

Bárbara (van Rossem notes); Magdalena (Dawson notes); San Pedro River on the boundary; Sonoyta; Colorado River at Monument 204 (Mearns notes); Cerro Blanco (Chicago Nat. Hist. Mus.).

*GEOCOCCYX VELOX MELANCHIMA* MOORE

SONORA LESSER ROADRUNNER

*Geococcyx velox melanchima* Moore, Trans. San Diego Soc. Nat. Hist., 7, May 31, 1934, 459 (Guirocoba, Sonora, México; alt. 2,500 feet); 1938 a, 24 (Guirocoba).—Peters, 1940, 61 (southern Sonora).

*Geococcyx affinis* (not of Hartlaub) Shelley, 1891, 421, part (Sierra de Alamos).—Salvin and Godman, 1896, 536, part (Sierra de Alamos).—Ridgway, 1916, 81, part (Sierra de Alamos).

Rare inhabitant of the lower mountains in the extreme southeastern corner of the State. The only two individuals collected to date are one taken by Lloyd in the Sierra de Alamos, May 23, 1888 (examined in Brit. Mus.) and the type which was taken by Wright near Guirocoba on March 25, 1931.

ORDER STRIGIFORMES OWLS

Family TYTONIDAE Barn Owls

*TYTO ALBA PRATICOLA* (BONAPARTE)

BARN OWL

*Strix Pratincola* Bonaparte, Geog. and Comp. List, 1838, 7 [New name for *Strix flammea* Wilson] (northern parts [of America] = Pennsylvania).—Stone and Rhoads, 1905, 689 (Colony).

*Tyto perlata pratincola* Ridgway, 1914, 605 (Sonora).

*Tyto alba pratincola* van Rossem, 1931 c, 250 (Tecoripa; Saric; crit.); 1934 d, 436 (Alamos).

Probably a fairly common resident of Sonoran and Tropical zones, although recorded from but few localities. Noted at Colonia Lerdo in the Colorado delta by Rhoads in the winter of 1905; observed in the same region at San Luis on May 2, 1937 (van Rossem notes); not uncommon about Rancho La Arizona ["Saric"] in early May, 1937, and July, 1929; Tecoripa, March 14, 1929; Alamos, February 23, 1888; heard occasionally at Guirocoba in May and June, 1937 (van Rossem notes); San Bernardino Ranch, September 4, 1892 (Mearns notes).<sup>19</sup>

<sup>19</sup> As previously mentioned (van Rossem, 1931c), the Tecoripa specimen is indistinguishable from *Tyto alba guatemalae* of Central America.

## Family STRIGIDAE Typical Owls

*OTUS ASIO CINERACEUS* (RIDGWAY)

## MEXICAN SCREECH OWL

*Megascops asio cineraceus* Ridgway, Auk, 12, No. 4, Oct., 1895, 390 (Fort Huachuca, Arizona).

*Otus asio cineraceus* Ridgway, 1914, 702, part ("probably northern Sonora").—Cory, 1918, 30, part (northern Sonora).—A.O.U. Comm., 1931, 163 (Sonora).—van Rossem, 1931 c, 250 (El Alamo).—Bent, 1938, 274, part, in text (Sonora).—Moore and Peters, 1939, 40 (Sonora).

Status uncertain, though probably a resident in the northeastern and north central foothills and mountains. This distribution is predicated by the distribution in the mountains of extreme southern Arizona. There is one definite record, that of a specimen taken July 1, 1928, by Bancroft at El Alamo in the Lower Sonoran zone, though in a locality closely adjacent to the Upper Sonoran. This specimen (Nat. Hist. Mus.) is unquestionably *cineraceus*. Screech owls heard at Rancho La Arizona on June 7, 1937, (van Rossem notes) almost certainly belonged to this subspecies, since the locality lies between El Alamo and the Arizona boundary. There appears to be no basis, other than supposition, for "Sonora" records of *cineraceus* previous to 1931.

*OTUS ASIO GILMANI* SWARTH

## SAHUARO SCREECH OWL

*Otus asio gilmani* Swarth, Univ. Calif. Pub. Zool., 7, No. 1, May 26, 1910, 1 (Blackwater, Pinal Co., Arizona).—Moore, 1937 b, 65, in text (northern Sonora).—Moore and Peters, 1939, 40 (Sierra Seri).—Peters, 1940, 102 (extreme northern Sonora).

