

SUMMER BIRDS OF AUTLAN, JALISCO

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THE city of Autlán, Jalisco, is about one hundred miles southwest of Guadalajara, and not far from the Río San Pedro. Its elevation is about 3000 feet. Mountains rise all about it—to the north and west the Sierra de Perote, to the southeast the Sierra de Autlán and the Nevado de Colima, and to the southwest lesser ridges which step down gradually to the coastal plain. The highest mountain of the region is the Nevado de Colima (elev. 14,000 feet). Autlán is only 50 miles from the Pacific.

The area immediately about Autlán is arid tropical. Its summers are hot and its winters warm. In general, precipitation is light, though occasional torrential rains in summer subject the slopes to heavy erosion. Farming is carried on only during the rainy season, for there is no irrigation. In cultivated districts fence-rows and scattered thickets provide cover for quail and other ground birds. Uncultivated areas are largely scrubland covered with an open shrubby growth of giant cacti (*Lemaireocereus*), thorny bushes, and trees of the genera *Prosopis*, *Acacia*, *Pouzolzia*, *Croton*, *Bursera*, and *Plumeria*. We refer to this habitat as "scrub forest" where the trees form a fairly dense canopy 20 to 30 feet high.

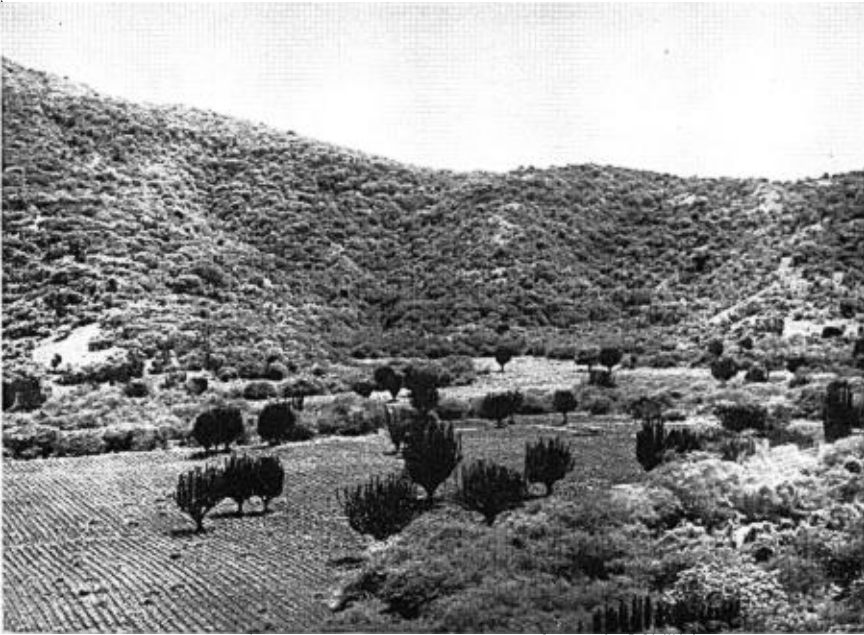
Most of the area about Autlán is heavily over-grazed. There is abundant evidence of destructive land-use. Much of the topsoil has been eroded from even the gentlest slopes, and where it has been deposited in the valleys agriculture is intensively practiced. The clumps of grasses and ground-clinging vines left by grazing animals provide refuge for numerous lizards and ground squirrels. We saw coyotes occasionally.

There are no swamps or lakes in the immediate vicinity of Autlán, but between Autlán and Guadalajara are a few marshy areas where herons and other water birds fed. We did no collecting in these marshes.

The only passable road leading southward from Autlán soon leaves the scrubland, and winds up oak-covered slopes to an elevation of about 4000 feet. We did some collecting in these oak groves nine miles south of the city. From here the road drops gradually to areas of luxuriant vegetation at 2000 feet. Twenty miles from Autlán (two miles north of the village of La Resolana), at an eleva-

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tion of about 1500 feet, the road penetrates a dense, tropical, deciduous forest. This area is hot and humid, being subjected to daily downpours during the rainy season. Here, trees of the genera *Ficus*, *Hura*, *Calliandra*, *Enterolobium* and *Acacia* flourish. On the slopes directly above the densely wooded bottomlands *Curatella* is the dominant tree, and shrubs of the genera *Piper*, *Corchorus*, *Triumfetta*, *Tournefortia*, *Acalypha* and *Solanum* are common. Deer, coati-



Cultivated bottomland surrounded by scrub-covered slopes eight miles northeast of Autlán, Jalisco, México. Photographed August 4, 1949, by G. Bryan Harry.

mundis, and cougars are among the larger mammals of the area. Ticks and various biting and stinging insects are abundant, contributing their share to the discomforts of the country. We collected here for a week in early July and occasionally thereafter.

Harry spent 12 days (July 19–August 1) collecting in the Sierra de Autlán. His base camp there (elev. 7200 feet) was near a small mountain stream ten miles southeast of the village of Tecomatlán. Oak forests with herbaceous ground-cover are dominant in that area from 4000 to 5000 or 6000 feet. Higher still are open stands of tall pines with occasional firs, many trees being two or three feet in diameter. Beneath the pines is a ground-cover of grass, but the natives burn the slopes during the dry season. In protected moist pockets the oak forest is dense; the large trees are covered with a tangle of ferns, vines, bromeliads, mosses, and orchids. *Arbutus* trees and shrubs of the genera *Salvia*,

Cornus, and *Castilleja* grow in both sheltered and unsheltered areas. Above the pines, between 8000 and 9000 feet, there are meadows. Here lupine grows with the dense, tough clumps of waist-high bunch grass, and there is a scattering of pines and shrubbery.

