UNUSUAL BIRDS AND EXTENSIONS OF RANGES IN SONORA,
SINALOA AND CHIHUAHUA, MEXICO

By ROBERT T. MOORE

During the years 1933 to 1937, the author made four trips to southern Sonora, southwestern Chihuahua and Sinaloa in order to get first-hand information concerning the distribution of bird life from sea level on the Gulf of California to the highest points of the Sierra Madre. This range forms the boundary line between Sonora and Chihuahua in the north and Sinaloa and Durango in the south. The 1933 party concentrated its activities on the lower areas, from the cactus plains near Navajoa, southern Sonora, to an altitude of 5000 feet, covering chiefly the foothills and arroyos from Jim McCarty’s ranch at Guirocoba, just east of Alamos, to the Chihuahua-Sonora boundary line in the Transition Zone above Marromichán. The spring of 1934 found us on a more ambitious effort to penetrate through the little known short canyons, which dissect the western face of the Mexican plateau in southeastern Sonora and northeastern Sinaloa, to the most northerly of the three enormous canyon systems, which gouge the Chihuahua plateau for a hundred miles to the east. Approximately a month was spent in an attempt to obtain a comprehensive impression of the changes in bird life, both vertically and horizontally, as our expedition of four white people and five Mexican packers steadily climbed from 1450 feet at Guirocoba to 8500 feet on the rim of the great Barranca del Cobre. A week was employed collecting on the sides and bottom of this great arid canyon system which, with the Barranca de Batopilas and the Barranca de San Carlos, provide enormous dry troughs as migration routes for the arid-loving species of southern United States to reach their winter range on the cactus plains of Sinaloa.

Part of June, 1934, was spent in making a traverse across northern Sinaloa following the length of the great Rio Fuerte, one of the two largest rivers of western Mexico. March and April of 1936 made possible a zoological survey in southern Sinaloa, from Mazatlan to the summit of the Sierra Madre on the Durango-Sinaloa boundary at Rancho Batel, 6 miles due north of Santa Lucia, Sinaloa, where a new species of a South American genus had been found surviving in a much restricted mountain habitat. Several days in May, 1937, were spent in the vicinity of Mazatlan and two weeks on Mt. Mohinora, the highest mountain of northern Mexico. Stations were made in the Transition Zone from 8500 feet to the summit of the mountain, which had been reported as 13,400 feet in elevation, but which proved to be only 11,215 feet, according to our aneroid. These checked precisely with the aneroids of two airplanes, which were chartered to save nearly three weeks of mule travel. Two of the airplane routes took us obliquely across the Sierra Madre from Mazatlan to Parral and gave opportunity to survey this extremely intricate and rugged country of peaks and deep canyons.

Detailed collecting has been carried on by Chester C. Lamb for a period of four years, almost without interruption, covering the whole state of Sinaloa and portions of Sonora, Chihuahua and Durango. This work was supplemented by two years’ work by J. T. Wright in southern Sonora and extreme northeastern Sinaloa. The manuscript covering the distribution of the bird life, based on a wealth of material, is nearing completion, but it seems wise at this time to record a few of the unusual occurrences, which may be of help to other workers in adjoining fields. The rarer publications, such as the literature of Mexican writers, have not been completely searched and some data may have been overlooked, but it is reasonably certain these would create little change in the records given. All capitalized names of colors in this paper are taken from Ridgway’s Color Standards and Color Nomenclature.
Heterornus cabanisi. Tiger Heron. This species was noted by the author as not rare along the Sabina-bordered streams in southern Sonora, but due to the infrequency of records from Sonora and Sinaloa, specimens taken at Guirocoba, Sonora, should be noted, as well as five individuals from Sinaloa (Chele, Rancho El Fielo and Rancho Santa Barbara). There is also an adult male from Alamos, Sonora, in the Museum of Comparative Zoology. Some of these adults revealed wider barring on the anterior upper and lower parts, when compared with a long series of Central American specimens, but two recently-taken adults from Rancho El Fielo and Chele, Sinaloa, show such contrasting variable extremes, that it is inadvisable to describe a new race.

