413-415 9th St., N. W.,
Washington, D. C.

En route to Mexico.
Dec. 13-15,

Dec. 13, 1902.

Left Washington, D.C. at 11:15 A.M. by the B. & O. R.R. for Mexico. All day a drizzling rain fell and it was so cold that the water froze, forming a coating of ice on the branches of trees, fences and all exposed surfaces. The train was delayed and missed a connection at Cincinnati, so that much of the night was spent there waiting for another train.

Dec. 14 en route.

When I got up I found we were still at Cincinnati. We finally got away about 9:15 A.M. and reached St. Louis at 6:25 P.M. The cold, drizzling rain continued to fall all day.

Dec. 15 en route.

The train was delayed about three hours last night by washouts. This morning when I got up we were nearing Russell, Arkansas. Very heavy rains occurred last night and this morning all the streams are out of their banks and in many places only the tops of fence posts project above the water. It is much warmer today and a few of the trees still retain green leaves. The country is low, fairly level,

En route to Mexico,
Dec. 15.

and in most places forested. In the clearings crops of corn and cotton are raised. The people are evidently poor. The houses are small, primitive looking affairs, usually of rough boards but occasionally of logs. Most of them have old-fashioned fireplaces with big chimneys built outside at the ends. The cotton plants are small and stunted. The most abundant forest tree near Russell is an oak with large, lobed leaves. The leaves still adhere to the branches giving a reddish brown color to the forest.

Platanus. Sycamores are common among the oaks described above.

Liriodendron? Leafless trees that I took to be Tulip trees were common over large areas east of Little Rock, Arkansas.

Most of the fences were worm fences made of heavy split rails.

Pinus. As we neared Little Rock, a pine with short leaves and small cones appeared suddenly and was abundant over certain areas but did not appear to occur at all over other areas, apparently of the same character.

Passed Little Rock about noon.

Sturnella. Several were seen alighting in a field along the R.R., about 30 miles west

En route to Mexico,
Dec. 15-16-17.

of Little Rock.

Pinus. Pines became more abundant along the R.R. about 30 miles west of Little Rock and in many places are the principal forest tree. Near Arkadelphia, Gurdon and other places along the road considerable lumber is sawed from the pines.

Palms. As we neared Arkadelphia, the country, which is still forested, became more swampy and small palms appeared. In some places the palms were very abundant.

Dec. 16, en route, San Antonio, Tex.

Veg. This morning when I got up we were passing Austin, Tex. and I saw some of the familiar Mesquites and large, flat-leaved Opuntia and there were many Live Oaks covered with Spanish Moss. Also many small bushy-topped cedars or junipers.

Sturnella. Several large loose flocks of 50-75 birds were seen flying, near Austin.

I reached San Antonio about 11 A.M. and was obliged to spend a night there.

Dec. 17 en route.

Left San Antonio for Eagle Pass and Mexico at 8:30 A.M.

Veg. Between San Antonio and Eagle Pass, Mesquites, large Opuntia and Acacia farnesiana

En route, Zacatecas.
Dec. 18.

were abundant.

Catharista atrata. Saw a flock of about 100 working on and flying about the carcass of a cow lying near the R.R. a short distance north of Spofford, Tex.

Cathartes aura. Several were seen flying near Spofford. Apparently not so abundant as C. atrata.

The "Administrador of the Aduana" at Ciudad Porfirio Diaz, passed all my baggage without obliging me to open any, and the train started on south into Mexico at 4 P.M.

Dec. 18. in route, Zacatecas. Zacatecas.

Alt. Zacatecas. 8000 ft.

When I got up this morning, the train was about 20 miles from Torreon where we soon arrived for breakfast.

Near Piedras. Barron rugged hills rise 1000 ft. or more, a short distance away. Both on the east and on the west.

Falco sparverius. Several were seen flying along the R.R. today.

At Jimuleo. Barron, rugged hills rise 1000-1500 ft. about a mile away on the east side and about two miles away on the west side. In the bottom land along the river, crops of corn and cotton are raised.

Veg. The vegetation appeared to be about the

Zacatecas.

same, from Torreon to a point a short distance north of Truxillo, where the country becomes more grassy and at least some of the species appear to end. Perhaps this point may be near the extreme upper limit of the Lower Sonoran zone. Most of the species vary in size and abundance on different areas.

Yucca. A rather short-leaved species was common nearly all along the way today. Near Gutierrez they were larger and more abundant than elsewhere.

Fouquieria. Common at least as far as Jimuleo.

Covillea mexicana. Common from Torreon to a point a short distance north of Truxillo where it appeared to end entirely.

Agave "lechugilla". Near Jimuleo this, and a much larger Agave are abundant. Most of them were seen a short distance south of the town.

Opuntia. A large, broad, flat-leaved species was common nearly all the way and did not end entirely along with Covillea mexicana, a short distance north of Truxillo, Zac. Near Gutierrez the Opuntias were much larger and more abundant than elsewhere.

The train reached Zacatecas about 7 P.M. and I found quarters at the "Hotel Zacatecas." The weather

Zacatecas
Dec. 19.

is much warmer here than I expected to find it and there has been some rain. Frost occurs occasionally at night. My object in stopping at Zacatecas was to secure topotypes of Sigmodon fulviventris.

Dec. 19. Remain at Zacatecas.

Sigmodon fulviventris. My object in stopping here was to secure topotypes of this species. The collector of the type reported that the species is abundant in the barren pastures surrounding the city. Today was spent in searching for signs on the barren slopes of the hills in the vicinity of the city, but nothing very promising was found. Traps were set during the afternoon in the best looking places.

Mines. Only one mine of importance is being worked near here and the town is very dull. Almost all of the mines have been abandoned. The majority of the people seen in the streets belong to the lower class and look very ragged and dirty and thoroughly wretched.

Lepus (Jack). A specimen which had been shot near Calera was bought in the market this morning.

Scardafella inca. Only seen in the parks and yards in the middle of the city.

Oniscalus macrourus. Abundant in flocks among the houses in the city.

Zacatecas,
Dec. 19.

Catherpes mexicanus. Several were seen and heard on walls in the middle of the city.

Sayornis saya. Rather common among the scanty vegetation on the barren hills. At least a half dozen were seen today.

Carpodacus m. frontalis. Common among the trees in parks in the city.

Salpinctes obsoletus. Several were seen among the rocks on the barren hills near the city.

Harporhynchus curvirostris. Two were seen skulking about among some large Opuntias on a barren hillside.

Lanius. One was seen sitting on a telegraph wire and another was perched on the top of a thorny bush on a barren hillside.

Amphispiza bilineata. Two pairs were seen among the cactus and thorny bushes on a hillside.

Falco sparverius. One was seen flying along a steep slope in the hills.

Sprotus c. hypogaea. One flew off down a barren hillside from what appeared to be its burrow. It flew from a hole which entered the ground on a steep hillside. There was bird excrement scattered about near the entrance.

Spizella. Three or four were seen together among the cactuses on a barren hillside.

Baccharis. Common along the bottoms of nearly all the arroyos.

"Little Rubbu Shrub" Grows sparingly and to small size on the barren hills.

Goats. Have nearly finished devouring all the vegetation. Even the thorny shrubs are browsed close.

"Maguay de Pulque" Today near the edge of town I came across a piece of level ground, covered with Agave leaves which had been trimmed along the edges to get rid of the point and the thorns. They were spread out in double overlapping rows with the hollow sides up and the points turned toward each other. An open space was left between the double rows to serve as a path thus:

The hollows were filled with water which is allowed to stand overnight and on frosty mornings ice is gathered. Most of this ice is used for making "heladas" or crude ice-cream which is sold by peddling it about the city.

6512. This is by far the most common shrub on the sterile hills surrounding the city and is probably a characteristic Upper Sonoran species.

Agave. (6511). Grows sparingly on the hills.

Zacatecas,
Dec 20-22.

Dec. 20. Remained at Zacatecas.

Calamospiza melanocorys. Several flocks containing at least 150 birds each, were seen among the thorny vegetation on barren, rocky hillsides.

Dec. 21 Remained at Zacatecas.

Corvus sinuatus. A single bird was seen just before sunset, flying over a high hill.

Pipilo fuscus. Two were seen early this morning among some thick cactuses near the edge of town.

Sceloporus. Several were seen among the *Opuntias* and thorny bushes along an arroyo, south of the city.

Dec. 22 Remained at Zacatecas.

Sigmodon fulviventris. I have searched pretty thoroughly for several miles out in every direction from the city and have failed to find any signs of this mouse and have failed to catch any in numerous traps set during three nights in the most promising looking places. So have decided to leave this evening for Acottan.

Rainfall. The rainfall here is very light. Most of it comes during the months of June, July and August, but showers may occasionally come later. The winter months are entirely dry.

Thomomys. Signs were seen on a mesa

not far from the R.R. station.

Reithrodontomys Two specimens were caught among the scanty growth of weeds and thorny vegetation on a steep slope near the city.

Peromyscus (leaved) Abundant and well distributed on the rocky slopes near the city.

Peromyscus (wh. ft.) Found rather sparingly among the weeds and Baccharis bushes along arroyos among the rocky hills near the city.

Dipodomys Rather common on a high mesa about a mile from the R.R. station and at about the same altitude. Usually they make from one to three holes which enter the ground under the shelter and usually at the bases of thick bunches of large *Opuntias*. Runways sometimes connect holes two or three feet apart but none were found leading away from the shelter of the *Opuntias*.

Neotoma Common along stone walls and other shelter. No stick nests were seen. Rather dim runways were seen where the animals are in the habit of passing through dense thorny vegetation.

Agave The leaves of the species used here to hold water left out overnight to freeze, belong to one of the species used for making pulque.

Coctlan, Jalisco.
Dec. 23.

They are broad and rather short. I was told they were all brought from La Blanca, a small town to the eastward about 16 leagues. According to my informant none grow here. The species found here is latter and has more slender leaves. The leaves used for freezing water are about three feet long and about 10 inches wide.

Zacatecas has an altitude of about 8000 ft. The city is surrounded by barren, rocky hills, some of which rise at least 500 feet higher. The hills are entirely devoid of trees, and shrubs are few in number. During the winter season, sharp frosts occur.

Dec. 23, Coctlan, Jalisco.

When I got on the train last night at Zacatecas I found Mr. Nelson and we came on together to Coctlan, arriving at 9:50 A.M. We found quarters at the Lake View House, a hotel of which Mr. Winfield Scott is the proprietor. Mr. Scott has travelled over much of Mexico and has taken a great many fine photographs of the Indians, natural scenery and other interesting things, and made it pleasant for us at Coctlan.

Coctlan is situated two and one half miles from Lake Chapala, in a rich

agricultural district. Among the crops raised are corn, wheat, barley and tobacco.

Viz. Today there appeared to be a decided change in the vegetation when we began to descend the slope between La Piedad and Yurécuaro, at about 1600 meters altitude. On the plain near La Piedad Mesquites and acacias appeared to be the principal trees. When we began descending the slope, Pine Spornias appeared and soon became abundant.

This afternoon a trip was made across and down along the farther side of the Sula river, a branch of the Santiago - the two streams unite a short distance below the town. The rivers are only a trifle below the level of the broad plain, and are bordered near here, along both sides by marshy tracts in which many aquatic birds find shelter.

Water Hyacinth. This plant is said to have been unknown here until about three years ago when a few were placed in a small branch of the Santiago river. Now the plant grows with excessive abundance and chokes the Santiago at Acottan so much that navigation is interrupted with and the river has to be periodically cleaned. The plants are spreading rapidly and will probably soon be growing

in abundance in many places along the shores of Lake Chapala.

Pyrocephalus r. mexicanus. Very abundant along the banks of the rivers here. Usually seen sitting on the Mesquites, Huisachis and other trees along the banks, but they alight also on any available perch.

Fulica. Very abundant in the marshy areas along the river.

Certhophaga sulcirostris. Several parties of 5-10 birds in the marshes along the Sula river.

Dec. 24, Lake Chapala.

An invitation was received yesterday afternoon to go on a hunting trip today and tomas on Lake Chapala for geese, ducks and other water-fowl. The invitation came from Mr. Reese who is in charge of the Dwight Furness ranch near here and facing on the lake. A carriage came about 9 A.M. this morning to take us to the ranch, from which the start was to be made. We got off about noon in a large sailing canoe usually used for freight. The party consisted of Mr. Nelson, Mr. Reese and wife, another man and myself, besides several boatmen. Our objective point was the

vicinity of the mouth of the river Lerma where it enters the lake. The lake is silted up here and a sort of point of marshy land extends far out from the main shore, on either side of the river. Marshes of grass, tules and flags are abundant. The wind not being favorable we made slow progress but about sunset were near the mouth of the river and the first ducks were sighted. Mr. Reel and I went after them in a small canoe and shot four - one Sprigtail and three Spoonbills. Late in the evening, we anchored a quarter of a mile or more from land in order to avoid the mosquitoes.

Dec. 25. Lake Chapala

Most of the day was spent in the neighborhood of the mouth of the Lerma River and near the little village of La Palma on the south shore of the lake. We had fairly good duck shooting, considering our rather unwieldy canoe and the noise our canoe men make in poling us about. A number of species of ducks and other birds were noted. Large mixed flocks of ducks were seen among the tules and flags. Usually before we were within gunshot the birds took alarm and flew to some other part of the lake.

There is so much room they do little circling and it is seldom that shots can be secured at birds passing over.

Phalacrocorax Near La Palma a nesting place was found, where perhaps 2000 birds were gathered, some of which were actually breeding. The nests were situated among the branches of a shrub or small tree which called "Amegquite" ⁶⁵¹⁵. This plant grows abundantly over shallow areas along the lake shore. Usually it grows 6-12 feet in height with open top, affording practically no shade. Many of them contained three or four nests placed 2-5 feet above the surface of the water. Many of the nests contained eggs. When we approached to use our cameras the birds were all perched close together on the bushes but before we could get any very satisfactory pictures they took alarm and nearly all flew off. Nests were 12-15 inches across.