*Megascops asio cineraceus* (not of Ridgway) Stone and Rhoads, 1905, 689 (lower Colorado River).

*Otus asio cineraceus* Huey, 1931a, 430, in text (Sonora side of Gulf at lat. 29° 46' ).

*Otus asio trichopsis* ? (not *Scops trichopsis* Wagler) Price, 1899, 92 (lower Colorado River).

Probably a resident of Lower Sonoran deserts in the northwest. Screech Owls heard by Price along the lower Colorado in early January, 1898, by Rhoads in early February, 1905, and by van Rossem at San Luis in early May, 1937, were undoubtedly *gilmani*, since this race occurs in immediately adjacent parts of Baja California and Arizona. As in the case of the northeastern *cineraceus*, though, there is but one specimen on record, that taken by Charles Sheldon in the Sierra Seri on January 1, 1922, and which is now in the collection of the Biological Survey. This individual seems

to be the basis of Huey's statement that "*cineraceus*" occurs on the Sonora side of the Gulf at the above-given latitude.

*OTUS ASIO SINALOENSIS* MOORE

SINALOA SCREECH OWL

*Otus asio sinaloensis* Moore, Proc. Biol. Soc. Wash., 50, April 21, 1937, 64 (Guamuchil, northwestern Sinaloa, México); *ibid.*, in text (Guirocoba).—Moore and Peters, 1939, 42 (Guirocoba).—Peters, 1940, 103 (southwestern Sonora).

*Otus vinaceus sinaloensis* Moore, 1941 b, 158, in text (Guirocoba; Agiabampo).

Probably a not uncommon resident of the Tropical zone lowlands and foothills from the latitude of Guaymas southward. According to Moore (1937 a), specimens from the foothill region (Guirocoba) are intermediate toward *vinaceus* of the higher zones east of the Sonora-Chihuahua boundary. Additional specimens of this race have been examined from 10 miles north of Guaymas, May 11 (breeding) and June 27, 1937 (Dickey coll.).

*OTUS TRICHOPSIS ASPERSUS* (BREWSTER)

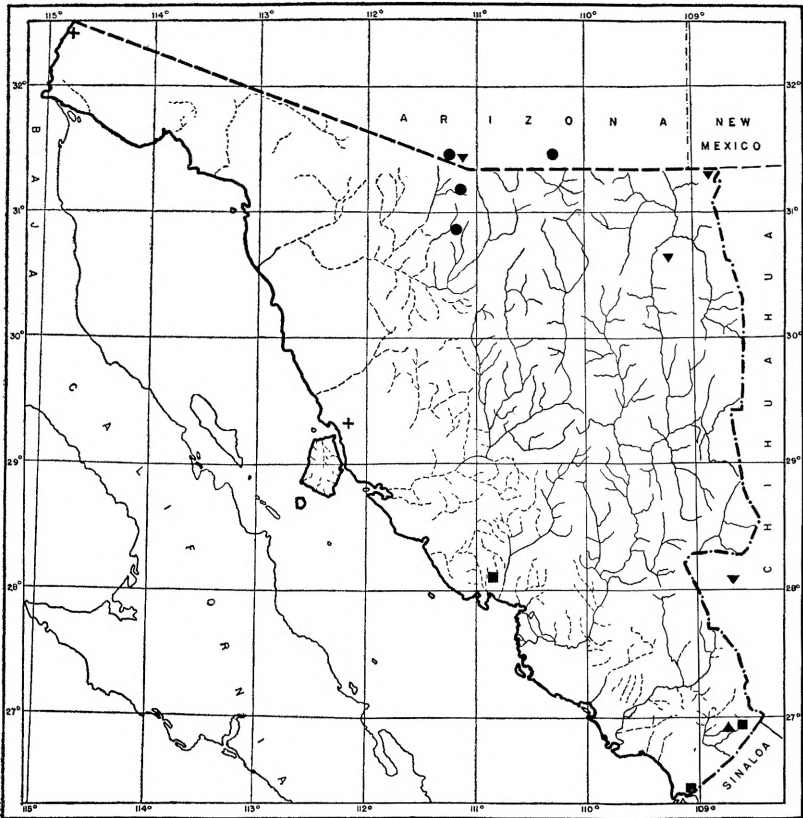
SPOTTED SCREECH OWL

*Megascops aspersus* Brewster, Auk, 5, No. 1, Jan., 1888, 87 (El Carmen, Chihuahua, México).