Podilymbus podiceps. Pied-billed Grebe.—Noted June 23: two adults and several immature birds on a pond 30 miles northeast of Autlán.

Ardea herodias. Great Blue Heron.—One was feeding with Egrets at a roadside pond 35 miles northeast of Autlán on August 7.

Casmerodius albus. Egret.—About 65 seen in recently flooded lowlands 15 to 35 miles northeast of Autlán on August 7.

Anas diazi. Mexican Duck.—On June 23 we saw two on a temporary pond in a cornfield 20 miles northeast of Autlán. We noted the greenish bill of the male and the white lines bordering the speculums.

Coragyps atratus. Black Vulture.—Common in and about Autlán (up to 4000 feet) throughout our stay. On July 15 Harry saw 40 feeding on the carcass of a cow at 4000 feet elevation. The same day, at Autlán, Zimmerman saw one being pursued by a female Great-tailed Grackle (*Cassidix mexicanus*). Largest number seen during one day: 80 (July 25).

Cathartes aura. Turkey Vulture.—Less numerous than the above but noted at considerably greater elevations. Harry saw it repeatedly at 8000 to 8500 feet July 23 to 31.

Accipiter spp.—On June 30 Zimmerman saw what he took to be a Sharp-shinned Hawk (*A. striatus*) being pursued by a Sulphur-bellied Flycatcher (*Myiodynastes luteiventris*), 20 miles south of Autlán. On July 27, in the Sierra de Autlán (8300 feet), Harry saw what he believed to be an immature Cooper's Hawk (*A. cooperi*).

Buteo jamaicensis. Red-tailed Hawk.—Noted throughout our stay, at 3000 to 8500 feet, but not common. All seen clearly were adults. Two seen July 15, at 4000 feet, were soaring together (Harry).

Buteo albicaudatus hypospodius. White-tailed Hawk.—The most common hawk of the scrubland and agricultural areas. Often seen "hanging" in air, motionless save for occasional lowering and raising of the legs. Upon sighting prey, "hanging" birds folded their wings and dropped swiftly earthward. On June 23 we saw two birds capturing and eating large flying insects in midair, kite-wise. On the evening of July 4 we saw one of two soaring birds suddenly dive at a passing Raven (*Corvus corax*) and pursue it for several hundred yards. Low-flying White-tails were frequently attacked by Olive-backed Kingbirds (*Tyrannus melancholicus*). We took an adult female White-tail in non-breeding condition on July 16, and an immature female on July 25.

Buteo nitidus. Gray Hawk.—Identified with certainty only on July 8 when we saw one flying low over the forest 21 miles south of Autlán.

Parabuteo unicinctus. Harris' Hawk.—Single birds recorded June 29 and July 21 flying over farmland south of Autlán.

Buteogallus anthracinus. Mexican Black Hawk.—Twenty miles south of Autlán, on August 5, we drove to within ten feet of a Mexican Black Hawk perched on a log beside the road. The cere and base of its bill were bright red-orange and its legs bright yellow. When it flew a single white tail band and the white tip showed. Black-looking hawks were seen flying in this tropical forest area several times, July 2 to August 5.

Polyborus cheriway. Caracara.—From July 27 to August 7 we saw several daily. Groups of four or five may have been family parties.

Ortalis vetula. Chachalaca.—Noted occasionally among large trees in the tropical deciduous forest and in wooded arroyos near Autlán.

Dendrortyx macroura. Long-tailed Partridge.—On July 2, in an open grove of oaks ten miles south of Autlán (5000 feet), Harry "squeaked" a covey of several birds to within ten yards

and collected a female. The eyes of this bird were dark brown, the fleshy parts otherwise bright orange red.

Philortyx fasciatus. Banded Quail.—Fairly common in the arid scrub, coveys of 10 to 20 birds being seen almost daily. When running through the brush they often uttered a rapid, high-pitched *pip-pip-pip*. When they burst into the air a musical *pee-pee-pee-eeee* accompanied the whir of their wings. The crop of a female taken July 13 was filled with small beetles. Apparently the Banded Quail has not been previously recorded from Jalisco (see Friedmann, Griscom and Moore, 1950. "Distributional Check-List of the Birds of México," pt. 1, p. 75).

Colinus virginianus. Bob-white.—Coveys fed with small doves in the scrubland and plowed fields near Autlán. They were very wary.

Jacana spinosa. Jacana.—On August 7 we observed two birds in a pond (choked with water hyacinth) about 40 miles northeast of Autlán.

Actitis macularia. Spotted Sandpiper.—One record: a bird with spotted under parts seen at a roadside pool 30 miles northeast of Autlán on August 7.

Zenaidura macroura. White-winged Dove.—Seen frequently (one or two a day) in the dry scrub throughout our stay. Our only specimen, a female with enlarged ovary taken July 11, measures: wing, 155.5; tail, 111 mm.

Scardafella inca. Inca Dove.—Up to five pairs seen daily in the scrubland. On August 4 we found a nest (with bird incubating two eggs) about ten feet up in a giant cactus. An adult and a juvenile were taken July 27.

Columbigallina passerina pallescens. Ground Dove.—A few observed almost daily in the scrubland. We did not find a nest, but the oviduct of a female taken July 26 held an egg nearly ready for laying.