Late in the evening we started for Acotlan but the wind stopped blowing and we were becalmed until late in the night. The wind which came up toward morning was not very favorable but we made fairly good progress toward Acotlan.

Dec 26, Acottan.

Early this morning we anchored about six miles from Acottan and nearly in front of a small ranch called Las Portugas. As our boat had no keel it was impossible to work against the wind so we took a small canoe and reached the Furness ranch about noon. Late in the afternoon Mr. Nelson and I returned to Acottan.

Dec. 27 Remained at Acottan.

Entire day was spent in skinning and preparing specimens shot Dec. 24-26.

Dec. 28-31. Remained at Acottan.

The four days were spent collecting in the vicinity of Acottan.

Phalaenopteryx Iris, dark grass green; eyelids, dark brownish with 20 small regularly spaced, transverse blue spots; gular pouch, dirty flesh color; base of mandibles surrounding gape, dirty yellowish, finely speckled with dirty whitish; bill, blackish horn color along top of upper mandible, shading downward into bluish horn color on lower part of upper mandible and all of lower, becoming palest on under side of lower mandible. Sides of lower mandible transversely marked with irregular spots of whitish horn color.

Canis. Said to occur on plains near

Acottan.

Jan. 1, 1903, Las Portugas, Jalisco.
Mr. Nelson went to Guadalajara this morning to buy pack and riding saddles and other outfit for our trip through Michoacan and Guerrero. He expects to be gone three days. I went with the photographer, Mr. Winfield Scott, to a small place, ^{called Las Portugas} ~~that~~ he owns on the lake shore about six miles from Acottan, to remain for three days collecting. The little place is a point formed by a sort of delta, where a deep arroyo or box cañon breaks down through the steep bluffs bordering the north shore of the lake. The climate is much milder, no frosts occur in the immediate vicinity of the lake and crops of sugarcane, bananas, corn, beans are raised. The sugarcane and bananas require irrigation and the water is raised from the lake by "norias". The hills bordering the lake at this point rise abruptly and have cliffs and rocky ledges along their fronts.

Quiscalus macrourus, called "uraca" by people at Acottan.

Sturnella Several were heard singing from marshy land along the Tula river early in the morning, when on the way by canoe to Mr. Scott's place.

The river which enters Lake Chapala is called the Lerma and the stream flowing out the Rio Grande de Santiago.

Certhia This wren is common among the tall grass and aquatic vegetation along the Sula and Santiago rivers at Acotlan. They spend almost all the time out of sight among the grass but on hearing one approach they often pop up into view and having satisfied their curiosity quickly disappear again. Occasionally they were heard singing a lively little song.

Bolaurus While hunting in the tall grass in a marsh along the Sula river, a bittern suddenly flew up within 10 feet of me. It arose with a great flapping of wings and so suddenly as to startle me.

Melospiza^{georgiana} A single specimen shot in the long grass along the Sula river was the only one seen. It was perched on a grass stem about three feet from the ground.

Zonotrichia leucophrys. A single bird was seen and shot among some grass and weeds along the roadside near the bridge across the Sula river at Acotlan yesterday.

Xanthocephalus xanthocephalus. A flock of about 40 birds was seen on a marshy tract along the Rio de Santiago near where it leaves the lake.

Agelaius A few were seen along the Santiago river. Local name "gordillo".
Ficus. A species with whitish bark and broadly spreading base is common along the lake shore. This tree appears to always grow up along the face of a cliff or large rock. Usually it is found growing on the lower side of the rock.

Earthquake. About three years ago one of the towers of the church at Acotlan was shaken down by an earthquake. It is being rebuilt now.

Jan. 2-3. Remained at Las Portugas.
"Pochote" Silk cotton trees are common along the bluffs facing the lake at Las Portugas, and on the south slopes of most of the hills near Acotlan. They grow 20-25 feet in height and have the usual tapering spiny trunks. Although ^{usually} leafless at this season, many of them have a few fruits almost ready to discharge their contents. In a few cases trees were seen with a few leaves but no fruits.

Pithecolobium dulce. Common in the valley at Acotlan and on some of the slopes of the surrounding hills. The bark is said to be used for tanning purposes at Acotlan.
Pin-be. This is a small tree found

rather sparingly near San Portugal and elsewhere along the lake shore. The bark is used for tanning leather after being ground very fine.

Jan. 4. Acotlan.

I returned from San Portugal to Acotlan and Mr. Nelson returned there from Guadalajara.

Jan 5-6 Remained at Acotlan, Jalisco

On the 5th we hired Mr. R. H. Crompton and his gasoline launch to take us to the nesting place of the cormorants near La Palva. Our object was to secure a good set of pictures of the birds and nests. Mr. Winfield Scott accompanied us and we all took a number of pictures.

Canis Coyotes are said to occur in the valley at Acotlan.

Lepus Jack rabbits occur in open grassy parts of the valley but are not so very common. According to the natives they are often seen in pairs.

Lepus A few cottontails are found about fields.

Didelphis (15730) A number of tracks were seen along the Sula river and one specimen was taken.

Thomomys (15721) Abundant and well distributed except in the marshy land along the rivers. They were most abundant along such

fences and among the weeds along the borders of fields.

Byzomys (15718) Rather common among the coarse grass along the edges of the marshy tracts along the Sula river.

Signodon (15717) Excessively abundant and well distributed everywhere. They were found both on dry and on marshy ground, but were less common along the cliffs near the tops of the hills bordering the lake.

Peromyscus (H. Ft.) (15715) Common everywhere around fields and along the marshy borders of the Sula river.

Sorex Said to occur rather sparingly among the hills bordering Lake Chapala. One was seen along the shore and shot from a canoe and the skull presented to us.

Blarina (15708) Three specimens were taken among the coarse grass along the edges of the marshy tracts along the river.

Spilogale (15720) A single specimen was caught in one of the runways ^{of foot} made along the edge of a marshy tract, bordering the Sula river.

Mephitis (15731) As in the case of the Spilogale, a single specimen was caught in a foot runway.

Bassariscus (15734) Two were caught in traps

set along the cliffs along the bluffs facing Lake Chapala near Acotlan.

Peromyscus (15733) A single specimen was caught along a cliff several hundred feet above the lake.

Procyon. A number of tracks were seen.

Lutra Otters are described by the people and are said to be not uncommon. While I was stopping at the little ranch called Las Portugas on the lake shore about six miles from Acotlan, otters came in the night and took six large cat fish from a fish pen in the edge of the lake in front of the house. The heads were left unharmed and were scattered about along the beach near the pen. Two fish were left unharmed in the pen. Traps were set but on the following night the otters did not return. They are said to live in large holes below the water-line in a rocky bluff near the ranch. The water at that point is deep. They are said to be rather common in the Gula river above Acotlan, where they live in holes which enter the banks among the roots of Bald Cypress trees. Occasionally the fishermen see them sunning themselves on the rocks along the shore of Lake Chapala.

Nasua A few are said to occur in the hills surrounding the lake.

Natu novemcincta, a few are said to occur in the hills.

Edocheilus Deer are said to occur in the higher hills surrounding the lake but are not abundant.

Daiomys (15710) Very common and well distributed.

Reithrodontomys (15739) A single specimen was taken among the grass on a rocky slope several hundred feet above the lake.

Reithrodontomys (15716). Several specimens were taken among the coarse grass growing on the wet borders of the marshes along the Gula river.

Spermophilus variegatus, common among the rocks along the shores of the lake. Several were seen in passing by canoe, and two were secured for specimens.

Procyon. said to occur.

The following birds were noted at Acotlan and on or around Lake Chapala.

Zayornis nigricans

Pyrrocephalus r. mexicanus

Mimus

Trisechus macrourus

Tachycineta bicolor

Catherpes mexicanus

set *Siurus motacilla*
 tek *Polyborus cheriway*
Scardafella inca
 alv *Polyphila*
Melanerpes
Fulica
 an *Astragalinus*
 slo *Crotophaga sulcirostris*
 thi *Myiozetetes s. superciliosus*
 oti *Sporophila moreletii*
 ca *Trochylus*
 la *Dryobates*
 us *Melospiza lincolni*
 th *Circus hudsonius*
 us *Pelecanus*
 su *Ganus*
 no *Harporhynchus curvirostris*
 ho *Scolus pustulatus*
 ne *Callopterus*
 du *Procaetus*
 in *Chondrostes*
 lu *Phalaacrocorax*
 th *Spizella pallida*
 th *Nycticorax naevius*
 on *Ardea herodias*
Spoonbill Duck
Glossy Ibis

Ardea carulea
 Wood Ibis,
Garus californicus
Sterna
Sprigtail
Botaurus lentiginosus
Sturnella
Agelaius
Jacana
Tyrannus
Green-winged Teal
Black Mallard
Cinnamon Teal
Ruddy Duck
Cathartes aura
Gallinago delicata
Agelaius vociferus
Lesser Yellow-legs
Spotted Sandpiper
Long-billed Curlew
Redhead Duck
Podilymbus podiceps
Aechmophorus
Little Bl. Duck
Godwall
Canada Goose
Ardea v. anthonyi

La Barca, Jalisco.
Jan. 7

- Platyptaris
- Barn Owl.
- Crotophaga
- Guiraca caerulea.
- Pitangus dubianus.
- Heliodorops serrapennis.
- Sceloporus cyanocephalus
- Florida Gallinule.
- Falco sparverius.
- Trochilus platycercus?
- Phalaenoptilus
- Sylvania pusilla.
- Zonotrichia leucophrys.
- Tachycineta thalassina.
- Melospiza georgiana.
- Thryomanes.
- Zenaidura macroura.
- Cathartes aura & cathartes aura
- Agelaius
- Sterna regia.
- Ceryle alcyon.
- " cabanisi.
- Melospiza cinerea.
- Piranga

The following plants were noted or collected.

Guayaba

- Pithecolobium dulce
- Jalisco
- Tantania (6520)
- Prosopis
- Taxodium (Bald Cypress)
- Baccharis
- Acacia farinosa
- Cereus 'pitahaya'
- 'Pochote' (silk cotton tree) 6532
- Amizquite (6515)
- Opuntia
- Tree Opuntia 'palo bobo'
- Copal
- Pithecolobium (6524)
- Ficus 'palo blanco' (6527)
- Guaje
- Agave (6526)
- Slender leaved tree (6519)
- "Pimillo" (6531)

Jan. 7, La Barca, Jalisco.

We left Detroit and travelled by train to La Barca, a station a few miles further east, on the Lerma river. The river at this point is about 30 yds. in width and 10 or 15 feet in depth. The banks are about 15 or 20 feet in height, and there is no marshy land immediately along the stream. The great

marshes - probably the largest fresh-water marshes in Mexico, begin about five miles down down.

Jan. 8.

Answer. Our principal object here was to secure specimens of the geese which were excessively abundant. We spent the day on the marshes on the Hda. Buena Vista, about five miles from La Barca and south of the Lerma river. The great marshes near the eastern end of Lake Chapala are called 'cieneegas' which means simply marshes in the Spanish language. Waterfowl of numerous kinds were seen including several species not noted before. Two species of geese were seen but they have been hunted a great deal and are not so easy to secure as earlier in the season. A few days ago several hunters are said to have killed 200 birds.

Duck Hawk. Several were seen flying about over the marsh. Several times two birds were seen, apparently quarreling together while on the wing.

Black Stilt. Common on the marsh. Solitary in habits. Usually seen wading about in the shallow water looking for food. They peck frequently into the mud

and water with their long bills.

Macrorhamphus A few were seen along the edge of the water in the marsh. Mr. Nelson had never seen them before in Mexico. They arose from among the short grass and flew ^{ahead} in a close flock about 50 yds. to the edge of some open water. They were not at all wild and were easily approached and shot.

Ajaji Several pairs and several small flocks were seen. One flock of six or eight was ^{seen} standing in an irregular line on the ground. Several pairs flew over within easy gunshot. At such short distance, their broad bills and long legs stretched out behind could very plainly be seen and they had a very ungainly appearance.

Numenius longirostris Single birds flew over us several times and one was shot by Mr. Nelson.

Stelgidopteryx serripennis. Eight or 10 were seen flying over some open water near the edge of the marsh.

Tachycineta bicolor. Very common. They were flying here and there, all over the marsh, often within five or 10 feet of

the surface of the water. Several passed within a few feet of my head.

Tringa minutilla. Several flocks were seen.

Gallinago delicata. Several were flushed among grass and weeds near the edge of the marsh, and about 5 P.M. when on our way home on horseback we passed within a few yards of one standing in plain sight in open ground with his bill under his wing and apparently asleep.

Pelecanus erythrorhynchos. Several flocks were seen flying.

Chen (W. goose). Several large flocks were seen. They abight to feed in certain places and are much quieter than the White-fronted Goose.

Anser (W. fronted). Thousands of birds were seen. They were constantly flying about in huge flocks and in small parties and even pairs and single birds. They abighted in long lines on the marshy and nearly bare ground separating areas covered with open water. These are apparently regular feeding-grounds and the grass is propped close. The birds were very

restless. Some frequently flew off while others come and abighted with the flock, while on the ground some of the birds frequently stood up very straight and spread and flapped their wings. Often five or six would be doing this at the same time. I estimated one flock to contain at least 2000 birds. It was a fine sight when Mr. N. came toward them in a canoe and the whole flock took to flight.

Jan. 9. Remain at La Barea.

Nearly the entire day was spent in making up specimens secured yesterday.

Chen. A native hunter brought in a large and a small white goose which we made up. Whether they belong to the same or different species remains to be determined.

Chordeiles. Yesterday several were seen flying, late in the evening, over the Mezquite covered plain near the town. One was brought in this evening by a native hunter.

Spizella c. hyp. A specimen was brought in this evening by a native hunter.

The weather has been threatening for several days and it has sprinkled a little several times. This afternoon it began sprinkling and a rain of fine drops fell

Zamora, Michoacan.

Jan. 10.

all the evening.

The following were noted at La Barca.