Chondrohierax uncinatus uncinatus. Hook-billed Kite. Seldom failing to take the unusual, Mr. Lamb secured a male and female, apparently mated, at Rancho Picacho (3000 ft. alt.), 15 miles east of Cacalotan, southern Sinaloa, August 5, 1934. Hitherto this Hook-billed Kite had not been recorded in northwestern Mexico, the nearest locality being Guerrero. I am not at all confident that this is not a new race, but there is so much individual variation both in coloration and size of bill in this species, that I do not feel warranted in separating it. It is a notable addition to the avifauna of northwestern Mexico.

Accipiter gentilis, subsp.? Goshawk. A single female taken by Mr. Lamb at Babizos, Sinaloa (6400 ft.), November 30, 1935, seems to be the first record for Sinaloa, and a comparison with thirteen females in the Museum of Comparative Zoology, indicates it as different. Salvin and Godman's record (1879, pt. 3, p. 46) of young, "not fully feathered," from the Sierra de Nayarit leads to the belief that this species may breed in the Sierra Madre. My female, larger and darker than thirteen females of true ariacapillus, may represent a new race from northwestern Mexico.

Meleagris gallopavo, subsp.? Turkey. For many years hunting parties have reported turkeys from the mountains of eastern Sonora, but no definite records have been published. On May 12, 1933, while the author and an Indian guide were hunting near Mirasol, southeastern Sonora (3500 ft.), approximately 10 miles west of the Chihuahua-Sonora boundary, two turkeys were seen and the tail feathers of one, which had been killed by some mammal, were found. On May 16, near the same place, the author jumped a male turkey. Another was observed by the author on May 20 near Baromic6n, Sonora; and on the same day one of our Indians killed a female turkey near the Sonora-Chihuahua state line, approximately 2 miles east of Baromic6n in extreme southeastern Sonora. This female from Sonora, like the author's two specimens from northeastern Sinaloa and the individual collected by the author at Guayatchi, southwestern Chihuahua, differs distinctly from M. g. merriami of New Mexico, being less cinnamon on rectrices and secondaries, with tips of rectrices whiter. They seem to be closer to specimens from Michoacan, although larger in size and less iridescent on the back.

Sterna albifrons browni. Brown Least Tern. Although this species has been known to range along the Pacific coast of Mexico, no records seem to exist for Sinaloa. Mr. Lamb secured a breeding male and female (El Molino, Reforma, April 17 to May 24).

Geococcyx veloz melanichius. Pale Road-runner. An individual of this rare road-runner was observed by the author near the Questa del Cedros, Chihuahua, a few miles to the east of the Chihuahua-Sonora boundary line on May 7, 1934. The near proximity of the bird and its much smaller size than in the California Road-runner, rendered identification positive. This is the first record for Chihuahua. Only one individual, the type, has been taken in Sonora (Moore, 1934) and only three specimens by Mr. Lamb in Sinaloa. A few old skins from the last state exist in museums.

Strix occidentalis lucida. Mexican Spotted Owl. A single female taken by the author on May 11, 1934, at Vasagota, Chihuahua, at nearly 7000 feet altitude, represents the only individual secured by us in western Mexico. As Vasagota is only a few miles from both the Sonora and Sinaloa state lines, this species will undoubtedly be found in these states. However, neither Mr. Lamb nor J. T. Wright have secured any specimens for the author during their extensive collecting.

Micropallais whitneyi whitneyi. Elf Owl. The Elf Owl does not seem to have been recorded from any point farther south than Magdalena (van Rossem, 1931) and Cerro Blanco (Ridgway, 1914), both apparently in extreme northern Sonora. Two males (March 5 and April 16) in the Moore collection, taken at Guirocoba, southern Sonora, extend the range of this race more than 200 miles farther south.