Leptotila verreauxi. White-fronted Dove.—Recorded only on July 15 when Zimmerman took an immature male northeast of Autlán. The irides of this specimen were pale yellow, the bare circumorbital region dull lavender-pink, the loreal area dull blue. The abdomen and under tail coverts are much darker and buffier than those of an immature male specimen of *L. v. angelica* (from Texas) at hand.

Ara militaris. Military Macaw.—Recorded three times: three flying together six miles south of Autlán, June 26; a single bird, July 5; and a flock of 12 flying over the tropical deciduous forest, July 8.

Aratinga canicularis. Orange-fronted Parakeet.—Abundant in the tropical deciduous forest south of Autlán. Individuals, pairs, and flocks of up to 80 were seen repeatedly. They were noisy, particularly at dawn when they came in large numbers to the fig trees near camp. Our two specimens, both much worn (male, wing, 132, tail, 94 mm.; female, wing, 133.5, tail, 97), resemble the race *clarae* in that "the greenish blue of the crown continues anteriorly around the bare space in front of the eye. . ." (Moore, 1937. *Proc. Biol. Soc. Washington*, 50: 101); but their measurements, admittedly not satisfactory because of wear, seem to be closer to those of *eburnirostrum* (*ibid.*, p. 102).

Forpus cyanopygius. Mexican Parrotlet.—We saw flocks of 10 to 20 of these wary tiny parrots in and along the edges of the forest 20 to 22 miles south of Autlán in late June and early July. We usually saw them in the early morning with the flocks of Orange-fronted Parakeets.

Piaya cayana mexicana. Squirrel Cuckoo.—Noted occasionally in the forest 20 miles south of Autlán, July 2 to 8. Seen and heard infrequently in the arid scrub near town where a male was taken June 25. The irides of this bird were bright cherry red. A large grasshopper was in its stomach. The call of this species was a loud, measured *chuck . . . chuck . . . chuck . . .*, as many as 40 or 50 notes repeated in slow succession.

Geococcyx velox melanchima. Lesser Road-runner.—Observed occasionally in the scrubland and along the roads at from 3000 to 4000 feet. A male taken by Zimmerman on June 28 had been feeding on large red ants. The irides of this bird were brown with a dark buff ring around the pupil; the bare skin around the eye was bright blue except for a small area of blood red

posteriorly; the bill was gray above, pale blue-green below, the legs greenish in front, blue behind. Several times we saw Lesser Road-runners pursue and capture small lizards.

Crotophaga sulcirostris. Groove-billed Ani.—One of the most common birds of the farmlands, associating with Red-eyed Cowbirds (*Tangavius aeneus*) among cattle in the fields, sometimes perching and feeding on the animals themselves. Two nests, found in low acacias along the road June 28 and July 12, appeared to be built entirely of sticks. The usual call note was a burro-like *chaw-eeek* or *cha-eeek-eeek*, the last one or two syllables higher than the first. An adult male (testes unenlarged) was taken near Autlán on June 27. A nearly flightless young bird captured July 23 was infested with larvae similar to those discussed under *Megarynchus pitangua*.

Glaucidium minutissimum. Pygmy Owl.—Infrequently recorded in and along the edges of the tropical deciduous forest south of Autlán. Ordinarily we found three or four birds together in the lower branches of the larger trees. Two were seen in a mimosa thicket a mile north of



Pygmy Owl (*Glaucidium minutissimum*). Photographed 19 miles south of Autlán, Jalisco, México, June 30, 1949, by Dale A. Zimmerman.

Autlán (3000 feet), June 25. Our single specimen (male, possibly immature, taken June 30 at 1500 feet) appears to be identical with a Guerrero specimen of *G. m. griscomi* in the Museum of Comparative Zoology except that it is smaller (wing, 82; tail, 51 mm.) and its pileum is unspotted. Both of these variations may be due to immaturity, or it is possible that our specimen represents the race *palmarum*.

Nyctidromus albicollis. Paumaque.—Identified only in forest clearings 20 to 23 miles south of Autlán. The behavior of an adult bird flushed by Zimmerman was interesting: after alighting it raised itself on its legs and bobbed its head up and down several times. When approached closely it flew some 50 feet, flopped to the ground, quickly turned and bobbed its head once or

twice, then flew back and landed almost at the observer's feet. Here it continued its head-bowing for nearly a minute, whereafter it flew out of sight. Perhaps it was trying to divert attention from its young. Thirty minutes earlier Zimmerman had accidentally killed the only two young known to be in the vicinity when he had shot the adult male that apparently was brooding them.

Phaethornis superciliosus. Long-tailed Hermit.—Twice during the morning of June 30 Zimmerman clearly saw a bird of this species at very close range plucking insects from a spider's web above a small forest stream. Friedmann, Griscom and Moore (*op. cit.*, p. 161) do not list this species from Jalisco.

Amazilia beryllina viola. Berylline Hummingbird.—Zimmerman shot a male in oak forest (4000 feet) south of Autlán July 16. Others were seen there several times during July.

Amazilia rutila. Cinnamomeous Hummingbird.—Common at the forest edge 21 miles south of Autlán, being seen there daily.

Cyananthus latirostris. Broad-billed Hummingbird.—Several seen and a male (wing, 49.5; tail, 31.5; culmen, 20 mm.) taken northeast of Autlán, June 25. This bird has the measurements and white under tail coverts of *magicus*, but the merging of the blue of the throat with the green of the belly is even more pronounced than in a toptype (at hand) of *propinquus*.