Duck Hawk, Black Silt, Macrorhamphus
Ayaja ayaja, Greater Yellow Legs,
Numenius longirostris, Stelgidopteryx serripennis,
Arabituzia anthracina, Buteo borealis,
~~Bubo~~, Tringa minutilla, Gallinago delicata,
Colaptes auratus, Pelecanus erythrorhynchos,
Grus mexicana, Chen (w. goose),
Anser (w. fronted).

Jan. 10.

We left La Barca soon after noon and travelled by train to Zamora, Michoacan where we arrived about 4:30 P.M.

Road: Along the road from Guacuaros to Zamora, marshes of considerable extent were seen. Several fields of winter wheat several inches high were seen along the road.

The rain continued all day today.

Ardea egretta. In a marsh passed this afternoon along the road from Guacuaros, about a dozen birds were seen, scattered about in one place.

Zamora is a large town, situated in a broad valley containing much valuable farming land.

Jan. 11. Remain at Zamora.

In the morning Mr. Nelson and I went on a horse car line about three miles, in a southerly direction from Zamora to a suburb called Jacona to look at the country near the border of the valley at that point. The hills near Jacona are of broken lava, at least on the surface, but even some of the lava strewn slopes are marshy at least at this season. Water appears on the surface among the rocks, and swamp grasses and other aquatic vegetation is abundant. The bottom of the valley is marshy in many places.

Silk Cotton Tree "Pochote". Common on well drained slopes of the rocky hills.

Pithecolobium dulce. Not uncommon in the valley.

Tree Ipomea. Abundant on the drier parts of the rocky hills.

Bananas are grown successfully in gardens at Jacona.

Coffee. Thrives in small quantities in gardens at Jacona.

Sugarcane. Small fields are grown near Zamora and Jacona.

Cactopis mexicanus. Very common about the houses at Zamora and Jacona.

Calabaza. The seeds of squashes are roasted and eaten by the natives living along the shores of Lake Chapala.

Guayaba. The common wild species grows very abundantly on the rocky slopes near Jacora.

Poliophtila. A few were seen among the guayaba and *Baccharis* bushes on the rocky slopes near Jacora.

Baccharis. Common along streams and on wet rocky slopes near Jacora.

Jan 12. Remained at Zamora.

Today it rained almost all day. Early in the morning it stopped for a short time and I went out to Jacora to set traps in the vicinity. It began raining again and I was soon soaking wet, but managed to get mouse traps set on a hill about two miles to the northward, which has cliffs near its top which furnish abundant shelter to small mammals.

Thryomanes. Several were heard singing on a rocky hill near Jacora.

Jan. 13. Remained at Zamora.

It rained all day and I did not go out at all.

Jan. 14. Remained at Zamora.

Rain ceased about 4 P.M. In the afternoon

I went out to hill near Jacora and found over a dozen mice in traps set day before yesterday.

Nelsonia. A single specimen was caught in a mouse trap set at the base of a large rock in a thicket on the north slope of the hill, about two miles from Jacora.

Jan. 15. Remained at Zamora.

Putorius. I shot a specimen which crossed a trail in front of me, while hunting in a thicket covered with *Baccharis* and other shrubs, near Jacora.

Illustration to be filled in on typed page #

G. 270

Jan. 16. Rode to La Guaraeba.

to La Guaraeba, an hacienda about 50 miles west of Zamora, to try to buy pack and saddle animals. Arrived late in the afternoon and found the administrator absent. He was to return on the following day.

Road led through valleys and over low, rolling hills and the country was of the same general character as at Zamora. The hacienda is situated near the ciénega of Guaraeba at the eastern end of Lake Chapala. The edges of the marsh make fine grazing lands and considerable areas are covered with sugarcane which appears to thrive very well as there is little or no frost in the immediate

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g. 270

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Jan. 15. Remained at Zamora.

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Jan. 16. Hda. La Guaraeba.

I went to La Guaraeba, an hacienda about 35 miles west of Zamora, to try to buy pack and saddle animals. Arrived late in the afternoon and found the administrator absent. He was to return on the following day.

Road led through valleys and over low, rolling hills and the country was of the same general character as at Zamora. The hacienda is situated near the ciénega of Guaraeba at the eastern end of Lake Chapala. The edges of the marsh make fine grazing lands and considerable areas are covered with sugarcane which appears to thrive very well as there is little or no frost in the immediate

vicinity of the lake.

Jan. 17 Zamora, Michoacan.

Returned from Guaracha to Zamora, having failed to find the mules and horses.

Spermophilus variegatus. Rather common in the stone walls along the road. Two were shot for specimens.

Jan. 18. Remained at Zamora.

Went out to the high, rocky hill near Jacona and spent the day resetting and taking care of traps.

Jan. 19-20 Remained at Zamora.

Still trapping on hill near Jacona.

Rhithrodontomys — a specimen of a large species was caught at the base of a rock in a thicket on the slope of the rocky hill.

Geococcyx californianus. One was seen standing on the branch of a tree about 20 feet from the ground. The tree rose from a dense thicket on a steep hillside near Jacona. The bird stood up rather straight, with the tip of its bill elevated and its tail hanging downward and was uttering the characteristic hoarse croaking note. Soon it spread its wings and tail and sailed down the hillside.

The following mammals were noted or collected at Zamora. Nelsonia, Raiomys

Peromyscus, Putorius, Spermophilus
variegatus, Rhithrodontomys,
Birds. The following were noted or collected
at Zamora, Michoacan. Trypanus, Pipilo
fuscus, Tyrannus verticalis, Scardafella
inea, Spizella pallida, Dendroica
auduboni, Thryothorus, Empidonax
melospiza lineolus, Polioptila,
Xanthocephalus xanthocephalus, Tamias
Sylvania, Ardea virescens,
Sporophila torquata, Astragalinus mexicanus
Bostronia curvirostris, Guiraca caerulea
Salpinctes obsoletus, Mimus polyglottos
Chondestes g. strigatus, Corvus sinuatus
Jan. 21

I left Zamora by rail early in the morning and joined Mr. Nelson at La Barca, shortly before noon. He has been having good success collecting birds. During the afternoon I made a trip out to the Hda. of Buena Vista to look for jack mules but did not find any.

White crane. At one of the haciendas I saw a bird that had been kept there for a number of years until it has become quite tame. When I approached the bird was standing, poised on one leg, with its head bent sidewise and backward, so that its

Gill noted among the feathers on its back.

Jan. 22. Remained at La Barca, Jalisco.
Went in the morning on horseback with new
mozo, Rosalio Briseño to Hacienda of Portezuela and
others on the road to Atotonilco, a town north
of La Barca, to look for pack mules.

Heliodytes = 'pitarrilla'.

Scolecopagus cyanocephalus = 'urraquita'.

Jacana = 'gallito'.

Wood Ibis = 'ganzon'.

Pelecanus erythrorhynchos = 'borregon'.

Regulus

Melanotis caerulescens

Pithecolobium dulce

Oak bark

Pinbe

Crotophaga = 'Picis'

Sturnella = { Tortilla con chile.
Torda con chile.

} Used at La Barca for
tanning leather.

Returned late in the evening to La Barca,
having failed to find any good mules at rea-
sonable prices.

Jan. 23. Zamora, Michoacan.

We returned today by rail to Zamora.

Jan. 24-26. Remained at Zamora.

These three days were spent in completing
outfit of saddle and pack animals for trip

off the R.R. and in making preparations for
leaving.

Jan. 27. Patamban, Michoacan.

We left Zamora about 9 A.M. and travelled
with pack outfit about 18 miles in a southerly
course to the indian town of Patamban sit-
uated at the base of the Cerro de Patamban, an
old volcanic peak about 12000 feet in height.

Road today led to Jacona and then so-
cended slowly but steadily all the way.

Ptilinopus cinereus. A flock was seen
near Jacona, feeding on the berries of a
Floranthus.

Pipilo fuscus. Has the habit of sitting
up in plain view on the tops of stone
walls, particularly early in the morning.

'Caciripe' tree used for making charcoal
for the use of blacksmiths. Probably Upper
Sonoran.

Lower Sonoran zone. Vegetation of this zone
extends far up along open draws, even on
gentle north slopes. Near Patamban, at probably
7000 ft., a few *Ipomea* trees were seen on
easy south-easterly slopes, among scattered
pines of two species.

Floranthus Excessively abundant on Lower
Sonoran oaks.

Basilinna leucotis, Melanerpes formicivorus,
Spizella pallida, Artalis, Penelope pur-
purascens, Melospiza, Anthus,
Glaucidium

Spermophilus variegatus. Several were seen
along stone walls soon after leaving Zamora.

Yucca
Arbutus
Geraniaceae } Near Patamban.

Jan. 28. Remained at Patamban.

Went up from the town on the north
slope of the Cerro de Patamban. A large
cañada descends this slope and passes
near the town. From near the base, firs
extend up the slope nearly to the top. Two
species of pine occur. One with very small
cone and the other with cone similar to
that of P. ponderosa. The underbrush is
very thick. The slopes are steep and there
are no streams. The mountain rises almost
from the town, in fact the town is sit-
uated on the basal slope of the mountain.

Zamelodia melanocephala
Junco
Ceoloptes
Melospiza migratoria
.. tristis } Noted among the
lower firs.

Geothlypis trichas } near town of Patamban.
Piparus verticalis }

Jan. 29. Remained at Patamban.

Spent the day working on the north slope
of the Cerro de Patamban.

Glaucidium gnoma = "Chiripopo."
Anthus = "Coreo"

Corvus sinuatus about 40 or 50 were
seen, a few of which were sitting on some
old stumps and the remainder on the
ground near. I could find nothing that
appeared to attract them to that particular
spot.

Trogon A pair was seen this morn-
ing, in a dark cañon on the north slope
of the Cerro de Patamban.

Helodytes Several were heard making
the characteristic grating noise, among the lower
firs on the Cerro de Patamban.

Setophaga miniata
Sphyrapicus varius
Melanotis caerulescens } Lower Canadian zone.

Jan. 30. Remained at Patamban.

Working on the Cerro de Patamban.

Corvus sinuatus About 10 were seen this
morning, among the pines and oaks near
the base of the Cerro de Patamban. One

was sitting on the top of a stump and the remainder were standing about or scratching among the leaves and picking up food with motions very much like those of barnyard fowls.

Mirula migratoria Hundreds were seen and heard singing in a cañada on the north slope of the Cerros de Patamban.

Aphelocoma common among the lower pines. Paraso Indian name 'algüéé' Corvus sinuatus = algüéé.

Rhynchopsitta platyrrhynchos. A flock was heard calling high up in the Canadian zone.

Jan. 31, Remained at Patamban

Spent the day on the Cerros de Patamban.

Sorex Probably two species were taken. One being larger and darker colored than the other. Both were caught under rotten logs in the cañada on the north slope at about 10000 feet altitude.

Pipilo (Chamaeospiza) Has same whistling note as ordinary Pipilos of the maculatus group. Specimens from here show that color pattern varies a great deal. In some specimens it is similar to that of ordinary Pipilos. Canadian zone.

Thryomanes Near town of Patamban.

Parus meridionalis
Geardellina
Ergaticus ruber } Canadian zone.

Feb. 1, Remained at Patamban.

Cupititola neoserena. Saw five or six birds in a tree covered with small round fruits, in the Cañada on the north slope of the Cerros de Patamban. The birds scattered as I approached on horseback and alighted in neighboring trees where they were easily overtaken and five were shot. One flew off some distance and hearing a bird uttering cries, fell among the branches of a tree it returned and alighted not far away. They usually alight among the upper branches of the trees. Usually on leaving their perches, loud, rattling notes are uttered. While sitting on perches, a loud peculiar whistle is uttered.

Sorex A specimen was taken in a trap reset where one was caught yesterday.

Coccyus A Dogwood growing one to two feet in diameter is very common in the Canadian zone on the north slope of the Cerros de Patamban.

Feb. 2-4, Remained at Patamban.

6574 "Espinocilla" Woody herb about two feet in height. Used to make a tea said to cure malaria. Grows on the slope close to the town.

Buteo borealis

Glaucidium gnoma

Troglodytes humicapillus

} Canadian zone.

Feb. 5. Los Reyes, Michoacan.

We moved today from Patamban to Los Reyes, a distance of about 12 leagues in a southerly course.

Road skirted the north-west base of the Cerros de Patamban for a number of miles and then descended gradually to Pinguindin. From Pinguindin we continued to descend through pine and oak woods of rather confusing species which appear to end only a short distance above Los Reyes. There was little to indicate zone boundaries. Los Reyes is tropical and at Pinguindin, bananas, coffee, aguacates, and other tropical fruits are raised.

Sialia Along base of Cerros de Patamban.

Volcanic cones. A number of volcanic, cone shaped hills with broken out craters, could be seen in the valleys below us.

Guasima

leuciripe

Guayaba

} slope near Pinguindin.

Ficus } near Los Reyes,
Erythrina }

Feb. 6. Remained at Los Reyes.

The morning was spent in preparing for work at this place. In the afternoon I went out on the road by which we came, to some low cliffs along the edge of the valley and set traps for rats and other animals.

Basiluterus Only one was seen.

Feb. 7. Remained at Los Reyes.

Peromyscus a very fulvous species. Several were taken.

Rhithrodontomys Several taken.

Geomys Two specimens of the pictus group, the first we have taken this season.

Melanotis caerulescens

Poliophtila

Zenaidura macroura

Falco sparverius

Tyrannus

Amisulcus macrourus

Sporophila torquata

Lagopus nigricans

Chondestes strigatus

Leatheripes mexicanus

Pyrgisoma

Pipilo fuscus

} near Los Reyes.

Sayornis nigricans

Amphispiza

Falco sparverius

Cathartes aura

} near Gos Reyes.

Feb. 8. Remained at Gos Reyes.

Ptilopus duboisi

Columbigallina passerina

"Anili"

This is a Salvia used as a tea which is very popular and extensively used by the Tarasco Indians and by the people at Gos Reyes in general. The Indians claim that it is very nourishing.