*Otus trichopsis aspersus* Moore and Peters, 1939, 44, in text (San Luis Mountains, "Chihuahua"; crit.).

Probably not uncommon, at least in summer, in the high Upper Sonoran and Transition zones in the northern and eastern mountains. Definite records are but two in number; specimen taken near El Tigre Mine by Berry Campbell, July 26, 1935 (Univ. Mich.), and two adults and two juveniles taken by Mearns on the west side of the San Luis Mountains, July 13, 1892 (U. S. Nat. Mus.; Mearns notes). Known occurrences in Arizona (west to the Pajaritos Mountains) and Chihuahua (El Carmen near the Sonora-Chihuahua boundary) indicate a more extensive distribution in Sonora than is at present known.<sup>20</sup>

<sup>20</sup> The validity of the race *aspersus* is by no means proven, as Moore and Peters freely admit, and my own investigation which goes considerably beyond "sending two specimens to the British Museum" fully bears out their doubts. However, after correspondence with Peters I have decided to use the name tentatively and without endorsement of the ascribed characters, my doubts concerning which are further heightened by seven recently collected October specimens from the Pajaritos Mountains in Arizona.



MAP 5. Distribution of the genus *Otus*. Circles, *O. asio cineraceus*; crosses, *O. a. gilmani*; squares, *O. a. sinaloensis*; inverted triangles, *O. trichopsis aspersus*; triangle, *O. guatemalae hastatus*.

### *OTUS GUATEMALAE HASTATUS* (RIDGWAY)

#### MAZATLÁN SCREECH OWL

*Megascops hastatus* Ridgway, Proc. U. S. Nat. Mus., 10, sig. 17, Aug. 1, 1887, 268 ("La Paz, Lower California"=Mazatlán, Sinaloa, México).

*Otus hastatus hastatus* van Rossem, 1934 d, 436 (Guirocoba).

*Otus guatemalae tomlini* Moore, 1937 a, 63 (Guirocoba).—Moore and Peters, 1939, 49 (Guirocoba).—Peters, 1940, 104 (southeastern Sonora).

*Otus vinaceus* [!] (not *Megascops vinaceus* Brewster) van Rossem, 1931 c, 250 (Guirocoba).

Uncommon inhabitant (probably resident) in the Tropical zone foothills in the extreme southeast. The two specimens so far taken in Sonora

were collected by J. T. Wright at Guirocoba, respectively, on April 22, 1930 (Dickey coll.) and at an unknown (to me) date (Moore coll.).<sup>21</sup>

*BUBO VIRGINIANUS PALLESCENS* STONE

WESTERN HORNED OWL

*Bubo virginianus pallescens* Stone, Amer. Nat., 31, No. 363, Mch. 1, 1897, 237 (Watson Ranch, 18 miles southwest of San Antonio, Texas).—Ridgway, 1914, 742 (Hermosillo; Oberholser locs.).—van Rossem, 1931 c, 251, part (El Doctor); 1934 d, 437, part (35 miles south of San Pedro; crit.).—A. O. U. Comm., 1931, (Sonora).—Sheffler, 1931 b, 165 (between Magdalena and Santa Ana).—Huey, 1935, 253 (Punta Peñascosa).—Bent, 1938, 321, in text (Sonora).—Peters, 1940, 111 (Sonora).

*Bubo magellanicus pallescens* Oberholser, 1904 a, 182 (Colorado River at Mon. 204; San Bernardino Ranch; San Luis Mountains).

*Bubo virginianus* (not *Strix virginiana* Gmelin) Salvin and Godman, 1897, 12, part (Hermosillo).

*Bubo virginianus subarcticus* [sic.] (not *Bubo subarcticus* Hoy) Price, 1899, 92 (lower Colorado River).