Heliomaster constanti. Plain-capped Star-throat.—Several seen feeding with the commoner Broad-bills among giant cactus flowers, June 25. Immature male taken that day.

Trogon mexicanus. Mexican Trogon.—Noted by Harry on July 23, 26, and 29 in pine-oak forest between 7500 and 9000 feet on the Sierra de Autlán.

Trogon elegans ambiguus. Coppery-tailed Trogon.—One to six seen daily in the tropical deciduous forest south of Autlán. Breeding female and male taken June 30 and July 5 respectively. Young bird seen July 9.

Trogon citreolus. Citreoline Trogon.—Recorded only on July 6 when Zimmerman collected a singing male (enlarged testes) in the forest 21 miles south of Autlán. The plumage of this specimen is nearly identical with that of an adult female. The head, back, and tail are plain slate gray without a single iridescent feather. The mottled brown alula of the right wing and the plumulaceous character of some of the under tail coverts suggest immaturity. The song of this individual was a low, soft *hoo-koo, hoo-koo, hoo-koo*. The brilliant lemon yellow iris showed clearly in the field.

Momotus m. mexicanus. Russet-crowned Motmot.—Single birds seen infrequently near streams in the forest 15 to 21 miles south of Autlán. Adult female taken July 6 (Zimmerman).

Colaptes cafer. Red-shafted Flicker.—Noted occasionally in pine forests (7500–8000 feet) on the Sierra de Autlán in late July (Harry).

Centurus chrysogenys flavinuchus. Golden-cheeked Woodpecker.—Abundant in the scrubland among giant cacti; less numerous at the edge of the tropical deciduous forest. On June 25 Zimmerman observed what he believed to be a courtship display: a male, perched on a large cactus fruit, bowed elaborately, swaying and spreading his wings, sometimes hanging upside down, before a female. These actions were accompanied by a flicker-like *chicker-chicker-chicker*, etc. The performance lasted about three minutes. Adult (female in coloration) with well-defined brood-patch taken June 24.

Balanosphyra f. formicivora. Acorn Woodpecker.—Seen occasionally in oak and pine forests at about 8000 feet. Harry collected a female, July 25.

Piculus auricularis. Gray-crowned Woodpecker.—Zimmerman collected an adult female in scrub oak forest (4500 feet), July 29.

Dendrocopos scalaris centrophilus. Ladder-backed Woodpecker.—One or two pairs seen daily in the scrubland. A male taken July 27 (wing, 101; tail, 56; culmen, 22.5 mm.) and a female taken July 25 (wing, 94, culmen, 18.5 mm.) have the dark under parts and broad black dorsal bars of *centrophilus*.

Dendrocopos arizonae fraterculus. Arizona Woodpecker.—Harry took a female in mixed pine-oak forest (8000 feet), July 23. The wing (100 mm.) of this bird is shorter than that of the

shortest-winged female *D. a. fraterculus* measured by Ridgway (1914. *U. S. Natl. Mus. Bull.* 50, pt. 6, p. 263).

Xiphorhynchus flavigaster. Ivory-billed Woodcreeper.—Seen sparingly in the tropical deciduous forest during July and early August. Two immature males taken (July 9; August 5). In neither of these is the bill or tail full grown. The August specimen (bill, 24 mm.) appears to be the older. In both specimens the throat feathers are buff, tipped with dusky, and the breast markings are distinct, the buff striping being more sharply defined than that of adults. The plumage has a rich yellowish cast throughout, probably a concomitant of immaturity.

Platypsaris aglaiae albiventris. Rose-throated Becard.—Recorded three times. By following a food-carrying female Zimmerman found a nest in a large, isolated fig tree in a plowed field near Autlán on July 26. The tree held also an occupied nest each of the Vermilion Flycatcher (*Pyrocephalus rubinus*) and Mexican Cacique (*Cassiculus melanicterus*). The ragged, bulky becard nest was about ten inches long and eight inches wide, and was attached to the tip of a long branch 30 feet above the ground. Both adults made regular trips to the nest but only the female was seen with food in her bill. Three days later there was no sign of the becards at or near the nest. Zimmerman took a breeding male near Autlán on July 23.

Tityra semifasciata. Masked Tityra.—Rather common in forest south of Autlán. Conspicuous because of its coloration, loud calls and fearlessness. Usually seen in groups of four or five. Small fruits seemed to be its principal food though the stomach of one specimen contained a few insects. Our two specimens (males, June 30, July 21) are slightly darker, especially above, than male specimens of *personata* at hand, and the black of the outer webs of the lateral rectrices is extensive (wing, 133.5, 130 mm.; tail, 81, 76.5; culmen, 26, 26.5; tarsus, 27, 28); probably they represent the race *griseiceps*.

Pyrocephalus rubinus mexicanus. Vermilion Flycatcher.—The most abundant flycatcher and one of the commonest birds of the arid scrub. Nests with young found June 30 and July 26 were about 20 feet above ground in large trees. That found July 26 was in a fig tree which also held active nests of *Cassiculus melanicterus* and *Platypsaris aglaiae* (see above). Two males and four females taken June 29 to August 2.

Tyrannus melancholicus occidentalis. Olive-backed Kingbird.—Seen regularly in the farming areas and scrubland near Autlán, but not common. Specimens taken: adult male, June 29; two young males, August 5.