Feb. 9. Remained at Gos Reyes.

"Pimbinchi" = Wild Pineapple.

Certhopaga sulcirostris

Ardea virescens "cococho"

Icterus wagleri

Astragalinus mexicanus

Gallinago delicata

Duck Hawk

Arrebitoxia

Ceryle

Meleagris

Icterus wagleri "calandria"

Melanotis caerulescens "mulato"

Icterus virens

Catharista atrata

Ardea herodias

Melospiza lincolni

Stelgidopteryx serripennis

Dendroica auduboni

Falco sparverius

Geothlypis (Carniothlypis) poliocephala

Icterus abelii

Cyanocitta

Coccyzastur latirostris

Ceryle riparia

Icterus cucullatus

Scardafella inca

Zenaidura macroura

Praya

Ceryle cabanisi

Platyparis

Corvus sinuatus

Geothlypis

Merula tristis

Feb. 10. Remained at Gos Reyes.

'6550 "Caciripe" coll. near Patamban is a tree growing 6-10 inches in diameter and 20-25 feet in height. The wood is said to make ultra fine charcoal for the use of blacksmiths.

Troglodytes

Myiarchus

Amphispiza

Geococcyx

Feb. 11. Remained at Los Reyes.

Melospiza leucophaea

Polyborus cheriway

Lanius - No. of tubercles variable, smallest is wanting in two out of five specimens taken last night.

Wilsonia

"Niube": Several burros loaded with the bark of this tree, passed Los Reyes today on their way to Zamora, where the bark is used for tanning purposes.

Vireo hypochrysus

Cathartes macgillivrayi

Feb. 12. Remained at Los Reyes.

Tyrisoma

One was shot last night by our mozo. He found two birds sitting among the branches of a tree along a small stream in the valley near the town. One of the birds at least, was heard making a noise very much like the qua-qua of the Night Heron but was much hoarser. The noise was heard about sunset. Today Mr. N. skinned the specimen and it proved to be a male with partially swollen testes. A search was made in the same vicinity this morning for the bird that escaped, but it was not seen.

Leathurus a specimen was caught in a steel trap set on some damp ground, overgrown with tall grass and bushes along a stream.

Gallinago delicata, common in irrigated fields near Los Reyes. Last Sunday, three of us killed 24 birds in one field and a couple of weeks before a party killed 64 in the same place. Local name "agaachon"

Kolothus

} a huge flock of mixed birds was seen flying about and alighting in fields a few miles from Los Reyes when on our way down from Patamban.

Sigmodon

A single specimen was caught in a runway among the grass on a steep hillside about three miles from Los Reyes.

Baironius

None have been taken on the slopes of the hills at this locality. Several were taken last night among grass and bushes along irrigating ditches bordering cane fields, in the bottom of the valley.

Chordilus

Circus hudsonius

Sturnella

Feb. 13. Remained at Los Reyes.

"Pimbe". Three burros loaded with this bark passed Los Reyes today, en route to Zamora. The arrieros said it is common in the "Pivra caliente" below here and that it is the favorite bark of tanners in this whole region.

Icterus spurius

Mniotiltus s. superciliosus

Melospiza lincolni

Carpodacus m. frontalis

Catherpes mexicanus

Ceryle cabanisi

Astragalinus p. mexicanus

Sceloporus inea

Mimus

Catantops variegatus

Tipus (jack)

" (cot)

Acacia farnesiana

"guasima"

Spondias (tree)

Pinus

"guayaba"

Opuntia

Cornus sinuatus

Spizella c. hypogaea

Feb. 14. Remained at Los Reyes.

Cryzomys The small species was caught in traps set about rocks and along the wet marshy banks of small streams, flowing from springs surrounded by thick woods.

Cyanospiza parvirostris

Cryzomys a larger species is not very uncommon.

Feb. 15. Remained at Los Reyes.

Amphispiza rufescens, lives among the brush and tall grass on hillsides near Los Reyes.

Thryothorus (rufous sp.)

Feb. 16. Remained at Los Reyes.

Pyrrhuloxia lives in thickets on rocky hillsides and has motions similar to those of Pipilo.

Icterus wagleri, common. Usually seen feeding about the flowers of the common large Erythrina so common along roadsides.

Euphonia

Proglodytes

Tyrannus

Pyrocephalus r. mexicanus

Black Mallard,

Green-winged Teal,

Sparrow,

Feb. 17. Remained at Los Reyes.

Notosorex One was caught in trap
set in sort of runway at base of tree growing
on damp ground near spring in thick woods.

Urocyon A fine old male was caught
along an arroyo opening into the valley near
Los Reyes.

Corvus sinuatus.

Feb. 18. Remained at Los Reyes.

Piranga hepatica.

Urocyon.

Feb. 19. Remained at Los Reyes.

I took our camp wagon and made a long
day's ride around the west end of the
ridge called the Cerro de Panecitars to look for
moist tropical cañons issuing from the
south side. We went nearly to the town of
Panecitars without finding any cañons. The total
distance covered was between 50 and 60 miles.

Road led about three leagues to the
town of Periban, situated in nearly tropical
country at the lower edge of the pines on the
north slope of the Cerro de Panecitars. From
Periban we climbed gradually for about two
hours to the little Indian town of Apo, at
the base of the west end of the main mountain
mass, thence we continued nearly to Panecitars,
close to the base of the south slope.

Feb. 20. Periban. Michoacan.

Left Los Reyes about 9 A.M. with outfit and
moved to Periban from which point we hope
to be able to work the Cerro de Panecitars.
Arrived about noon.

In the afternoon I rode up the easy slope
back of the town, nearly to the base of the
mountain mass, and set two gopher traps.

Myadestes

Junco

Spizella

Corvus sinuatus

Zamelodia melanocephala

Carpodacus m. frontalis.

Columba fasciata

Tialia

Dryobates (sm. br.)

Aphelocoma

Feb. 21. Remained at Periban.

A trip was made, up on the north slope
of the Cerro de Panecitars to set traps. It took us
two hours to reach the base of the main
mountain and about an hour more to ascend
to about 10000 feet altitude among the firs,
oaks and pines. Traps were set in the
forest among the lower firs and we returned
to Periban late in the afternoon.

Toxostoma curvirostris

Pipilo fuscus

Diniscalus macrourus

Geococcyx

Aphelocoma

Basilinna leucotis

Ergaticus ruber

Troglodytes agrius

Myadestes

Sciurus

Madroño

Basswood

Sm. cone Pine

Large " "

Drop-leaved "

Alms

Near Periban.

Canadian zone on
Mt. Panecitars.

mainly transition zone
on Mt. Panecitars.

Feb. 22. Remained at Periban.

Visited traps set yesterday on north slope
of Mt. Panecitars, and returned to Periban in the
afternoon.

Zygodomys Two traps were set day before
yesterday on the north slope near some fields,
near the base of the main mountain mass of
Panecitars. I expected to catch specimens of
the Platyzomys taken at Palamban, as the
elevation and general conditions appear to be
the same, and the two mountains are

connected by a high, pine covered area. Today I
was surprised to find a Zygodomys in one
of my traps.

Hesperomys, A pair of adults were taken
in Microtus runways, under logs on a north
slope in the lower edge of the Fir forest
on the north slope of Mt. Panecitars.

Microtus Not uncommon on damp north
slopes in the forest near the lower edge of
the firs. They make well-marked runways
under logs and among the weeds and bushes.

Neotomas A few were found living
about rocks along a small canyon in the
lower edge of the firs. They make fairly
well-marked runways along the bases of
rocks and through the vegetation on steep
slopes.

Blarina A single specimen was taken
in a Microtus runway.

Sorex Three taken in Microtus runways.

Progon mesoleucus

Melanotis caerulescens

Sphyrapicus varius

Colaptes cafer

Setophaga miniata.

Feb. 23. Cerro de Panecitars.

We left Periban soon after 8 A.M. and before

noon were making camp at about 10000 feet altitude on the north slope of the Cerros de Panaitaro. The afternoon was spent in setting traps.

Zygocorymbus The specimen taken yesterday on the slope, at the north base of the Cerros de Panaitaro was of the usual dark color, although the soil was a reddish loam.

Ptilinopus cinereus.

Carpodacus m. frontalis

} near Puribar.

Feb. 24. Remained on Mt. Panaitaro.

Ridgwayia Early this morning as I approached an arroyo with a small stream flowing down it, one of these birds flew up from the water and alighted on a fallen log. Before I could approach to within range, it flew nearly straight upward, to the top of a very tall tree and soon passed on out of sight. This evening Mr. N. saw a flock of 20 or 30 passing through the tree tops.

Merula tristis

Basilornis belli

Basilornis leucotis.

Leucurus

Columba fasciata

Trogon mexicanus

Buccon

Buteo borealis

Pyrannus

} Canadian zone.

Melanerpes formicivorus.

Picolaptes

Piranga hepatica.

Diglossa baritula

} Canadian zone.

Feb. 25. Remained on Mt. Panaitaro.

I went today nearly to the extreme summit of Mt. Panaitaro. The trail is a very good one and in frequent use by the "hueros" who go up nearly to the top to gather snow or the ice which accumulates each clear night, in shallow, artificial pools made in marshy ground near the lower edge of the snow line.

After March or April it ceases to freeze and the snow all melts on the summit. The top of the mountain is well up in the Hudsonian zone. The scrubby timber-line pine is almost the only tree, a few alders extend up at least part of the way into the Hudsonian zone. Saccaton grass begins at the lower edge of the Hudsonian zone and several large bushes are covered with it and a thin growth of the Hudsonian zone pine. These bushes extend up to a back-bone forming the crest of the ridge, and rising and rising perhaps a 1000 ft. above the highest bush. In the upper part of the Canadian zone, the Firs are almost the only trees, and the undergrowth

is mainly of large Truncos, Lupinus and a few Salvias.

Indians. In gathering corn, the Paras Indians on Mt. Tancitaro, carry large baskets on their backs, into which the corn is thrown as they walk down the rows, husking as they go.

Peromyscus

Blarina

Sorex

Nelsonia

Adocicelus

Sciurus

Arctotyphlops

Delomus (Scott's)

Hemicarhina

Plagioptiza

Sialia

Canadian zone

Hudsonian zone.

Feb. 26. Remained on Mt. Tancitaro.

Dodder. In the upper part of the heavy Canadian zone forest, Dodder grows so abundantly that it gives the whole a yellowish tinge.

Rhynchopsitta platyrhynchos. Heard frequently in the Hudsonian zone, near the summit. They feed on the seeds of the Hudsonian zone Pine.

Gloraster A species grows very abundantly in the tops of the Pines in the upper part of the Canadian zone.

Sitta carolinensis

... pygmaea.

Hudsonian zone.

Feb. 27. Remained on Mt. Tancitaro.

Sorex

A small species was taken in a Microtus runway along a log, lying among the brush, grass growing along the banks of a small stream in a meadow near the lower edge of the snow at about 11500 feet altitude in the Hudsonian zone.

Lepus

One was seen this evening in a meadow in the Hudsonian zone at 11500 feet altitude. It was only a trifle over 100 yds. away and allowed me a good look at it before it ran off. Its back and tail appeared to be blackish, and had reddish fur on the flanks and arms.

Junco

Corvus sinuatus

Leucanthus ama

Hudsonian zone.

Feb. 28. Remained on Mt. Tancitaro.

Today I ascended to the highest point and secured several pictures of the partially snow-covered top.

Zygogomys Ranges to the extreme top
Microtus Runways were seen along the
edges of snow drifts on the summit of the
mountain.

Mar. 1. Remained on Mt. Panicitaro.

Salix Lemnadian zone,
Palmate-leaved tree, Transition zone,
Hornbeam. " "

Mar. 2. Remained on Mt. Panicitaro.

From the slopes of Mt. Panicitaro we had
fine views of the Volcanos of Colima and
the Sierra Nevada de Colima. The Sierra
Nevada was covered with a mantle of
snow, ^{apparently} extending well down toward
timber line. The volcanos and Sierra Nevada
rise boldly above everything, forming very
prominent land-marks. The intervening
country, although not so high, appeared
to be very rugged.

Mar. 3. Cirosto, Michoacan.

In the afternoon we left the camp on
Panicitaro and travelled about 15 miles in
a south-easterly course, around the south-
east base of Mt. Panicitaro, to the little
Tarasco Indian village of Cirosto.

Mar. 4. Uruapan, Michoacan.

We left Cirosto and travelled steadily

down a very easy slope for about 35 miles
to Uruapan. The road continued today in
the same general, south easterly course
as yesterday.

Mar. 5-7. Remained at Uruapan.

Platygomys Not uncommon along the
road to Cirosto, just above Uruapan. Only
one specimen was taken.

Mar. 8. Las Pilas, Michoacan.

We left Uruapan and travelled in a
southerly course for about 28 miles to a
group of ranches called Las Pilas.

The road today led up from Uruapan
over a low pine covered ridge, and then
descended rapidly into typical Arid Tropical
country.

Mar. 9. La Salada, Michoacan

We continued in a southerly course for
about 12 miles today from Las Pilas to
La Salada, a group of ranches ^{near} the
edge of a cañon through which one of
the tributaries of the Rio Balsas flows.
Our principal object in coming here was
to secure a series of the wild turkeys said
to occur.

Mar. 10-23. Remained at La Salada.

We spent this time working in the vicinity

of La Salada. The last four days I spent on a trip to Uruapan to make a shipment of specimens, leaving Mr. Nelson at our camp near La Salada.

Meleagris Not uncommon along the rugged cañons near La Salada. They often come out along the edges of the grassy plains bordering the cañons during the day. They always roost at night in trees along the cañons. The native hunters secure the birds by hunting their roosting places at night. They do not appear to have regular roosts but simply roost wherever night overtakes them.

Baroniceps

Piromyscus

Bassariscus

Nasua

Philortyx Quite common in flocks, in the grass on the plains and along the walls of the cañons.

Mar. 24. El Zapote, Michoacan.

Left La Salada and travelled about 22 miles in a south-easterly direction to a ranch called El Zapote.