Common resident of Sonoran zones south at least to Punta Peñascosa coastwise and to Hermosillo in the interior (specimen in Brit. Mus. examined). The zone of intergradation between *pallescens* and *mayensis* is not known, but may be roughly anticipated, by analogies provided by other species, as at no great distance north of Guaymas on the coast and north of latitude 29° in the eastern interior. Additional localities are Cañón Bonita Creek; Guadalupe Cañón; Niggerhead Mountain at Monument 82 (Mearns notes).

*BUBO VIRGINIANUS MAYENSIS* NELSON

MEXICAN HORNED OWL

*Bubo virginianus mayensis* Nelson, Proc. Biol. Soc. Wash., 14, Sept. 25, 1901, 170 (Chichén Itzá, Yucatán, México).

*Bubo virginianus pallescens* (not of Stone) van Rossem, 1931 c, 251, part (Obregon; Tesia); 1934 d, 437, part (Guaymas; Alamos).

Resident in the Tropical zone foothills and lowlands north to Guaymas. Specimens have been examined from Guaymas, January 13, 1887; Alamos, February 14, 1888 (Mus. Comp. Zoöl.); Ciudad Obregón, No-

<sup>21</sup> I agree thoroughly that *bastatus* is a race of *guatemalae*, but am unable to appreciate the characters which are supposed to distinguish "*tomini*" from *bastatus*.

vember 17, 1929; Tesia, December 16, 1929 (Dickey coll.); Guirocoba, May 10, 1931 (Bishop coll.)<sup>22</sup>

*GLAUCIDIUM BRASILIANUM CACTORUM* VAN ROSSEM

CACTUS PYGMY OWL

*Glaucidium brasilianum cactorum* van Rossem, Proc. Biol. Soc. Wash., 50, Feb. 23, 1937, 27 (between Guaymas and Empalme, Sonora, México).—Peters, 1940, 130 (Sonora).—Brodkorb, 1941, 2, in text (nomen; crit.).—A. O. U. Comm., 1944, 450 (between Guaymas and Empalme).

*Glaucidium brasilianum ridgwayi* (not *Glaucidium ridgwayi* Sharpe) Ridgway, 1914, 798, part (Alamos; Sonoyta; Caborca).—van Rossem, 1931 c, 251 (Magdalena; Obregon; Guaymas; Miramar; San Jose de Guaymas; Agiabampo; Caborca); 1934 d, 437 (Alamos).—Bent, 1938, 438, part, in text (Sonoyta; Caborca).

*Glaucidium phalaenoides* (not *Strix phalaenoides* Daudin) Stephens, 1885, 231 (20 miles southwest of Caborca).

Fairly common resident of Lower Sonoran and Tropical zones, chiefly in giant cactus associations, in the western part of the State. Records extend from Sonoyta, Caborca, and Magdalena in the north, southward to the Sinaloa boundary. There are no records from the Colorado River region, nor from northern interior points east of Magdalena. Additional stations are 35 miles northwest of Magdalena, December 4, 1932; Guirocoba, May 25, 1937 (Dickey coll.).

*MICRATHENE WHITNEYI WHITNEYI* (COOPER)

WHITNEY ELF OWL

*Athene whitneyi* Cooper, Proc. Calif. Acad. Sci., [ser. 1] 2, sig. 8, [before Dec.] 1861, 118 (Fort Mojave, Arizona).

*Micrathene whitneyi* Evermann and Jenkins, 1888, 69 (Querobabi).

*Micrathene whitneyi whitneyi* Peters, 1940, 135 (northern Sonora).

*Micropallas whitneyi whitneyi* Ridgway, 1914, 807 (Cerro Blanco).—Cory, 1918, 47 (Sonora).—Dawson, 1923, 1133 (Sonora).—van Rossem, 1931 c, 251

<sup>22</sup> I am inclined to believe that Griscom (Ibis, 1935, pp. 546-7) and Peters (1940, p. 112) are correct in recognizing but one race of the Great Horned Owl from the territory formerly assigned to *mayensis*, *melanocerus*, and *mesembrinus*, especially as all were originally described on utterly inadequate material. The Sonora series of five specimens is not distinguishable in color from an El Salvador specimen of "*mesembrinus*"; for that matter about the only way any of the lot can be separated from *pacificus* is by the slightly smaller size. Wings of three females from Sonora measure 343-343-357 mm., the two smallest being from the lowlands, the largest from 1,500 feet altitude at Guirocoba. The Tesia and Ciudad Obregón specimens I once stated (1931 c) were "exactly" like *pallescens* of southeastern Arizona. This was because of two *pacificus* which were labeled by the collector (though not on original field tags) as from that region. The locality may be correct, but it seems more likely a mixup in labels has occurred.