Tyrannus crassirostris. Thick-billed Kingbird.—A noisy, conspicuous species recorded six times, June 29–August 4, in the scrubland. It probably bred there for Zimmerman found three young accompanied by adults on July 26. Some of the notes of this bird are similar to those of a Vermilion Flycatcher but louder and longer: *brrr-zee* or *purr-eet*, the last syllable slurring upward. A longer call, a loud, raucous, throaty *cheek, cheek, cheek, purreek*, was also heard. Our two specimens (males, June 29, July 22) appear to be larger, darker-crowned, and paler below than specimens from Nayarit and Sinaloa.

Myiodynastes luteiventris. Sulphur-bellied Flycatcher.—Encountered wherever we went below 4000 feet but more numerous in the heavy woodlands than in the drier scrub. Usually the most conspicuous bird in the forest, its sneeze-like calls being heard throughout the day. Specimens: male, June 27; female, June 30.

Megarynchus pitangua. Boat-billed Flycatcher.—Seen only in the tropical deciduous forest and rare there. One pair, feeding recently fledged young, seen July 8. The female (collected) was infested with seven white larvae from 1.5 to 2 cm. in length. After the bird died, six larvae emerged, two through the skin of the throat, two from each wing at the wrist. Another was found in the throat during the skinning process. The flycatcher was taken within 60 miles of the type locality of *caniceps*, yet its measurements are closer to those of *tardiusculus* (exposed culmen, 31.5; width of culmen, 14.5 mm.).

Pitangus sulphuratus. Derby Flycatcher.—Noted occasionally near the forest edge about 20 miles south of Autlán and, especially in late July, in the scrubland up to 3000 feet. Our single specimen (male, July 21) is in juvenal plumage. Its crown is wholly dark except for one yellow feather.

Myiarchus cinerascens inquietus. Ash-throated Flycatcher.—Single individuals recorded July 4 and 13 in the scrubland. Male (wing, 86; tail, 81.5; culmen, 14 mm.) taken on the former date.

Myiarchus tyrannulus magister. Arizona Crested Flycatcher.—Two males in juvenal plumage taken by Zimmerman near Autlán, July 25.

Myiarchus tuberculifer querulus. Dusky-capped Flycatcher.—Bird in juvenal plumage (wing, 75; tail, 77; culmen, 14.8 mm.) collected along the forest edge 22 miles south of Autlán, July 21.

Contopus p. pertinax. Greater Pewee.—Observed July 16 (adult feeding a young bird) and July 29 in oak forest at 4500 feet. Female (wing, 99; tail, 79; culmen, 15.5 mm.) taken on latter date.

Empidonax difficilis. Western Flycatcher.—Several seen and a male in juvenal plumage taken in pine forest on the Sierra de Autlán at 8100 feet, July 23 (Harry).

Mitrephanes phaeocercus. Tufted Flycatcher.—Seen daily July 25–31 in pine and oak forest on the Sierra de Autlán (Harry). The upper parts of a female taken July 25 at 8000 feet are too dark and the bill is too large for *tenuirostris*.

Stelgidopteryx ruficollis. Rough-winged Swallow.—Single birds seen in Autlán, July 1 and 24. Several flocks (10 to 30 birds) seen feeding over farmland north of town, August 4.

Hirundo rustica. Barn Swallow.—Common in Autlán and around dwellings south of the city. Adults seen feeding young, July 16.

Corvus corax. Raven.—From one to 15 seen daily. Noticeable as they fed in plowed fields at any hour between daybreak and late afternoon. Small groups often observed flying eastward at dusk.

Calocitta formosa colliei. Magpie-Jay.—Seen occasionally in rocky arroyos and scrubland. Harry found a short-tailed young bird, evidently just out of the nest, July 12. On July 20, at the same locality, he saw three young all capable of strong flight, but still accompanied by their parents. Adult male (with black crest, auriculars and throat) taken June 24.

Xanthoura yncas speciosa. Green Jay.—Noted along a stream in the oak forest on the Sierra de Autlán, July 28 and 30. A male (wing, 131; tail, 157 mm.) collected by Harry on July 30 has the yellowish-white eyelid feathers (some tipped with blue), yellow forehead, and yellowish bases of the blue hindneck feathers characteristic of this race.

Cissilopha san-blasiana nelsoni. San-Blas Jay.—Common in dense forest south of Autlán (about 1500 feet). Seen in pairs and groups of four or five. Rare in scrub areas at 3000 feet. Birds seen carrying sticks, possibly for nest construction, July 7. The stomach of a female taken June 26 contained insects and a small snail.

Cyanocitta stelleri. Steller's Jay.—Seen daily, July 22–31, in pine forest on the Sierra de Autlán. Female taken July 22 (Harry).

Sitta carolinensis. White-breasted Nuthatch.—Seen frequently in pine-oak forest on the Sierra de Autlán (about 7500 feet), July 23–31. Young male taken July 25 (Harry).

Certhia familiaris jaliscensis. Brown Creeper.—Noted frequently in pine-oak forests on the Sierra de Autlán (7500–8000 feet). Male taken July 27 (Harry).

Campylorhynchus gularis. Spotted Wren.—Found only in clearings and in vegetation beneath scrubby oaks at 4000 feet nine miles south of Autlán. On July 29, on one hillside, Zimmerman encountered six adults and eight long-tailed young birds actively foraging low in the thicket. He collected from a family group the adults and one of three young. The color-pattern of the young bird was quite unlike that of either adult: its underparts were unspotted and its pileum was black (brown in adults). It had a black postocular streak and the superciliary line was wider than in the adults. The irides were gray, those of the adults bright rusty orange. This species and *C. jocosus* have been regarded as conspecific by some taxonomists, but the fact that the juvenal plumage of the one differs strikingly from that of the other does not seem to support such a concept (cf. van Rossem, A. J., 1938, *Bull. Brit. Ornith. Club*, 59: 11).