Mar. 25-26. Remained at El Zapote.

Two days were spent working at El Zapote.

Mar. 27. Agua Blanca, Michoacan, continued 8 miles today, in a south-easterly course to the hacienda of Agua Blanca, situated near the Volcano of Jomello.

Mar. 28. Remained at Agua Blanca.

The day was spent in making a trip up on the Volcano of Jomello, distant about five miles from Agua Blanca. The trail led through old lava beds to the top. The Volcano of Jomello is about 4500 ft. high. The crater is large and is broken out on one side. Formerly steam or sulphur fumes issued from various parts of the crater but for a number of years no signs of volcanic action have been seen. The volcano is not higher than hills in the vicinity and is only conspicuous by its form.

Mar. 29. Guadalupe, Michoacan.

Left Agua Blanca and travelled 30 miles in a south-easterly course to Guadalupe.

Mar. 30. Paso de las Vacas, Guerrero.

Left Guadalupe and crossed the Rio Balsas and entered the state of Guerrero. We stopped for the night at a group of ranches called Paso de las Vacas.

Road today descended gradually to the Rio Balsas and then ascended steadily to Paso de las Vacas. The Balsas valley is impressively

and.

Mar. 31. El Limon. Guerrero.

Continued in the same direction about 18 miles to ranches called El Limon.

Apr. 1-2. Remained at El Limon.

Two days were spent in work at El Limon.

Apr. 3. El Naranja. Guerrero.

Left El Limon and travelled about 16 miles in a south-easterly course to El Naranja.

Apr. 4. La Junta. Guerrero.

We remained at El Naranja until noon to secure specimens of Leptellus humulatus which had been described to us by the people. In the afternoon we travelled on in the same ^{general} direction as yesterday to La Junta.

Apr. 5. La Union. Guerrero.

Continued for 9 miles today to the town of La Union. Formerly this was a town of some importance but the whole region appears poverty-stricken at the present time.

Apr. 6. La Lagunilla. Guerrero.

Left La Union and reached La Lagunilla after travelling about 20 miles.

Apr. 7. Sihuataneyo. Guerrero.

Continued about 25 miles today and reached the little port of Sihuataneyo.

Apr. 8-10. Remained at Sihuataneyo.

Three days were spent working along the coast at Sihuataneyo. Boat trips were made to birds rocks to the north and south of the port.

Ara macao. Found at least 50 pairs nesting on a bird rock or "moro" a few miles north of the port.

Tropic Bird. Found nesting in holes in rocks on rocky islets along the coast south.

Apr. 11. San Geronimito. Guerrero.

Continued from Sihuataneyo, ^{south} down along the coast to San Geronimito 24 miles.

Apr. 12. Bayacal. Guerrero.

Continued south along the coast to Bayacal, a distance of about 27 miles.

Apr. 13. Pamarindo. Guerrero.

Travelled on south along the coast for about 18 miles to Pamarindo.

Apr. 14. Muzes. Guerrero.

Today we travelled about 22 miles south along the coast from Pamarindo to Muzes.

Apr. 15. San Geronimo. Guerrero.

Continued south along the coast 28 miles from Muzes to San Geronimo.

Apr. 16. Papayo. Guerrero.

Today we travelled about 24 miles from San Geronimo to Papayo.

Apr. 17-22. Remained at Papayo.

at Papayo we stopped six days to work.

Cayaco. This palm is excessively abundant at Papayo where it grows as forests in which the palms are the principal vegetation.

Near Papayo are large lagoons in which water-fowl of many kinds is abundant.

Felis hernandezii. A fine specimen just killed was brought in to us.

Apr. 23. Coayuca. Guerrero.

Left Papayo and continued 15 miles down the coast to the town of Coayuca.

Apr. 24. Acapulco. Guerrero.

Continued down along the coast for about 32 miles today and arrived at the port of Acapulco in the afternoon.

Apr. 25-27. Remained at Acapulco.

Remained working at Acapulco.

Apr. 28. Remained at Acapulco.

Went out in the morning to work near the soap factory of Stevens of Cia.

Saltator grandis

Melanerpes elegans

Glaucidium ferrugineum.

Poliophtila

Granatellus

Nothocercus

Catharista atrata

Ring-necked Hawk.

Colinus pectoratus

Setona verreauxi

Heliodytes

Empidonax

Mniotiltus s. superciliosus.

Leptotila

Scardafella inca.

Columbigallina passerina

Tache nitida

Amphispiza

Aimophila acuminata.

Columba flavirostris.

Diuscalus macrourus.

Cassidix melanicterus.

Diplopterus Probably not this gen. (Monocoryx?)

Calocitta

Trogon citreolus

Cardinalis

Arid Tropical Acapulco tree.

Cecropia

Ant. Lion. Watched one for a few moments this morning. A small black ant was observed walking along the inner margin of a pit when the lion began throwing up dirt at the bottom which caused the ant to tumble

at once to the bottom. It tried to escape again and again by walking up the side. But each time the Lion caused the steep slope to cave with the ant. Soon the Lion seized the ant in its claws and thrashed it about in the bottom. The body of the Lion was all the time concealed from view.

Repeatedly the ant managed to get out of the Lion's clutches and attempted to escape but was caught each time and thrashed about. Finally I happened to jar the ground and the Lion disappeared in the sand leaving the body of the ant in the bottom of the pit. I saw then that the ant was at last dead. I awaited further developments for a few moments and as the Lion did not reappear I picked out a handful of sand and found him in it. He was about a third of an inch in length.

Prickly-leaved Sonora tree.

Cayaco. At Manzanillo, San Blas and Acapulco the Cayaco Palm is very abundant. Trees are said to require from 20-40 years to come into bearing. The nuts according to William Stevens, furnish about 70% oil by chemical extraction and 65% by hydraulic pressure. The nuts are oblong in shape. Most

of them are gathered by women, when they fall in the forests.

Cocoyul. A palm with round nut collected here. It is said to be widely distributed and also produces oil but the nut is small, very hard and is little used.

Apr. 29. Remained at Acapulco.

Went out hunting again beyond the soap factory of Stevens y Cia.

Granatellus Secured a pair among the scrubby vegetation a short distance from the soap factory.

Thryothorus maculipictus? A single specimen was heard singing and was shot in a thicket about three miles from the port.

Apr. 30. Remained at Acapulco.

Mr. N. and I went out early in the morning to a small island near the mouth of the harbor to get sea birds and noted the following:

Fregata

Pelecanus

Wandering Tattler.

Ferns heermanni

Spotted Sandpiper.

Sula (same sp. coll. at Sahuatanejo)

The coast about the mouth of the harbor is of steep and more or less Breccia granite.

Wandering Tattler. We had never seen this bird before in Mexico. Several were seen among loose rocks projecting from the water in the harbor and along the rocky shores near the mouth of the bay. They run along and skulk about among the rocks and fly up and down somewhat after the fashion of the Spotted Sandpiper.

Larus heermanni? Five young birds in black plumage were seen perched on some rocks. They were very tame and easily approached and shot.

May 1. Remained at Acapulco

Leucurus (old man)

Jacaratia

Bullthorn

Prickly Sonora tree.

Stringing ant. They live in the broad bases of the thorns of the Bullthorn. They perforate one of the twin thorns a short distance from the tip and hollow out the interior which then becomes permanent living quarters. Several thorns examined contained several

of the live ants and about 1/2 dozen larvae. Occasionally both branches of the twin thorns are perforated but usually only one. As the branches grow and the thorns appear, the latter are perforated while still quite young and tender and the soft pulp, filling the interior is worked out. Whether this serves as food or not I did not ascertain. Some of the fresh thorns examined were partially hollowed out, and others were only partially perforated, a small round gnawed place in the smooth surface of the thorn indicating where the perforation was to be. The ants sting severely when disturbed.

Gonzoli is cultivated to some extent near Acapulco. The oil is said to be worth considerable for the manufacture of soap.

Coconut Palms. Young ones are said to begin bearing near Acapulco, at five years of age.

Mar. 2. Egidio Nuevo. Guerrero.

Left Acapulco and travelled about 18 miles in a northerly course to Egidio Nuevo, a small town situated among hills

1000-1500 feet high.

Arumones

La Venta. We passed small village of La Venta about noon. It was at La Venta that we passed the east night on the road to Acapulco from the interior in the winter of 1894-95.

Calocitta

Dendroclastes

Commis petzii.

Guazuma guazuma.

Paint-Bush Vine.

Jacarata

Fish Hook Vine.

Centrolobium

Cecropia

Bullhorn

Brazil Wood.

Jicara.

Centrolobium The trees have flowers and fruit and young leaves are coming out.

Hanche or changungo. Common along the road near Ejido Nuevo. It does not appear to occur on the lowlands near the coast but is usually encountered as soon as one enters the hills. It ranges

from about 1000 feet up to at least 3000 feet. It was noted near La Salada, Michoacan.

Cecropia (Tupano)

Peperomia

West coast tree somewhat like Coccoloba.

Cecropia

May 3. Dos Arroyos. Guerrero.

Left Ejido Nuevo about 9:30 A.M. and continued in a northerly course along the main road to Tetulpancingo to Dos Arroyos, a distance of about 8 miles.

Road led up and down hill all the way and was rather rough.

Delonix glauca

Pityra

Cardinalis

Oricodites

Thryothorus maculipictus.

Columbigallia rufipennis

Diplopterus

Fish Hook Vine.

Hanche

Cecropia (Tupano)

Pelo del Brasil

Jacarata

Cacahuanauche.

Centropus

leucocitta

Bullitorn

Opuntia (long slender-leaved)

Pipera

Termite nests are abundant.

leucocitta A bird was seen sitting on a ^{small} nest made of small sticks in the top of a wild fig tree. The bird squawked at us from the nest and when we stopped to watch her, rose and flew off.

May, 4. Remained at Dos Arroyos.

Phaethon melanocephalus. We remained here today to try to secure topotypes of this bird but none were seen.

The country in this vicinity is of low hills of decomposed granite.

May, 5. Coquilla. Guerrero.

We left Dos Arroyos at 7:15 A.M. and about 10 arrived at Alto del Camaron where we left the main road to Amilpancingo and turned off to the eastward and stopped at the small town of Coquilla after travelling about 16 miles.

Fluvina antillarum Several were seen along the Papagallo river.

Melanerpes elegans.

leucocitta

Arremonops

Tyrannus

Empidonax macrourus

Columbigallina passerina

Hirundo

Volatinia splendens.

leucocitta Nest was found in a small fork near the top of a tree standing alone near the Papagallo river. Nest was of small sticks loosely gathered together. Tree was the slender-leaved species growing so abundantly along streams. Eggs were seen in number.

Ardea egretta

Big Malva tree with five-lobed pods.

Cecropia (tupano)

Centropus

Bullitorn

West coast tree

leucocitta

Guassina

Acapulco tree

Nanche

Jacaratia

Pithecolobium dulce

Jicara

Uruba herodias

Certhopaga

Amazilia cinnamomea

Tyrannus

Pitangus derbianus

Myiozetetes s. superciliosus

Guayaba

Dished thorn tree.

Scrub bean (similar to Malvaceae)

West coast tree. This is a very crooked straggly species growing abundantly on the dry hills. In many slopes it is almost the only tree.

Pepelwaje

Calabuananche.

"Cacha de Borrero" long slender podded, Bignonaceous tree first seen near El Naranjo.

May 6. San Marcos. Guerrero.

I left Mr. Nelson and the outfit to work along the road to Chilpancingo while I make a flying trip down along the coast to obtain a set of pictures of the round houses and negroes who inhabit them. I left Coquilla at 6:30 A.M. and reached San Marcos about sunset. The

distance was about 30 or 35 miles in a south-easterly course.

Road today led gradually down nearly all the way through hilly and more or less rocky country, but there are no very deep canons. Shortly before reaching San Marcos the hills practically ended so that the hacienda is on a low, rolling plain extending to the sea.

ittila

Amphispiza

calocitta

Melanerpes elegans

comurus pitzi

Amphispiza

Dendrocygna

Philortyx

Geococcyx affinis

Cassidix melanicterus

Quiscalus macrourus

Certhopaga sulcirostris

calocitta

Cathartes aura

Heliodytes

Mimus flavirostris

Scardafella inca

Melastoma

F. laticornis
"Cayaco" or "Cognillo" The palm so common
at Papaya is called "Cognillo" near Cognillo
where it grows at 1000 or 1500 ft. altitude.

Rosa Marada.

West coast tree.

Bullthorn.

Hanche.

Centrolobium

Piperhaje

Pijones.

Guzmania. Some branches had old leaves
on, some had new leaves and others had
flowers.

May 7. Copala. Guerrero.

Left San Marcos for Copala at 7 A.M.
Road led in a south easterly course along
the coast plains and was fairly level.
Low hills were encountered in a few places
Distance travelled was about 35 miles.

Progne chalybea.

Amphispiza humeralis. Sings with loud
jerky note and meanwhile jerks its
wings slightly up and down.

Tallator griseus.

Thryothorus eximius.

Vireo flavoviridis.

Cardinalis

Heliodytes

Ceryle

Comurus

Calocitta

Tache nitida

Attila

Polyporus

Amphispiza acuminata

Scardafella inca

Piaya

Dendrocolaptes.

Icterus pustulatus

Cassidix melanictus

Flanoidium ferrugineum

Poliophtila (old. cap)

Nothocercus

Thryothorus (Chestnut belly)

Crotophaga sulcirostris.

Melospiza leucophaea.

Dendrocolaptes

Cyanospiza cyaneus.

Amphispiza guatemalensis.

Crotophaga scapularis.

Arremonops

Geothlypis

Myiodynastes

Columbigallina passerina

Amphispiza humeralis. After two birds possibly mates may be seen sitting close together on the same branch and singing the loud jerky song in unison. The song is accompanied by a jerky motion of the wings.

Tiro flavoviridis. Abundant and in full song.

Attila Several were heard singing near the road today.

Roctocercus One was seen moving rapidly through the undergrowth along about 70 yards from the trail.