(Magdalena).—A. O. U. Comm., 1931, 168 (Sonora).—Moore, 1938 a, 24, (Guircoba).—Bent, 1938, 443, in text (Querobabi; Magdalena).

A fairly common summer visitant in suitable localities in Sonoran and Tropical zones from the Arizona boundary southward. While the easternmost northern stations are Rancho La Arizona and Magdalena, the distribution in Arizona and southwestern New Mexico indicates a corresponding longitudinal range in Sonora. Concentrations of population favor the giant cactus association where available; in the absence of cactus any timber large enough to provide nesting sites is likely to be inhabited. Records beyond those cited above are Rancho La Arizona (both in Lower and Upper Sonoran zones), May 7 to 9, heard commonly; Guaymas, May 11, 1937, heard commonly (van Rossem notes); Agua Marín, 8 miles northwest of Álamos, May 4, 1939 (Mus. Vert. Zool.); noted in the Pinacate region by Lumholtz (1912). Sonora records cover only the period from March 5 (Guircoba) to "June" (Querobabi).

*SPEOTYTO CUNICULARIA HYPUGAEA* (BONAPARTE)

WESTERN BURROWING OWL

*Strix hypugaea* Bonaparte, Amer. Orn., 1, 1825, 72 note (Western United States=Plains of the River Platte).

*Speotyto cunicularia hypugaea* van Rossem, 1931 c, 251 (Obregon; Tesia); 1932, 135 (Tiburón Island); 1934 d, 437 (Bacuachi).

*Speotyto cunicularia hypogaea* Allen, 1893 a, 34 (San Pedro).—Ridgway, 1914, 814 (San Pedro; Bacuachi).

*Speotyto cunicularia* (not *Strix cunicularia* Molina) Salvin and Godman, 1897, 31, part (San Pedro).

Common winter visitant to deserts and plains areas nearly everywhere, including Tiburón, San Estéban, and probably other islands. Breeds commonly in farming areas in the lower Colorado River valley, the Ánimas Valley and Guadalupe Cañon, and without much doubt at many other suitable points in the extreme northern part of the State. Additional records are Ánimas Valley; Guadalupe Cañon, July, 1892; San Luís Springs, "Chihuahua," September 3, 1892 (Mearns notes); Bonancita, November 20; Las Arenas, December 15, 1905 (Mus. Comp. Zoöl.); San José de Guaymas, January 9, 1933 (Lamb notes); San Estéban Island, January 11, 1932 (Dickey coll.); Kino Bay, February 20, 1935 (Nat. Hist. Mus.); San Luís to Colonia Independencia, May 1 to 3, 1937 (van Rossem notes). Extreme dates which most likely pertain to migrants or winter visitants are September 3 (San Luís Springs) and February 20 (Kino Bay).

*CICCABA VIRGATA SQUAMULATA* (BONAPARTE)

## SQUAMULATED OWL

*Syrnium squamulatum* Bonaparte, Consp. Gen. Avium, 1, 1850, 53 ("México").  
*Ciccaba virgata amptonota* [sic] van Rossem, 1934 d, 437 (Hacienda de San Rafael; Alamos).

*Ciccaba virgata squamulata* Peters, 1940, 153 (Sonora).

Probably resident in the southeastern mountains, though known only through the four specimens taken by Frazar at Alamos and Hacienda de San Rafael between March 16 and May 18, 1888. A specimen by McLeod at Durazno, Chihuahua, a locality close to the Sonora boundary, on December 2, 1884, indicates permanent residence in the region. No recent collectors seem to have encountered the species in Sonora.<sup>23</sup>

*STRIX OCCIDENTALIS LUCIDA* (NELSON)

## MEXICAN SPOTTED OWL

*Syrnium occidentale lucidum* Nelson, Proc. Biol. Soc. Wash., 16, No. 40, Nov. 30, 1903, 152 (Mt. Tancítaro, Michoacán, México).

*Strix occidentalis lucida* van Rossem, 1934 d, 438 (Oposura).