Chlorostilbon auriceps. Golden-crowned Emerald. The taking by Mr. Lamb of an adult male, May 1, 1936, in the Sierra Palos Dulces (3500 ft.), constitutes the first record of the species in Sinaloa. Although this is a breeding bird it is obviously exceedingly rare. Hitherto auriceps has not been reported farther north than Santiago, Nayarit (Cat. Birds Brit. Mus., vol. 16, 1892, p. 43). Our specimen differs from two specimens in the U. S. National Museum (nos. 112617,-18) collected at
San Marcos, Jalisco, in slightly smaller measurements and narrower outer rectrices, but coloration is identical. I deem it inadvisable to base a new race on these minor differences. Floresi's type probably came from Bolaños, Jalisco; but not having seen it, I hesitate to designate a type locality. I also have a male (February 18, 1934) from Alejandra, Morelos.

Eugenes fulgens. Rivoli Hummingbird. One adult male was taken by Dr. W. H. Burt, May 18, 1933, who collected with the author in the Transition Zone above Baromición, Sonora (4500 ft.), 2 miles east of the Sonora-Chihuahua state line. Cahoon took specimens at Oposura.

Lampornis clemenciae clemenciae. Texas Blue-throated Hummingbird. One adult male in breeding condition was taken by the author in the Transition Zone above Baromión, Sonora, May 18, 1933. This male has the small bill of L. c. bessophihs, but none of the other characters given in the original description. Apparently a second record from Sonora, this species, as well as the Rivoli Hummingbird, will undoubtedly be found not rare at similar altitudes in the Sierra of east-central Sonora.

Pachyrhamphus major uropygiolis. Sinaloa Becard. This race, hitherto represented solely by the type specimen from "Plomosas," Sinaloa, is obviously very rare and confined to the mountains of southeastern Sinaloa. Mr. Lamb has secured one male (December 16, 1934) and two females (April 3 and 10, 1936), the first from Rancho Santa Barbara (2500 ft.), 20 miles northeast of Rosario, and the females from Rancho Batel (6000 ft.), 6 miles north of Santa Lucia. These latter undoubtedly represent the female of uropygiolis. I have compared them with females of nearly every species of this genus. They are surprisingly different. The two Batel females resemble more nearly the color pattern of P. a. griseus ornatus Cherrie, but differ markedly from that form in having the lower back, scapulars, rump and upper tail coverts Cinnamon-Buff instead of "uniform Light Grayish Olive-Green," and the upper back and pileum, Saccardo's Umber, instead of Chestnut Brown. Like ornatus, they have a black collar on the hindneck and a second collar below it, but this latter is whitish rather than "Yellowish Olive." The two females differ much more markedly from the description of P. major major by Ridgway (1901, pt. 4, p. 833).

Nuttallornis borealis cooperi. Olive-sided Flycatcher. A single male of the Olive-sided Flycatcher taken by J. T. Wright at Guirocoba, southeastern Sonora, September 25, 1933, seems to be the first record of the species for Sonora. An extremely small individual, with wing only 96.4 mm. and tail 60.1 mm., it seems to be fully adult, being far smaller than the minimum of the species, given by Ridgway. Clearly it should be referred to the eastern race. There is no record of this species from Sinaloa.

Empidonax minimus. Least Flycatcher. Mr. Lamb collected a female November 26, 1933, at El Molino, which seems to constitute the first record of this species for Sinaloa. Only one other specimen has been secured in northwestern Mexico, namely, at Alamos, Sonora, in 1888 by Frazar.

Progne subis hesperia. Western Martin. Mr. Lamb took an individual on the sea coast at Guamuchil, Sinaloa, October 5, 1933. Apparently it is the first authentic record of this race for Sinaloa. Grayson's statement (Lawrence, 1874, p. 271) is too indefinite to be given consideration.