Hawk. (white collar like spec. coll. at Acapulco). This afternoon one was seen to fly low over the ground and directly into a mass of Fishhook vines.

Cacahuananche Very abundant everywhere in the coast country. At Coquilla I found a man with three leaves stuck to his forehead and temples and he assured me they were good for headache.

Franchise.

Flathorn

West coast tree.

Repurchase

Bullhorn

Suzuma

Grute leiba.

Poliolecarpus (Fish-parrot)

Big Nawa (five-lobed seeds)

Fish Hook Vine.

Jicara

Tree similar to Coccolobus.

Centrolobium

Prickly leaved Sonora tree.

Jacaratia

Opuntia (long slender-leaved)

Opuntia (long three-ridged)

Cecurus "tepans"

May 8. Near Copala. Guerrero.

Made a trip today about 10 miles in a southeasterly course to a place called Gas Salinas on the coast where I found several of the round houses and a black population. Large quantities of salt are being made at Gas Salinas. I secured the photos and started back at 4:15 P.M. and spent the night near Copala.

Diplopterus

Sturnella Two or three were heard singing on the grassy plains between Copala and Gas Salinas.

Negros. Along the coast south of Acapulco are numerous villoges of crinkly-haired people who evidently are of African blood. They have however mixed to some extent with the Mexican Indians. They live in many places, almost entirely in round houses. These round houses begin at Huchuetan, a day's travel south of Copala and extend into the state of Oaxaca. The houses are made of staved poles placed perpendicularly side by side and lashed together with vines. A roof conical in shape and made of grass thatch is then put on.

Crismalura

Hothocerus, common in woods south of San Marcos.

South of San Marcos, the lowland tropical forest is interrupted here and there by open grassy llanos of all sizes up to 100 acres in extent, the largest ones were seen just south of Copala.

May 9. San Marcos. Guerrero.

Returned to San Marcos from near Copala. Distance travelled, about 35 miles.

May 10. Remained at San Marcos.

One day was spent here to rest my horse.

May 11. Coquilla. Guerrero.
Returned today from San Marcos to Coquilla. Distance about 30 or 35 miles.

Peyanocompa

Giscoceyx affinis.

Leocyle cabanisi.

Ciruela. The cultivated or sweet species is dried at Glans Grande. The ripe fruit is first boiled and then spread to dry in the sun. When dried it is said to keep indefinitely and ^{when} wanted for food simply requires being again boiled. The wild species is not used as it contains very little pulp and is too sour.

"Jingüile". A wild species is not uncommon and a cultivated variety is said to occur.

Leecropia.

May 12 Acapulco. Guerrero.
Travelled today in a northerly course from Coquilla to Acapulco on the road to Chilpancingo. The distance covered was about 37 miles.

Road today led directly up from Coquilla across a high ridge and descended the east side to the Rio de Amatlan. After crossing the river and travelling

about 3 miles I came out into the Acapulco road to Chilpancingo at Tierra Colorada and climbed up gradually by a rather rough, rocky road to Dos Caminos, where I stopped to have dinner and to feed and rest my horse. The country as far as Dos Caminos remained of the same general character. On the hills near Dos Caminos the lower pines begin. From Dos Caminos the road led up a fairly level valley to Rincon which is situated immediately at the base of a high pine-covered ridge. There are pines on all the hills surrounding the valley, but none in the bottom of the valley. From this point where the pines begin, the hills and all the rough ground is covered almost solidly with them. From Rincon the road ascended the ridge and descended rapidly to Acapulco.

Acapulco is a sugar hacienda situated near the lower edge of the pines.

- Orthocomys
- Amphispiza humeralis
- Arremonops
- Melanerpes elegans
- Polioptila

} Coahuila to Dos Caminos.

- Diplophrys
- Tache nitida
- Amazilia cinnamomea
- Acapulco tree
- Tijonco
- Rosa Morada
- Flattop
- Bullthorn
- Nanche
- Big Grape
- Palo del Brasil
- Opuntia (long slender-leaved)
- Cereus "tipamó"
- West coast tree.
- Pipetnagi
- Guayuma guayuma.
- Big Malva (5 lobed pods)
- Cassia
- Cirucla
- Fist Hook vine.
- Anona
- Perew Bean (similar to Malvaviscus)
- Guayaba
- Foul-thorn tree.
- Tree similar to Coccolobus.
- Melastoma
- "Pochote"

} Between Coahuila and Dos Caminos.

Pithecolobium dulce } Coahuila to Dos Caminos,
Jacaranda

Pinus. I was surprised to find that the species ranging the lowest near Dos Caminos is the sp. with small rounded cone first noted near Tinguindin, Mich., and not *P. johullensis* as I supposed it would be.

Flanthorn. Many of the trees have flowers, fruit and leaves but lack any of the large thorns. The largest thorns appear to be produced on trees which have no flowers or fruit. Sometimes parts of branches are covered with fairly large thorns and no fruit or flowers and the parts having fruit and flowers have no large thorns. Similar conditions have been noticed in the case of the *Boehote* and *Guazuma*.

Dos Caminos is a small town.

Goitre. Several of the women at Dos Caminos have it.

Heliodiptyx

Merula flavirostris

Leptolula

Quiscalus macrourus

Calloternis

Scardafella inca

} Dos Caminos to
El Rincon.

Pyrocephalus r. mexicanus, } El Rincon to
Melanerpes formicivorus, } Acapulco.

Wild Pineapple

Pinus (var. round cone) } Dos Caminos to Rincon.
Acacia farnesiana

Quercus. Oaks of several species begin near the same point as the pine and range to the tops of the ridges, mainly following the streams. They are all narrow leaved species and the broad-leaved oak so common on the ridge between Amapam and La Salada, Mich. was not seen.

Veg. The pines appear to range here far down into the tropics. Many of the tropical species overlap and range up to the top of the ridge at the point crossed where it is probably 1500 ft. higher than Rincon.

Hanche

Pajones

Jingule

West coast tree.

Copal

Acacia farnesiana

Guazuma guazuma

Rosa Morada

} sp. which overlap
with pines near
Rincon and on ridge
between Rincon and
Acapulco.

Veg. The Nanche and West coast trees are among the most abundant species occurring along the lower edge of the pines.

The high ridge crossed between Rincon and Acahuzota is quite rugged and is scantily timbered apparently on account of poor soil.

May, 13. Chilpancingo. Guerrero.

Left Acahuzota at an early hour and reached Chilpancingo, the capital of the state about noon. Distance travelled about 22 miles, in a northerly direction. Rejoined Mr. Nelson at the Hotel del Sur.

From Acahuzota the road ascended for about 1000 ft. and then descended into the valley in which Chilpancingo is situated.

Zone. Many tropical species of plants extend up considerable distances above Acahuzota and end on the west slope of the ridge crossed and the country becomes Lower Sonoran in the valley at Chilpancingo.

Amophila reflexa

Platysaris

Cacthus

Merula flavirostris

Pyrgosoma

Acahuzota slope

Diplopterus

Momotus mexicanus

Procyon

Melopelia leucoptera

Corvus petzii

Geococcyx affinis

Amophila acuminata

Volatinia sphenurus

Myiozetetes s. superciliosus

Astragalinus

Piprocephalus r. mexicanus

Carpodacus m. frontalis

Corvus sinuatus

Salix

Copal

Jungia

Acacia farnesiana

Guazuma guazuma

Bullthorn

Jacaratia

Pochote

Spongia lutea

Guayaba

Argemone (yel sp.)

Flathorn

One similar to Coccolobus

Baccharis (yel fl.)

Acahuzota ^{south} or ~~west~~ slope.

Valley of Chilpancingo
(Lower Sonoran)

Acahuzota
or south slope.

Anona
 Bananas
 Sugarcane
 Ficus (wh. bark) (found at Toluca) }
 Agave (large, long slender-leaved seen near
 Uruapan) }
 Opuntia (long slender-leaved) }
 Fan Palm. }

Acahuizotla
 or south
 slope.
 near
 top
 of
 ridge
 between
 Acahuizotla
 and Chilpancingo.

Passed Magatlan, a small town on the
 south slope, about 8:30.

May, 14. Remained at Chilpancingo.

Remained at Chilpancingo, making preparations
 for a trip into the mts. north of Chilpancingo.

May, 15. Amuliente. Guerrero.

Left Chilpancingo and travelled about 18
 miles in a northerly direction to the ranch of
 Amuliente, situated at about 8000 feet altitude
 in the mountains.

Road today ascended almost steadily. The
 valley at Chilpancingo is quite dry and barren.
 Soon after climbing out of the valley we found
 the hill sides covered with an abundant
 growth of fan palms. Higher up we entered
 a thin forest of oaks and pines and another
 kind of fan palm. The woods were rather
 barren looking and there was little under-
 growth until we got near Amuliente when

it became much more abundant and the
 climate evidently much more damp. Amuliente
 is situated near the crest from which the
 west slope leads down. The west slope has
 an abundant rainfall and the country im-
 mediately about Amuliente is also affected.

Salpinctes obsoletus
 Catherpes m. frontalis
 Geococcyx

Heterodytes
 Aphelocoma

Picus sumichr
 Sturna tris.
 Cassia
 Cedar

Dasyornis
 Leopal
 Tephrocitta

Agave (Broad-leaved coll. near Uruapan)

Trogon ambiguus

Troglodytes brunneicollis.

Buteo borealis

Pines. In climbing up from Chilpancingo
 the first species seen was the small round
 cone. Several others appeared higher up.

May, 16. Remained at Amuliente.

Melanerpes caeruleus

Valley of Chilpancingo
 and adjacent slope.

Setophaga miniata
Corvus sinuatus
Chamaespiza
Aulacorhynchus
Atlapetes
Myadestes
Oreothlypis
Boninna leucotis
Melanerpes formicivorus
Viphiocolaptes
Aeronautes melanoleucus
Stelgidopteryx serripennis
Trogon mexicanus
Catherpes
Merula tristis
" nig. propinqua.
Cyanocitta
Troglodytes brunnicollis
Peleodytes
Mitrephorus
Empidonax
Aphelocoma unicolor
Tegonopus wilsoni
Talia
Hornbeam
Basswood
Alnus

Arbutus
Lerataegus
Palu. (Pan)

Tree Ferns. They grow 10-30 feet in height and are rather common in many of the cañons at 8000-9000 feet altitude. They are only found in the humid belt on or near the top of the sea slope of the mountains.

Aulacorhynchus Late one evening while out in the woods, I suddenly heard a bird shrieking as though in pain, a short distance away. In approaching the place cautiously, I saw something moving among the undergrowth and found it. When I reached the place I was surprised to find the bodies of a pair of adult Boninns lying ^{side by side} in the body of a young Merula tristis they had just killed.

May. 17-20 Remained at Cuilteme.
'Acopitate' (Abies) Firs grow only on the tops of the highest ridges near Cuilteme, which rise probably to 9500 ft. They grow scattered over the tops and north slopes in fairly open forest. They do not appear to occur in the cañons which are filled mainly with what appears to approach Upper Tropical vegetation.
Hornbeam. Grows along streams in cañons

and extends up the slopes to the tops of the highest ridges.

May. 21. Remained at Amilleme.

Basileuterus Nest found and photographed on hillside. Situated on ground at base of several small shrubs. Made of short twigs, fine roots and leaves interwoven, and lined with very fine wiry grass. 4 views taken 2 at 3 ft. 30 x 60 sec. 96 stop and 2 at 3 1/2 feet 30 x 60 sec. 96 stop.

Automolus

Achloronax

Bird similar to Automolus.

Delattrea. Six specimens were secured on a ridge south slope of a ridge a couple of miles above Amilleme, this morning. They were working on the flowers of Bromelia-like plants growing high up on the branches of tall oaks.

May. 22. Remained at Amilleme.

Pityra

Cyanolyca

Beneolmia

Bird similar to Automolus. Another was shot today and like the one secured yesterday, was scratching about among the leaves on the ground in a thicket.

Automolus Three were secured this morning. The last one was shot about 11:20.

They appear to go in pairs, although the pair shot yesterday showed no signs of breeding. They have all been seen from 20 - 40 feet from the ground, working along branches, usually in trees in which there are air plants of various kinds, and mosses clinging to the trees. They do not work rapidly upward as Dendrocopos does, but may be seen clinging to the trunk in the same position. They walk about over the bark in all directions and one was seen this morning head downward, occasionally on small branches in the ordinary position assumed by most birds.

Ara militaris

Amazilia finschi.

Troglodytes brunnicollis. A nesting site was found this morning near Amilleme. A large pine had been partially burned out on one side near the base from the ground up about 10 ft. Under the bark, near the top of the burn was a deep crack into which a pair of birds were busily carrying nesting material. They were placing the material entirely out of sight in the crack.

May. 23. Remained at Amilleme.

Ptiliogonys cinereus. Common among the open

woods on the tops of the hills near Amittine.

Aulacorhamphus about noon today one was seen perched on a rock apparently feeding on something. It was shot and beside it lay a full grown Myadestes, still entire but with the back of its skull crushed.

May. 24. Remained at Amittine.

Dendrocygna About 6 A.M. this morning I found a ♀ with a swarm of young, recently hatched and just able to crawl, and caught two of the young. The mother bird ran off a short distance and disappeared, but could be heard calling occasionally. The young birds tried to escape by running and when closely pursued, hid among the leaves and remained motionless. On being caught they uttered sharp startled cries, che-e-ep, che-e-ep, che-e-ep. After all was quiet the young birds began to call pe-pe-pe rapidly and the mother answered with a ^{trillulous} ~~sort of~~ ^{call} clacking note, ca-a-a, ca-a-a, ca-a-a.

Aulacorhamphus This with quick fluttering wing strokes, and makes a fluttering noise.

Basileuterus culicivorus. Quite common in the Upper Tropical Forest near Amittine. They search for food among the undergrowth and are not at all shy. Several were observed

at a distance of a few feet. They often alight in plain view on the bushes. They have a dry little song se-e-et, se-e-et, se-e-et.