Thryothorus sinaloa. Sinaloa Wren.—Noted daily in the scrubland and along the forest edge (1500 to 4000 feet). Its song was a loud *pee, twa, weet-weet, woiit-woit-woit-woit*, often end-

ing with a higher pitched *wit!* Two males taken July 9 and 13 are darker and less rufous than six *T. s. sinaloa* specimens at hand (though the brightness of some of these may be due to "foxing"). The dorsal coloration of our birds is closer to that of the geographically-far-removed *cinereus*, while the heavy spotting on the lower belly and abdomen is different from that of any other specimens at hand.

Thryomanes bewicki. Bewick's Wren.—Noted only on July 10 when Zimmerman collected near Aultán one of three young being fed by an adult.

Troglodytes brunneicollis. Brown-throated Wren.—Seen daily July 22–31, in oak, pine, and bunch grass habitats on the Sierra de Aultán (Harry). A young female taken July 27 (8300 feet) is slightly paler below than a female in stub-tailed juvenal plumage from the Mt. Tancitaro district of Michoacán (UMMZ 115,792).

Catherpes m. mexicanus. Canyon Wren.—A few seen or heard daily in Aultán and in nearby arroyos. Adult male (June 29) and young female (August 6) taken.

Toxostoma curvirostre. Curve-billed Thrasher.—Seen occasionally in scrubland in late July. Young birds taken July 22 and 25; adult female (wing, 106; tail, 102.5; culmen, 27.5 mm.) taken July 29. On the basis of measurements the adult seems closer to the nominate race than to *occidentale*.

Mimus polyglottos. Mockingbird.—Seen occasionally in roadside thickets between Aultán and Guadalajara.

Turdus migratorius. Robin.—Adults and young seen July 25–27 in pine and oak forests on the Sierra de Aultán (Harry).

*Turdus r. rufo-palliatu*s. Rufous-backed Robin.—Seen only in the tropical deciduous forest south of Aultán. Its alarm note, a low *chuck*, reminded us of *T. migratorius*. Adults were seen carrying food, July 21. The irides of a freshly killed male (July 21) were rusty brown, the eyelids and bill ochre-orange.

Turdus assimilis renominatus. White-throated Robin.—Found in the same habitat as the above but twice as numerous and usually stayed high in the trees, seldom near the ground. Song, call notes, and behavior very similar to those of *T. migratorius*. A male taken June 30 is more tan and less olive-gray below, and appreciably duller, paler, and less olive above than examples of the nominate race. It is even somewhat duller than specimens of *renominatus* at hand. Female taken July 9. Irides of both sexes were dark rusty, the eyelids lemon yellow, and the bill brownish-black above, yellow-brown below.

Catharus occidentalis fulvescens. Russet Nightingale-Thrush.—Heard at dawn and dusk daily, July 21 to 31, near mountain streams in oak forest on the Sierra de Aultán (Harry). Adults and young taken July 28 and 29. The adults differ puzzlingly *inter se*, the female being brighter than the male throughout the upper parts.

Sialia sialis. Bluebird.—Seen infrequently in scrubland and oak forest (3000 to 4000 feet). Two males (adult and young) taken August 4.

Polioptila plumbea bairdi. Black-capped Gnatcatcher.—Seen occasionally in the scrubland. Our female (July 4) agrees with specimens of *P. plumbea bairdi* at hand, though the tail (50.5 mm.) is longer than Ridgway's average (43.5) for females of that form. A male (July 23) is also close to *bairdi* but the white in the second rectrix is more restricted than in most specimens of that race at hand.

Ptilogonys cinereus. Gray Silky-Flycatcher.—Female (plumage badly worn) taken on the Sierra de Aultán, August 1 (Harry).

Lanius ludovicianus. Loggerhead Shrike.—Fairly common in the scrubland. On July 27 three young birds, capable of feeding themselves, were seen begging from an indifferent adult.

Vireolanius melitophrys goldmani. Chestnut-sided Shrike-Vireo.—The chest-band of a male taken by Harry in pine forest on the Sierra de Aultán (9000 feet) July 25, is rufous, not deep chestnut (as in the nominate race); contrary to Nelson's original description of the type of *goldmani* (1903. *Proc. Biol. Soc. Washington*, 16: 155), however, the gray of the pileum meets abruptly the green of the back. The type of *goldmani* is, of course, a female.

Vireo huttoni mexicanus. Hutton's Vireo.—Females taken July 27 and 31 in pine-oak forest on the Sierra de Autlán (Harry).

Vireo h. hypochryseus. Golden Vireo.—Singing male taken July 5 along the forest edge 21 miles south of Autlán (Zimmerman). The irides of this bird were bright rusty-brown, the bill bluish, tinged with pink below, and the legs gray-blue. Two small yellow birds seen along a stream 19 miles south of Autlán, June 30, were probably of this species.

Vireo olivaceus hypoleucus. Red-eyed Vireo.—Present in the scrub forest near Autlán, but more abundant near edge of tropical deciduous forest farther south. Adult female taken June 24. A nest found July 6 was in a sapling, on a dead branch eight feet above a dry stream bed. An adult was on the nest. Another adult, which had been singing nearby, promptly attacked and pursued a cacique that alighted in a tree some 20 feet from the nest.