Progne subis sinaloae. Sinaloa Martin. Hitherto only the topotypical series (Nelson, 1898) of four males has been known of the Sinaloa Martin, whose nearest relative, P. s. dominicensis, is confined to the West Indies. Mr. Lamb secured three males and three females, August 8 to 15, 1936, at San Feliz, Chihuahua (7500 ft.), close to the state line of Sinaloa, due east of Tepetuco. We have not seen them at any other place. "Plomosas," the type locality of sinaloae, is known today as "Plomosas" and is located in extreme southeastern Sinaloa. Therefore, we have now two series from localities separated by a distance of nearly 250 miles. Coming from such a high altitude, sinaloae seems to be distinctly a mountain form. Our specimens constitute the first record of females. The male and female, taken by J. H. Batty at La Laja, Jalisco, are intermediate between sinaloae and dominicensis. Our females are smaller and have the brown on the flanks less restricted than in the latter.

Vireo atricapillus. Black-capped Vireo. The presence of the Black-capped Vireo in Sinaloa has hitherto been based upon a single female collected by A. J. Graysen (Lawrence, 1874, p. 272) at Mazatlán, in the 60's of the last century. Grave doubt was thrown upon the identity of this specimen, by Baird, Brewer and Ridgway (1874), as well as by Salvin and Godman (1879, vol. 1, p. 199). Our collection contains fifteen skins from Sinaloa, many taken by Mr. Lamb from 1934 to 1937. Obviously, the Black-capped Vireo is a regular migrant to Sinaloa. The earliest date of arrival is September 22 and the latest date of departure March 20. All our specimens come from southern Sinaloa (Rosario, San Ignacio, Rancho El Fielo and Chele). Its absence from Sonora indicates that this species, like other birds inhabiting arid sections of the south-central United States, crosses the tableland through Chihuahua and probably keeps to the east of the Sierra until it reaches the great barrancas of southwestern Chihuahua and Durango. From their rims it can descend immediately at least five thousand feet and follow their hot troughs to the cactus plains of Sinaloa. As far as I can
ascertain, the only other records of this bird in Mexico are the taking of one male at Santa Leonor, Tamaulipas, by Phillips (1911) and a reference to its occurrence on "Volcano of Toluca, Mexico" by Hellmayr (1935).

*Vireo pallens ochraceus*. Ochraceous Vireo. Two specimens, a breeding male and female, of this vireo, apparently rare in northwestern Mexico, were obtained by Mr. Lamb on Isla Las Tunas, Sinaloa, April 10 and May 9, 1934. This extends the range of the species approximately 150 miles to the north. The only other record seems to be Grayson's from Mazatlan (Lawrence, 1874, p. 272).

*Vireo huttoni stephensi*. Stephens Vireo. The accumulation of abundant breeding birds of this race in the mountains of Sinaloa south of Babizos is rather interesting, in view of the fact that none has been secured by the author's expeditions, either in southwestern Chihuahua along the western slope of the Sierra Madre, or in southern Sonora. Van Rossem (1931, p. 280) records a single individual 400 miles to the north near the United States border. Two individuals in the Museum of Comparative Zoology were taken by Cahoon near Oposura, Sonora. Our specimens range from 6400 to 7500 feet. It seems strange that Frazar did not secure any on his trip from Guirrocoiba, Sonora, to Pinos Altos, Chihuahua.

*Vireo hypochryseus hypochryseus*. Golden Vireo. Three males and four females of this rare vireo, most of them in full breeding condition, have been obtained, ranging from Rancho Picacho in the south to Potrerillo in central Sinaloa, at altitudes from 2000 to 3000 feet. They are obviously Arid Upper Tropical birds.

*Vireo olivaceus flavoviridus*. Yellow-green Vireo. Since Lawrence (1874, p. 272), quoting Grayson, states that "none" of this race "are seen after August, migrating probably to Central America after breeding," and Peters (1931) quotes his statement, it should be recorded that we have three September specimens (10th, 16th and 23rd) taken in Sinaloa. The earliest dates are May 27 and 28 for three males, which had already reached 1000 feet altitude in central Sinaloa at Potrerillo. (See Peters' [1931] discussion of the migration of this race.) A large number of nests and eggs were found in July. Our total series covers fifty-one specimens from Sinaloa and Sonora. I also have many migrants taken in South America.