Chlorospingus Rather common in Upper Tropical Forest near Amittine. Most of their time is spent in the tops of the trees but they were occasionally seen among the lower branches.

Aulacorhamphus Quite common in the Upper Tropical Forest on the west slope near Amittine.

The weather has been fairly clear but early this morning a few drops of rain fell and clouds were shutting in the hills all about Amittine, although it was evident when the sun came up that the clouds were thin. This was no doubt a reminder that the rainy season is approaching. I went hunting birds along the brow of the west slope, west of Amittine and found the clouds like a very dense fog rolling up the slope. The moss-laden trees enveloped in the fog had a strange appearance and stood out very dark against the white background of fog.

Aeronautus melanoleucus.

Tyrannus

Cyanocitta

Myadestes

Tityra

Pulacornampus Has several queer hoarse notes.

Apelocoma unicolor, Common in flocks in Upper Tropical Forest near Amullemie. They are very noisy birds and appear to quarrel a good deal among themselves.

Sciurus

Neotoma

Thomomys

Rhithrodontomys

Peromyscus 2 sp. } Both are common in
Peromyscus 1 sp. } the Upper Tropical Forest.

Sigmodon 2 sp.

Blarina

Sorex 2 sp

Lepus

Nasua

Felis (leopard)

Aquacate Two wild species occur in Upper Tropical Forest near Amullemie. One with globular, greenish fruit about 1 3/4 inches through and the other with pear-shaped, blackish fruit about 1 1/2 inches long and 3/4 of an inch through.

One fern. Many of the fronds are fully six feet in length.

Skink (Reticulated belly) The specimen taken was found apparently sound asleep on the leaves in a little opening in a thicket in a thin part of the Upper Tropical Forest at about 5000 ft. altitude.

Prunus (wild-cherry) grows near Amullemie.

May, 25. Chilpancingo, Guerrero.

Returned from Amullemie to Chilpancingo.

May, 26. Tixtla, Guerrero.

In the afternoon I went from Chilpancingo to Tixtla to look for Otocoris and Sturnella. The distance is about 3 hours. The road leads up and across a high ridge covered with the thorny leaved fan palm which grows everywhere about the valley of Chilpancingo.

Stopped in Tixtla at the meson of Luis Suarez. During the evening he assured me there were no fleas or bed bugs but soon after retiring I began to feel that something was wrong and on alighting a match found six or eight bed bugs and as many fleas between the sheets. Fortunately I had some flea powder and after thoroughly sprinkling the sheets soon fell asleep.

May, 27 Chilpancingo, Guerrero.

The morning was spent in exploring the vicinity of Tixtla and in the afternoon

I returned to Chilpancingo.

Tuxtla is situated in a broadly oval valley nearly surrounded by rather steep, barren hills. There is no outlet on the surface for the water which accumulates in the valley. Near the south-western margin are some sink holes into which the water gradually disappears. During the rainy season a large shallow lagoon is formed which lasts for several months. After the water disappears the thoroughly irrigated land is planted to corn, garbanos, musk melons and other crops. The agricultural importance of Tuxtla is due entirely to the land thus irrigated. The town appears to be about the same size as Chilpancingo but has much less business. It is however a prettier place.

Sturmetta. A half dozen specimens were secured in the fields on land irrigated by the lagoon. They are common residents but appear to be limited to this constructed area.

Otocoris No signs of any were seen, although a thorough search was made, on the dry plains of the part of the valley which is not irrigated.

Mizquitlan

May, 28. ~~Mizquitlan~~, Guerrero.

Left Chilpancingo about 10:30 A.M. for Iguala. We reached Zumpango about 12:45 and stopped until 3:30 P.M. when we continued on to Mizquitlan. Total distance travelled was about 19 miles. Mizquitlan is a ranch on the cañon leading from Zumpango to the Balsas river.

Amphispiza humeralis.

Icterus

Salpinctes obsoletus

Catherpes

Corvus sinuatus

Melanerpes elegans

Scardafella inca.

Wild Pineapple. A species with curious tapering leaves and long flower stems.

Pink Hook Vine.

Cereus A large single-stemmed species.

Palm. (thorny leaf) Common on the hills near Zumpango where it is extensively used for making pelates, rough ropes, thatching houses, awntadores for fanning charcoal fires, brooms and for locking together the conical framework much used as carrying baskets. Men go out into the ~~woods~~ ^{hills} to cut wood and return with it bound into a pack with shreds of the leaf of this palm.

Spongia tricus.

Baccharis

Cassia

Acacia farnesiana

Copal.

Pithecolobium dulce.

Flacomb.

"Soyat." Palm with smooth leaves which grows in the mountains.

Pinzan quarichi

Cereus (Tupano)

Cereus (old man)

Pinuela wild pineapple at Tixtla.

May. 29. Valitla, Guerrero, ^{Mizquititlan}.

Travelled about 33 miles from Mizquititlan to Valitla

Saltator

Heleodytes

Deterus postulatus

Amphispiza humeralis

Cyanospiza leclancheri.

Momotus mexicanus.

Aimophila acuminata

Vireo flavoviridis.

Calocitta

Artalis

Buteo borealis.

Columbigallina passuna.

Cathartes aura

Bumma (sm. smoky)

Poliophtia (blk. cap)

Arctogeomys

Road led down a long open cañada to the Balsas river at Mezcala where we arrived at 11.30 A.M. and remained to rest until about three P.M. where we crossed the river in one of the large boats made for the purpose of ferrying passengers across. From the river the road led up gradually to Valitla, a cluster of ranches where we stopped for the night. The road is a rough wagon road all the way. All the country traversed today is excessively arid and at this season looked very parched and dry.

Boats. Those used for ferrying passengers across the river at Mezcala are rather substantial affairs about 15 feet broad and 25 or 30 long. Loaded animals enter by the stern which is cut off squarely and closed by raising a gate. The bow turns strongly upward.

Balsas river. At Mezcala it is about 75 yds. wide and has a swift current.

Geococcyx affinis

Ficus (rock-sp found near Coctan)

Prosopis

Palo Verde.

Cereus (single stem)

Flatthorn

Pingou Guarichi (Pithecolobium?)

Acacia farnesiana.

Little Ceiba

Timbe

Permites. Abundant all along the road.

May, 30. Iquala. Guerrero.

We continued today from Valletta to Iquala a distance of a trifle over 30 miles.

Road today was a fairly good wagon road nearly all the way. It ascended gradually but led through arid tropical country all the way. We finally descended a steep hill into the valley in which Iquala is situated.

Veg. There were no striking changes today. The latter part of the way there were large open grassy areas.

Antozymus A number of diggings were seen along the road, a couple of miles south of Tototapa, a small town that we passed about 10 A.M. or about 7 1/2 hours south of Iquala. They were among the bushes on steep slopes where the ground is softer than

where more level.

Stumella

Dryobates (adder back)

Amophila acuminata.

Aspules Inc.

Molothrus obscurus

Jacarata

Flatthorn

Pipetwaje

Brasil wood ("palo del Brasil")

Guazuma guazuma (Guasima)

Ciruella 2 sp.

Four-thorn tree.

Ipomea tree.

Ranche.

"Palo del Brasil" At Zacacoyuca 2 1/2 hours south of Iquala a pile was seen which had been cut to bring out to the R.R.

Ipomea tree. Two species were common along the road. One with velvety leaves and the other with smooth leaves and twining branches.

Granaries "trojes" Along the road from Chilpancingo to Iquala the people at ranches and in the towns build corn granaries usually in one corner of the corral or near the houses. They are usually 6-10 feet square

and 8-10 feet high but from Tototapa 4 1/2 hours south of Iquala to Iquala most of those seen were round ~~and~~ instead of square. Both birds have square grass-thatched roofs.

May 31. Remained at Iquala.

Today was spent largely in getting of rid of our horse and mule outfit and preparing to continue by rail.

June 1. Remained at Iquala.

In the forenoon I went out on horseback to a small lake about 1 1/2 miles S.E. of Iquala. The lake has no outlet and occupies a depression along one side of the broad level valley in which Iquala is situated.

Crotophaga sulcirostris

Aythya americana

Pyramus

Amphispiza acuminata

Calliope

Chalacercus

Fulica

Podilymbus podiceps "gorrila"

Tringa (brown-crested)

Steganopus wilsoni

Ducks 2 kinds

Chalacercus

Fulica

} all seen at the lake.

} very common.

Ducks. Two species were seen ⁱⁿ one of which the ♀ has black head and neck and tail and whitish or light grayish body.

Molothrus obscurus Several pairs were seen feeding about a cow.

Amphispiza A ♀ was observed making clumsy attempts to catch some large-winged insect which was dodging along from one five feet from the ground. The bird half flew half-jumped up at the insect from a standing position on the ground. Each time it missed it alighted on the ground and immediately made another attempt. After four or five failures it finally succeeded in catching the insect.

Palms. The thorny-leaved species so common on the hills near Chilpancingo also occurs here and is used for thatching houses. The leaf stems are left about six inches in length. They are prepared for use by using a strap through the base forming a loop. To fasten them in position, this loop is simply inserted and used to bind the leaf in position.

Tringa (brown-crested) } was surprised to find these two species along the shore of Steganopus wilsoni.

the lake. Specimens were secured which on being skinned, showed the first signs of breeding. Both species appeared to be rather tame and unsuspicious. They were feeding so close together that a single shot a specimen of each. When the Sandpiper fell another which had been feeding near, circled about overhead several times uttering cries.

Tamand. The plaza at Iquala is surrounded by very large Tamand trees.

Iquala is a fairly large town and is the head of a district. It is surrounded by very arid-looking country. Corn and other common crops are raised to a limited extent but stock-raising is the principal business.

Cascalote. Was most abundant along the road between Ceireliguano and Ihuacava, Michoacan. The pods are gathered and packed to Leon and other cities and used for tanning leather. Cascalote is considered the best substance for this purpose by many tanners and the pods bring a good price in the markets. Mule teams go down into Michoacan from the tableland for the purpose of bringing back loads of the pods.

June 2. Rio Balsas. Guerrero.

In the evening we took the train for Rio Balsas on the Balsas river at the present end of a branch of the Mex. Cent. R.R. Our train started late for it had to wait for a delayed train from the City of Mexico. It was a 'mixed' one and a decidedly primitive affair. The headlight had been sent up the road for repairs and forgotten at headquarters so we were obliged to make the trip down the line after a heavy rain storm without one. In addition the brakes were working imperfectly. We reached the river about midnight and set up our cots and went to sleep in the open air near the little house.

Season. The rainy season began at Iquala this evening, with a heavy downpour which made small rivers of many of the streets for ^{over an} several hours.

Cattail Flax, a patch about 50 yds. square grows on swampy land near the edge of the lake near Iquala. The cotton from the seed stems is used for stuffing pillows. Possibly this may be the same species which grows around Lake Chapala.

June 3. Remained at Rio Balsas.

This morning we found Rio Balsas to be

a collection of 20-30 native shacks gathered close along the bank at the mouth of the Coeula a small tributary which enters the Rio Balsas at this point. There is a great contrast between the turbid current of the Rio Balsas and the crystal clearness of the Coeula. The Balsas at this point passes between bluffs 100-200 feet in height but there are practically no cliffs. A substantial iron bridge has been built across the river but the railroad ends at the river. Partial grading has been done for about half a mile beyond.

Volatinia splendens

Certhopaga sulcirostris

Scardafella inca.

Helodytes

Pyramus

Melanerpes elegans

Certhia

Mimus flavirostris.

Vireo flavoviridis

Myiarchus (small)

Leptotila.

Philotypus

Amphispiza acuminata.

Agelaius vociferus

Ceryle cabanisi

Pyrrocephalus r. mex.

Felurus pusillatus.

Phalaenoptilus

Myzocetes & super.

Ortogeomys Diggings are not uncommon along the steeper slopes where the soil is loose. Two wild turkey made last night were seen this morning.

Ceruus (tipans)

Guazuma guazuma
decapuled tree.

Acacia (flatthorn)

Vitis? (very large sp.) common. It is now ripening fruit, although entirely leafless. The fruit is of a dark red color when ripe and grows in very large clusters. The vines grow 30-35 feet in length and appear more like half reclining shrubs than like grape vines.

June 4. Remained at Rio Balsas.

Momotus mexicanus.

Artatis

Columbigallina passerina.

Ardea herodias

Cyanospiza leucocera.

Amphispiza nuptialis.

Asturina plagiata.

Basilulurus belli.

Uplandia

Between 9 & 10 A.M.

Three birds in as many different places were seen perched quietly about 6 feet from the ground in shady places

Vitis? (very large sp.) Grows a single, comparatively straight stem and is not twisted and contorted like ordinary grape vines. Often it is two and a half feet between the nodes. It has twining tendrils but grows upward and returns, rather than climbs over the surrounding vegetation. At the beginning of the rainy season it is absolutely leafless, but most of the plants are ripening two or three large clusters of fruit, which are dark red when thoroughly ripe.

Leimela. 2 sp.

Fish Hook Vine.

One long-leaved growing along streams

Pithecolobium ("pinzan guarichi")

Taxodium (Bald cypress)

Guayaba

Palo del Brasil.

Nicotiana (glaucous leaf)

Argemone. (yellow)

June 5. Punte de Ixta. Guerrero.

We were obliged to sit up until 2.30 A.M. at Rio Balsas, to catch the train for Punte de

Ixta where we arrived soon after 10.30 A.M.

Agelaius "charretero"

Volatinia sphenurus

Seturus prostratus

Thryothorus grandis.

Scardafella inca.

Columbigallina passerina.

Amniophila acuminata.

Astrogalinus mexicanus.

Pyrocephalus r. mexicanus.

Sporophila longirostris.

Melospiza flavirostris.

Monotus mexicanus

Punte de Ixta.

The following information is from Mr. C. Franklin who is employed at mine on Mt. Teotipe.