Known only from the single specimen taken by Cahoon near Oposura (almost certainly the Sierra de Oposura) on June 11, 1887 (Mus. Comp. Zoöl.). The distribution of the Spotted Owl in closely adjacent localities in Arizona and Chihuahua indicates that it may be expected to occur as a resident in the mountains of eastern Sonora.

*ASIO OTUS WILSONIANUS* (LESSON)

## LONG-EARED OWL

*Otus Wilsonianus* Lesson, Traité d'Orn., Livr. 2, May 8, 1830, 110 (États-Unis . . . Pennsylvanie=Pennsylvania).

*Asio wilsonianus* Bent, 1938, 167, in text (Tiburón Island).

*Asio otus wilsonianus* van Rossem, 1932, 135 (Tiburón Island).

One record, when found in some numbers on Tiburón Island, December 28 and 29, 1931. Mearns (notes) saw or collected individuals at various

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<sup>23</sup> Bonaparte's type came to Leiden from the Berlin Museum and is undoubtedly one of the co-types of Lichtenstein's manuscript name of *Strix squamulata*. While this name applies without question to the light-colored, large-spotted race of western México there is no necessity to fix a type locality at this time. Lichtenstein's other co-type or co-types, if they are still in existence, may provide a locality, assuming of course that the name is not a composite. I have examined Bonaparte's type at Leiden and agree with Dr. Junge (see also Peters, 1940) that it belongs to the race recently named *amplonotata* by Kelso.



points along the northern boundary, all of them apparently on the Arizona side. The status of this owl is probably that of a not uncommon winter visitant in the northern part of the State.

*ASIO FLAMMEUS FLAMMEUS* (PONTOPPIDAN)

SHORT-EARED OWL

*Strix flammea* Pontoppidan, Danske Atlas, 1, 1763, 617, pl. 25 (Sweden).

*Asio flammeus flammeus* van Rossem, 1932, 135 (Tiburón Island).

*Asio accipitrinus* Price, 1899, 92 (lower Colorado River).

A winter visitant in the northern part of the State. There are three records; single individual seen on the lower Colorado River, December 4, 1898 (at which date Price was on the Sonora side of the river); one seen on Tiburón Island, January 1, 1932; one taken on the Santa Cruz River, November 11, 1892 (U. S. Nat. Mus.).

ORDER CAPRIMULGIFORMES GOATSUCKERS AND ALLIES

Family CAPRIMULGIDAE Goatsuckers

*CHORDEILES ACUTIPENNIS TEXENSIS* LAWRENCE

TEXAS NIGHTHAWK

*Chordeiles texensis* Lawrence, Ann. Lyc. Nat. Hist. N. Y., 6, 1857, 167 (Texas [= Ringgold Barracks, near Río Grande]).

*Chordeiles acutipennis texensis* Ridgway, 1914, 581 (Sonora).—Oberholser, 1914, 103 (Colorado River opp. mouth of Hardy; San Marcial; San Bernardino Ranch; San Bernardino River; Mon. 204.).—van Rossem, 1931 c, 252, part (Saric; El Alamo; Tesia, part); 1934 d, 438 (Oposura; Granados; Alamos); 1942 d, 73 (Rancho La Arizona; El Alamo; Pilares; Hermosillo; crit).—Brodkorb, 1940, 543, part (El Alamo; Hermosillo; Pilares).

Common summer visitant to Lower Sonoran deserts south to about latitude 29°, penetrating locally into the Upper Sonoran. Occurs occasionally in winter in the Tropical zone southerly and possibly at more northerly points. Migratory and summer dates not so far published are from Cajón Bonito Creek and Guadalupe Cañon, July 2, 1892 (Mearns notes); Hermosillo, June 24 and 25, 1932; Pilares, July 3, 1935 (Univ. Mich.); Rancho La Arizona, May 9, 1937; San Luis, May 2 and 3, 1937 (van Rossem notes); Magdalena, May 13, 1925 (Dawson notes). Winter dates are San Marcial, November 10, 1905 (Mus. Comp. Zoöl.); Tesia, January 28, 1930 (Univ. Mich.). A definite migratory date is from Tesia, March 15, 1930, a locality where *micromeris* is the breeding form (Dickey