When comparing specimens in eastern museums in 1934, the author was tempted to describe these northern birds as new, based on darker coloration of upper parts and more extensive white area below. But as our great series began to accumulate, marked individual variation revealed itself. Furthermore, Peters (1931, p. 576) has shown that the original measurements of the lost co-types indicate a wing of 81.5 mm., almost identical with the average of our series. A new race might be based on the slightly more extensive white underparts, but even this character is subject to great variation.

*Mniotilta varia*. Black and White Warbler. Grayson (Lawrence, 1874, p. 269), referring to Sinaloa, recorded this form from "Sierra Madre," but no other records exist nor does it seem to have been found in Sonora. Between the years 1933 and 1936 Mr. Lamb secured five specimens, ranging from Rancho Batel (6000 ft.), southeastern Sinaloa, to El Molino on the northwest coast. This indicates the species to be an irregular migrant to Sinaloa.

*Granatellus venustus venustus*. DuBus Red-breasted Chat. Griscom (1932, p. 338) calls this species "one of the rarest of birds." W. deW. Miller (1905, p. 366) reported one immature male from Escuinapa, Sinaloa. The only other specimens taken in the state were secured by P. O. Simons at Rosario and Tatemalis, as reported by L. M. Loomis (1901) and by Yoshida (Kuroda, 1930) near Culiacan. Our records prove the DuBus Red-breasted Chat to be not extremely rare. It is well distributed over Sinaloa as far north as El Molino on the coast of northwestern Sinaloa and in the foothills from Potrerillo (1000 ft.), near Palos Dulces, to Los Leones near the Sinaloa-Sonora boundary in extreme northeastern Sinaloa. The last extends the range several hundred miles farther north than any locality previously recorded. The Moore collection contains nine males and two females. Sex organs are fully enlarged in many birds.

*Euphagus cyanoccephalus cyanoccephalus*. Brewer Blackbird. A male, slightly immature, which corresponds to the characters of this race, except for a regular shield-like patch of pure white on chin and throat, was secured by J. T. Wright on October 12, 1931, at Soyopa, Sonora. He reported he shot this specimen on the wing from a flock of four, all of them having similar throat patches. Presumably, this is a case of albinism.

*Piranga rubra rubra*. Summer Tanager. Hitherto, this tanager does not seem to have been recorded from northwestern Mexico, except for three vagrants taken in Lower California (Grinnell, Univ. Calif. Publ. Zool., vol. 32, p. 187). On January 30, 1935, Mr. Lamb collected a female on the Rio Los Canas, in extreme northern Nayarit (1000 ft.). We have not secured it in either Sinaloa or Sonora.
Piranga rubra cooperi. Cooper Tanager. Three males from Guirocoba (June 14, July 1, and August 3) indicate that the Cooper Tanager is a breeding bird of southern Sonora. The last specimen is definitely marked by the collector as "breeding." That it breeds as far south as latitude 26° in northern Sinaloa is evidenced by a specimen secured by Mr. Lamb on July 26, 1936, at Copalito (2000 ft.), 3 miles south of Tecucapa. The testes were enlarged to full size.

Cyanocompsa parnellia indigotica. Turquoise-fronted Bunting. The most northern point this race has been recorded is Mazatlan by Forrer (1888) and Labrados by Mrs. McLellan (1927). Our two males and three females, from the Sierra Palos Dulces and Vado Hondo, extend the range of the species 75 miles farther north in Sinaloa. We have twelve males and five females (Rancho Picacho, Rosario, and Chele in southern Sinaloa; Sierra Palos Dulces, Vado Hondo, San Ignacio and Potrerillo in central Sinaloa, and Rio Los Canas, northern Nayarit).