Itinerary from Rio Balsas to the mining camp of Watson and Ord at Teotipe (10500 ft.) on Mt. Teotipe, said to be 12500 ft. high and where snow falls occasionally:

Rio Balsas - Acatlan Cross Balsas on foot 15 mi.

Acatlan - Chapultepec 15 mi.

Chapultepec - Teacotepec 10 mi.

Teacotepec - Parota 25 mi.

Parota - Teotipe 25 mi. Last day is

the hardest.

June 6. Remained at Puente de Sata.

Sigmodon

Lepus

Glaucidium ferrugineum.

Comurus

Cerolophaga sulcirostris.

Bubo. Two were found sitting in a shady corner, on some rocks under an over-hanging cliff.

Philortyx a flock of six or eight was found among the brush on a dry hillside.

Chordeiles

Nyctidromus

June 7. Remained at Puente de Sata.

Thryothorus.

Amphispiza humeralis.

Tibonys torredus. Rather common in weed patches and along brush fences.

June 8. Remained at Puente de Sata.

Polyborus cheriway.

Ceryle alcyon.

Columbigallina passerina. Nest a frail structure of weed stems placed on interlocking branches of a *Bursera*, five feet from the ground.

Cameothlypis

Columbigallina passerina. On approaching a nest the female flew and alighted upon the ground about 30 feet away. She immediately began to hop off dragging her left wing. A few steps farther on she began dragging both wings as though they were broken.

Sycalis a few were seen in a rice field which had just been irrigated. The birds ^{were} scattered and evidently breeding but a loose flock of 6 or 8 was seen flying about 20 yards above the rice, after I had stored them up by firing a shot. ^{They were} usually seen ^{to} alight singly among the rice and ^{were} constantly flying ^{from place to place} actively about.

Although there were bushes about the birds were not observed to alight anywhere except on the ground. Single birds, pairs and loose parties of three or four, made flights of 200 yds. or more and alight upon the ground. The note is a dry, weak t-sit repeated at intervals of a few seconds both while on the ground and during flight. Two birds were seen hovering

with fluttering wings, about two feet above the tops of the rice. Possibly they may have been males courting females.

Eudalis One was observed to alight in a bush. Another note uttered during slow flight is see-see-see repeated rapidly. The flight is undulating and irregular. On rising they usually fly off out of sight, but occasionally they alight within 200 yards. Sometimes they describe several circles.

Hodomyz. An adult female was secured yesterday and a very young one was caught last night along a stone wall on level ground near the base of the hills on the opposite side of the stream and about a mile above the R.R. station. A few signs were seen which I at first supposed were of *Neotoma*; worn places led out at the base of the wall and there were small quantities of droppings near rocks on which the animals evidently perch to evacuate. The only runways were some thin ones I supposed at first were made by *sigmodon*.

June 9. Tres Marias, Morelos,
Left Cuente de Ixtla at 9:30 A.M. and
reached Tres Marias at 3 P.M. Mr. N. con-

tinued on to the city of Mexico and I stopped at Tres Marias here for four days to try to secure topotypes of ^a*Dendrocygna* Mr. N. described from here and also of a *Heliodytes* he described.

The road from Cuente de Ixtla the R.R. leads steadily upward and crosses a succession of terraces or valleys, each one higher than the last. Cuente de Ixtla is on one of these terraces and Cuernavaca is on another. Cuernavaca is situated on a rolling plain near the base of the mountains. Soon after leaving Cuernavaca the long steep ascent, leading to the summit of the range begins. On the way up to Tres Marias there are splendid views of Cuernavaca and a very broad expanse of the surrounding country. Yantique can plainly be seen, situated in another valley and separated from the valley at Cuernavaca by a low ridge. The low plains or valley country appear to extend into the state of Puebla. From near Cuernavaca large lava beds extend up the slope at least as far as Tres Marias.

June 10. Remained at Tres Marias.

Pres Marias is a small station five kilometers from Huizilac and is the headquarters for an extensive wood and railroad-tie cutting business.

Weg. In the immediate vicinity of Pres Marias there does not appear to have been much of a forest of oaks. The pines have been pretty nearly all cut off. On south and south-western slopes near Huizilac there is a heavy and excessively humid forest of oaks, now being rapidly cut off. This forest occurs just below or near the lower border of the fir forest.

- | | |
|---------------------------------|---|
| <i>Pipilo fuscus</i> | } Fairly open country near Pres Marias. |
| <i>Junco</i> | |
| <i>Zamelodia melanocephala</i> | |
| <i>Merula migratoria</i> | |
| <i>Seiura</i> | |
| <i>Ptilinopus</i> | } Oak forest near Huizilac. |
| <i>Pipilo maculatus</i> | |
| <i>Troglodytes brunnicollis</i> | |
| <i>Arremonops</i> | |
| <i>Myadestes</i> | |
| <i>Sceloporus miniata</i> | |
| <i>Colaptes</i> | |
| <i>Troglodytes</i> | } One specimen of this species |
| <i>Troglodytes</i> | |

was shot in the top of a tall oak in the forest near Huizilac

Troglodytes Local name "matraquita" a flock containing several nearly grown young was found in the oak forest near Huizilac and 10 birds were secured. The first bird shot fell struggling to the ground and the other birds gathered quickly in trees and bushes near and several darted down to the fallen bird, so that a single shot killed three of them, others moved excitedly about in the tops of trees near and were easily shot. When found the birds were working busily about in the tree tops and some of the members of the flock were uttering the harsh rattling note which has given the bird its local name. As soon as I began shooting however the birds instantly stopped their note. This harsh note is only uttered at intervals and usually several birds utter it in unison, meanwhile moving about with rapid, jerky motions. The *Troglodytes* on Mt. Tacitara and at Motzorong, Vera Cruz have ^{notes &} habits very similar to this one. Almost the entire day was spent near Huizilac.

Corvus

* Tree similar to Madroño. (Oak forest near Huiztilac).

Weather very cool and rainy. When it is not raining there are often heavy fogs.

Canis The meat is dried at Huiztilac and after being powdered fine is mixed with coffee and given patients suffering with frios (malarial fever).

Adocoilus After being dried the blood is powdered and taken, mixed with "vino tinto" (Claret) for dysentery.

Canis The skin is put in bed, and slept upon, as a cure for rheumatism.

Melanotis caeruleus.

Colaptes cafer.

Mitrophaga

Canis The "sebo" (tallow) applied externally is believed to relieve "rheumas" rheumatism.

Melospiza Said to occur in an oak forest a few miles from Huiztilac.

Most of the day was spent in the oak forest near Huiztilac.

June 11. Remained at Tres Marias.

Plagiopsis superciliosa

Trogon ambiguus. At Huiztilac the people

sometimes use the meat for heart trouble. Male birds are killed and after removing the entrails, the bodies are dried with the feathers on. For use the dried meat is cut fine and soaked several days in "jerez" (sherry) and then taken out and chewed. Drinks of the jerez are afterward taken, early each morning.

Glaucochim gnomia

Piranga hepatica

Catherpes

Basileuterus culicivorus

Atlapetes.

Elder "sauco" a tea is made of the flowers and applied to wounds to allay inflammation.

Prunus (wild-cherry)

Abies.

June 12. Remained at Tres Marias.

Dendrocygna Formerly common in the oak forest near Huiztilac but the great number of wood-cutters now at work there have driven them out or diminished their numbers so that I begin to fear I shall not be able to secure any specimens.

June 13. City of Mexico

No Grouse were found during a final hunt this morning and I decided to take

the afternoon train to the City of Mexico
& where I arrived late in the evening and
rejoined Mr. Nelson.

June 14. Remained in the City of Mexico.

June 15. Puebla, Puebla.

In the evening we left the City of Mexico
and went to Puebla where we arrived about
8 o'clock.

June 16. Atlixco, Puebla.

Continued this morning to Atlixco where
we found a heavy rain storm in progress.

June 17. Remained at Atlixco.

Hemiprocne

Otocoris

Carpodacus f. mex.

Astrogalinus p. mex.

Zenaidura macroura.

Cathartes

Cathartes

Amphispiza mysticalis.

Pyrgisoma A pair was found among
the bushes along a creek. When one was shot
its mate immediately flew down beside it.

Guiraca c. eurhyncha.

Scardafella inca.

Cathartes aura.

Cassia

Ipomea tree

Copal

Sugarcane.

Wheat.

Pepper tree.

Agave.

Frosts. Slight ones occur at Atlixco
in winter.

Neotoma. A few signs were seen
along cliffs bordering the arroyo or gulch
through which the creek flows, a few
miles above the town.

June 18. Remained at Atlixco.

Dusicalca.

Colinus.

Agelaius.

Amphispiza *totteri*.

Ammodramus

Sayornis nigricans

Melospelia leucoptera.

June 19. Remained at Atlixco.

Chelidon erythrogaster.

June 20. San Martin, Puebla.

Left Atlixco this morning and arrived
here soon after noon.

June 21. City of Mexico.

Returned to the City of Mexico from San

Martini,

June 22, en route to La Barca.
In the evening we took the train for
La Barca.

June 23, La Barca, Jalisco.
Reached La Barca about 9 A.M. We decided
to go to Coctlan tomorrow and to work out
around the marshes near the mouth of the
Terma river from there.

June 24, Coctlan, Jalisco.
Left La Barca and moved to Coctlan.
Practically no rain has fallen here as yet
and as many waterfowl are said to
wait until the rains come before breeding
we are too early for many of them.

June 25, Remained ^{near} Coctlan.
In the morning we left Coctlan for a
trip out into Lake Chapala. Most of the
day was spent in working our way across
12 or 15 miles of lake to the mouth of the
Terma river where we landed and camped
for the night.

Tule houses. Near the mouth of the
river we found a small settlement of
fishermen living in houses made of tules
bound on a framework of poles.
Melospiza leucoptera

Agelaius
Linnamun Peal.

June 26, Remained near Coctlan.
We returned during the afternoon to
Coctlan.

Wood Ibis
Glossy Ibis
Aechmophorus ("pipil")
Geothlypis
Melospiza (song sparrow)
White Ibis
Black Mallard,
Tern
Agelaius
Fulica gallinula
Ardea herodias
" *Eucogaster*
Nycticorax naevius.

June 27, Remained at Coctlan.
Colinus. Most of the day was spent
hunting quail along the Santiago river
between Coctlan and the lake. Eight
specimens were secured. At this season
of the year they are rather common among
the mezzquits and on the damp grassy
areas near the river wherever there is
any cover. Small flocks were seen but

many of the birds have paired and are beginning to breed.

Melospiza leucophaea

Sturnella

Agelaius vociferus

Pipilo fuscus

Scardafella inca

Jacana zymostoma

Harporhynchus curvirostris

Piprecephalus r. mexicanus

Astragalinus p. mexicana

Chelidon erythrogaster

Amascus macrurus

Agelaius

Myiarchus

Pitangus derbianus

Amphisp. acuminata

Tyrannus c. uncinatus

Ceryle cabanisi

Fulica

Myzodetes v. superciliosus

Zenaidura macroura

Phalacrocorax

Cliff Swallow

Chordeiles citreusis

Thryomanes

Spizella torquata

Minus

Icterus pustulatus

" *mallocki*

Certhia vulcanica

Icteria virens longicauda

Tule. The round species, called "tule redondo" is used for making rough mats for packing dried fish which is sent in large quantities, from Lake Chapala to Toluca and Mexico.

Cliff Swallow. A number of occupied nests were seen under the arches of a masonry bridge which crosses the Santiago river at Acapulco.

Icteria virens longicauda. A number were seen and heard singing late in the afternoon, from perches on the topmost branches of Mezquite trees near the Santiago river.

Signodon. A number of Signodons were seen early in the morning, running about among the short grass near the river. Their holes go into the ground in places which at this season are quite unsheltered. After they run rapidly for a few yards and stop to eye the intruder for a second or two before running or usually toward their holes.

Spumophilus variegatus,

Tepus (jack)

June 28. La Barca, Jalisco.

We returned today from Acatlan to La Barca, to do a little more work in the marshes near there.

In the afternoon I went out near La Barca, to look for hawks.

Dryobates scalaris.

Agelaius vociferus. "tildis" & "chifirio"

Agelaius

Harporhynchus curvirostris.

Cathartes

Lanius

Helodytes

Melanerpes

Pipilo fuscus

Tyrannus

Certhia vulpecula.

Scardafella inca

Sturnella

Polyporus chimney.

Tepus (jack)

Mizquile.

Apuntá

Cecropia pitahaya

Acacia farnesiana.

Mizquile.

June 29. Remained at La Barca.

Psittacus

Thryomanes

Certhia 'piciis'

We went out in the morning to the marshes near La Barca, still quite dry from lack of rain.

Agelaius We secured a good series of males and females and found the species common. Nests were also found.

Geothlypis A form which may possibly be new was common among the lutes and a good series was secured. Light rains fell during the afternoon.

June 30. Drapate.

Left La Barca at noon today and arrived here in the evening.

July 1. en route to Washington.

Left Drapate at 3 a.m. and went to bed at once. When I got up this morning the train was nearing Aguas Calientes, where we had breakfast. Arrived at Torreon late in the evening.

July 2. en route to Washington.

When I got up this morning the train was at Monclova. We had breakfast at

Sabins and reached Eagle Pass between 10 and 11 A.M. and continued on to San Antonio arriving about 7.30. At San Antonio I took the train on the International and Great Northern for St. Louis. Mr. N. continued by the Southern Pacific toward New Orleans. Between Spofford and San Antonio the country was much greener and prosperous looking than I have ever seen it. There have been abundant rains.

July 3. En route to Washington.

This ~~at~~ morning when I got up the train was nearing Palestine in eastern Texas.

Houses. Many of those in the country and small towns are of the old fashioned style, with big chimneys at the ends.

Big woods are very green. Much of the country is forested.

Liriodendron

Short-leaved Pine.

Large-leaved oak

Elder

Sumach

Small fan Palm

} All common.

} Near Longview.

July 4.

Reached St. Louis early this morning and

after a short delay, took the B. & O. S. W. train for Washington.

July 5

Reached Washington soon after noon