Nest and egg of Rufous-capped Warbler (*Basileuterus rufifrons*). Two other eggs were in the grass close by. Photographed 20 miles south of Autlán, Jalisco, México, July 21, 1949, by Dale A. Zimmerman.

Parula pitiayumi pulchra. Pitiayumi Warbler.—Male and female taken nine miles south of Autlán July 15 and 16.

Myioborus m. miniatus. Bright-bellied Redstart.—Several seen and a female in juvenal plumage taken on the Sierra de Perote (5000 feet), July 2 (Harry).

Euthlypis l. lachrymosa. Fan-tailed Warbler.—Male taken July 19 in a forested ravine nine miles south of Autlán (Zimmerman). This bird seems to represent the nominate race, though its wing-length (70.5 mm.) is less than that of four Tamaulipas males (73–75, average, 74) in the Sutton collection.

Ergaticus ruber. Red Warbler.—Seen daily, July 23–29, in oak and pine-oak forests (8000 feet) on the Sierra de Autlán. Male taken July 23 (Harry).

Basileuterus belli bateli. Bell's Warbler.—Seen daily in oak and pine-oak forest, Sierra de Autlán, July 22–31. Specimens taken: female (wing, 62, tail, 60 mm.), July 22; female (?) (wing 62.5, tail 59 mm.), July 30; juvenile (sex?), July 22.

Basileuterus rufifrons dugesi. Rufous-capped Warbler.—Seen frequently on brushy, grass-covered hillsides south of Autlán (4000 feet). Less common along the forest edge at about 1500 feet. A nest containing four well developed young, found in the latter area July 8, was on the bank of a roadside drainage ditch. It was well concealed by long, overhanging grasses and constructed of the same material, being lined with finer grasses and rootlets. Both adults were feeding the young. On July 21, our next visit, this nest contained one egg and two others were in the grass a foot or so away, but we did not see the warblers themselves. The song of this species resembles that of a Chipping Sparrow (*Spizella passerina*), and was recorded by us as *ti-ti-ti-ti-ti-ti* and *che-che-che-che-che*. Adults at the nest uttered a soft *tip*.

Passer domesticus. House Sparrow.—Not common at Autlán. An occupied nest found there June 24.

Cassiculus melanicterus. Mexican Cacique.—A conspicuous bird of the tropical deciduous forest. Mornings and evenings we heard its notes there—an odd *ker-yack, ker-yack, ker-yack*, and a somewhat *Agelaius*-like *cheedle-quaaaaa*. Two males taken (July 20; July 26). Its long pendulous nests were on the lower branches of tall, isolated trees along the forest edge. We saw no evidence of colonial nesting. An active nest found July 26 was in a fig tree: in the same tree were two other active nests—one of the Vermilion Flycatcher and one of the Rose-throated Becard. A cacique nest found July 7 probably held eggs, for we saw the adults change places several times that day. Nesting caciques ordinarily were tolerant of other birds, but we saw one male chasing a Golden-cheeked Woodpecker that had alighted in the cacique's nest-tree.

Tangavius a. aeneus. Red-eyed Cowbird.—Small flocks seen in farming areas and scrubland throughout our stay. Specimens taken June 26, July 26, and August 4. Our single adult male measures: wing 114.9, tail 78.5 mm.

Molothrus ater obscurus. Brown-headed Cowbird.—A bird in juvenal plumage collected in the scrubland August 4 was the only Brown-headed Cowbird we encountered. In this specimen the outer rectrices are marked with buffy white in such a way as to give the tail a pattern much like that of a Chestnut-collared Longspur (*Calcarius ornatus*).

Cassidix m. mexicanus. Great-tailed Grackle.—Small numbers seen near Autlán throughout our stay. Immature male taken August 5.

Icterus w. wagleri. Wagler's Oriole.—Pairs seen July 14 and August 2 near water holes in the scrubland. A male taken July 14 approaches *castaneopectus* in size (wing, 112; tail, 115; culmen, 23 mm.).

Icterus pustulatus. Scarlet-headed Oriole.—Common in the scrubland. Seen occasionally along the forest edge at 1500 feet. Adults seen feeding a recently fledged bird, July 7. Three specimens taken from a flock of eight immatures, August 3. Our adult males (June 26, July 10) possess the small lanceolate dorsal markings of *microstictus*, though the size of these markings differs greatly in the two specimens.

Sturnella magna. Meadowlark.—Seen and heard June 23 and August 7 in fields 20 miles northeast of Autlán.

Piranga flava. Hepatic Tanager.—Seen in oak forest (4000 feet) and among pines (8000 feet) in the mountains near Autlán. Adult and sub-adult males taken July 19 and 25; female taken July 19.

Piranga erythrocephala. Red-headed Tanager.—Male taken from a group of four immatures on July 19 (Zimmerman).

Habia rubica rosea. Red Ant-Tanager.—Zimmerman collected the male of a pair found along a stream in a wooded arroyo 19 miles south of Autlán, July 2.

Guiraca caerulea. Blue Grosbeak.—Pairs recorded at Autlán, July 13 and 21.

Passerina versicolor. Varied Bunting.—Singing male (testes enlarged) taken six miles north-

east of Autlán, June 25. On the basis of measurements this bird seems closest to *dickeyae* (wing, 66; tail, 51.5 mm.).