Volatinia jacarini atronitens. Blue-black Grassquit. Two specimens (August 2 and August 3, 1933) taken at Guirocoba seem to constitute the first records of this race for the state of Sonora and extend the range several hundred miles to the north. I observed a male at Baromicón, southeastern Sonora, May 17, 1933.

Spizella passerina arizonae. Western Chipping Sparrow. Six specimens (Guilocoba, Camoa, Guirajqui, February 2 to April 2) indicate that the Western Chipping Sparrow is a resident of the lower mountains of southeastern Sonora. That it is undoubtedly a breeding bird is forecasted by a long series of breeding June specimens taken 125 miles to the southeast at Los Frailes, on the Chihuahua-Sinaloa boundary line at an altitude of 3000 feet. The author found Chipping Sparrows fairly common at Rancho Batel (5650 ft.) in the mountains of southeastern Sinaloa in April, 1936. They do not seem to have been reported hitherto from Sinaloa.

Spizella breweri breweri. Brewer Sparrow. As this species apparently has not been recorded from Sinaloa and not south of Obregon, Sonora, an adult female taken on November 4, 1933, by Mr. Lamb near the sea coast at El Molino, Sinaloa, extends the winter range in northwestern Mexico several hundred miles south.

Arrenornops supercivosus sinaloa. Mazatlan Sparrow. Apparently this race is represented by very few specimens in collections. Salvin and Godman (1879) make no mention of it and W. deW. Miller (1905) does not record it from southern Sinaloa, but Miss McLellan (1927) secured it at Labrados, 25 miles south of Mazatlan. Our collection contains seven males and five females, most of them taken by Mr. Lamb in the southern half of the state; but an individual from El Molino, west of Culiacan, extends the range more than a hundred miles to the northwest. The females, which do not seem to have been described, resemble the males in coloration. Three males and one female taken in September, with sex organs in full breeding condition, indicate either an extended or a late breeding period.

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A NEW SUBSPECIES OF PINE GROSBEAK FROM ARIZONA
WITH CRITICAL NOTES ON OTHER RACES
WITH FIVE ILLUSTRATIONS
By RANDOLPH JENKS

The White Mountains of central-eastern Arizona, from which the new race comes, represent a boreal "island" set apart from the high Rocky Mountains in northern New Mexico by about 200 miles of Upper Sonoran Zone. They are similarly separated from other continuous chains of mountains and high plateaus in all directions except the west. Here the Mogollon Plateau, a high southerly continuation of the Colorado Plateau, connects them by a narrow belt of Transition Zone to the boreal region of San Francisco Mountain in north-central Arizona, nearly 200 miles away. Looking from an aeroplane, one would say that the area called the White Mountains resembles a large bulge at the southeast end of a narrow, forested island. This region has previously been described more fully (Jenks, Condor, vol. 38, 1936, pp. 242-243).

Pine Grosbeaks collected in the White Mountains appeared to be different from *Pinicola enucleator montana*. This circumstance stimulated a review of the species. The writer has personally examined more than 500 skins of pine grosbeaks representing all known races of the species, except those of eastern Asia.

In reviewing the status of the Pine Grosbeak in Arizona, I find that the first specimen, an adult female (U. S. Nat. Mus. no. 241988), was collected on July 30, 1915, by Dr. H. H. T. Jackson of the United States Biological Survey, at 9500 feet altitude on Baldy Peak, White Mountains, Arizona. The specimen was not reported upon.

The first published record of pine grosbeak for Arizona is that of Vorhies (Condor, vol. 32, 1930, pp. 262-263), who saw six at Jacob Lake Ranger Station, Transition Zone, Kaibab Plateau, June 24, 1929. He was unable to collect specimens. The only other Arizona record is that of Jenks and Stevenson (Condor, vol. 39, 1937, pp. 89-90), who recorded Pine Grosbeaks from the White Mountains under the name of *montana*. 