Passerina l. leclancheri. Leclancher's Bunting.—Seen occasionally on brushy hillsides northeast of Autlán. Its song, which was much like that of the Indigo Bunting (*Passerina cyanea*), was often heard during the warmest hours of the day when most species were silent. Males (wing, 66, 66.5 mm.) taken June 24 and August 4. Female (wing, 60 mm.) taken July 10.

Carpodacus mexicanus. House Finch.—Seen daily in Autlán, though not common there. Adults seen feeding young July 12 to 23.

Sporophila t. torqueola. Seedeater.—Immature male (wing 54.5, tail 45.5 mm.) taken two miles south of Autlán, July 26.

Volatinia jacarina. Blue-black Grassquit.—Common in the scrubland. Its song, a thin, buzzy *wee see chew* (last syllable dropping) or *wee see sit* (last syllable rising), was usually given from the top of a low bush or fence wire. Males (testes enlarged) taken July 4 and 23. One of these has black under wing coverts, while the coverts and bases of the remiges of the other bird are largely white. These birds were taken in an area included in the range of *V. j. diluta* by van Rossem (1938. *Bull. Brit. Ornith. Club*, 58: 131).

Spinus p. psaltria. Dark-backed Goldfinch.—Seen frequently among oaks at about 4000 feet. Male taken July 16.

Atlapetes torquatus virenticeps. Green-striped Atlapetes.—Common in oak forests on the Sierra de Autlán (6500–8500 feet). Male taken July 22.

Pipilo ocai. Collared Towhee.—Seen frequently in oak forest on the Sierra de Autlán July 23–29. Less common in pine forest and bunch grass meadows. Female taken July 23 (Harry).

Pipilo fuscus. Brown Towhee.—Seen occasionally in scrubland and oak forest up to 5000 feet. A male (wing, 92.5; tail, 90.5; culmen, 14 mm.) taken August 4 is paler below than specimens of *P. f. fuscus* examined.

Melospiza k. kieneri. Rusty-crowned Ground Sparrow.—Noted infrequently in heavily forested arroyos at 2000 feet, scrub forest (3000 feet), and oak forest (5000 feet), but most common in dense undergrowth in arroyos from 3000 to 4000 feet. Harry found a nest containing three pale bluish-white eggs, July 12. It was built of grasses and placed three feet from the ground in a shrubby vine. Male (July 2) and female (July 11) taken.

Aimophila h. humeralis. Black-chested Sparrow.—Locally common in the scrubland, being found in small loose colonies, often in association with the following species. Its song was a rapidly executed, run-together *che-ti-ti che-ti-ti chi-chiti chititi*, etc. The songs of this species and *A. ruficauda* were quite similar: both species gave duet performances. The alarm note of the present species was a metallic, junco-like *pit*. Four adults taken, July 4–August 4.

Aimophila ruficauda acuminata. Russet-tailed Sparrow.—The most noticeable species in the scrubland, inhabiting fence rows and acacia thickets. What we presumed to be mated pairs often sang in duet. When performing one bird would fly into a low bush, chatter a bit, and then, after a short buzzy flight low over the ground, join another bird. Soon both birds would perch side by side, or one just above the other, and begin singing together a rapid, vigorous *see-chee-see-seeche*, *see-chee-see-seeche*, over and over. This would continue for half a minute to two minutes before the birds would fly off into the brush. Zimmerman found two nests, each with three white eggs, July 20 and 27. About five feet above ground in low acacias, they were loosely built of thin twigs and grasses, lined with horse hair. Four adults taken June 24–August 5.

Aimophila ruficeps. Rufous-crowned Sparrow.—Male taken July 16 nine miles south of Autlán. This specimen bears little resemblance to some examples of *fusca* at hand, being more striped and not so reddish above. A topotype of this race (U. S. Natl. Mus. 135910) is redder in general tone above than the Autlán bird, though it is not very different in any other respect. The auriculars of the topotype are buffy; those of our specimen are gray.

Junco phaeonotus. Red-backed Junco.—Seen daily July 23–31 in bunch grass meadows

(8000–9000 feet) on the Sierra de Autlán. A female taken July 23 seems closest to *australis* on the basis of bill measurements. The outer tail feathers, however, have much more white than examples of that race at hand. In this respect the specimen is similar to *J. p. palliatus*.

UNIVERSITY OF MICHIGAN DEPARTMENT OF BOTANY, ANN ARBOR

NEW LIFE MEMBER

H. Lewis Batts, Jr. was born at Macon, Georgia, on May 24, 1922. He received a Bachelor's degree from Kalamazoo College in 1943, and a Master's from the University of Michigan in 1947. During World War II, he served for three years in the U. S. Army Medical Department. He now is teaching ornithology, ecology, and general biology at Kalamazoo College, and is completing an ecological study of breeding birds for his doctoral thesis. He is an assistant editor of *The Jack-Pine Warbler*, Treasurer of the Michigan Bird Banders' Association, a Life Member and member of the Board of Directors of the Michigan Audubon Society, a Vice-President of the Audubon Society of Kalamazoo, a Life Associate of the A.O.U., and a member of the Cooper Ornithological Club, Georgia Ornithological Society, National Audubon Society, Ecological Society of America, American Society of Mammalogists, American Association for the Advancement of Science, and the Photographic Society of America. His special interests are bird-banding, ecology, and photography. His published papers deal with Georgia field trips, and Goldfinch observations in Michigan.

