

Sula piscator (Linn.).

Puffinus auduboni Finsch.

St. Andrews.

Mimus magnirostris nobis.

Galeoscoptes carolinensis (Linn.).

Mniotilta varia (Linn.).

Dendroica flavida nobis.

Seiurus noveboracensis (Gmel.).

?*Certhiola tricolor* Ridgw.

Vireosylvia canescens nobis.

Vireo noveboracensis (Gmel.).

Euethia bicolor (Linn.).

Icterus lawrencii nobis.

?*Elainea martinica* (Linn.)

Sphyrapicus varius (Linn.).

Ceryle alcyon (Linn.).

Engyptila neoxena nobis.

Actitis macularia (Linn.).

Ardea virescens (Linn.).

Ardea tricolor ruficollis (Gosse).

Fregata aquila (Linn.).

Sula piscator (Linn.).

BIRDS OF TOM GREEN AND CONCHO COUNTIES, TEXAS.

BY WILLIAM LLOYD.

THE present paper deals principally with the avi-fauna of the valleys of the Concho River and its tributaries east to the Colorado River. It also includes the birds of the plains west of the Pecos River, and north to the Texas and Pacific Railroad, and some few noted incidentally south in Crockett and Edwards Counties, and in Nueces Cañon. The district has a general and nearly equal elevation of nearly 2000 feet above the sea-level, and

is well watered. Spring and Dove Creeks, with the South Concho, flow into the Middle Concho, which unites with the the North Concho at San Angelo, Tom Green County (Lat. $31^{\circ} 22'$, Long. $23^{\circ} 19'$ W.), and forms the Main Concho, which, after a general easterly course of about forty-five miles, receiving Kickapoo, Lipan (Euterpe on map), Duck, Mustang, and Horse Creeks, falls into the Colorado River, in the extreme east of the county. The creeks are well timbered with pecan, elm, hackberry, a species of walnut, and willows, etc., and have well defined bottoms of an average width of about fifty yards, but frequently are half a mile wide, densely grown with scrub mesquit, small groves of hackberry, wild china, and other small trees, overrun with poison ivy, and laden with parasitic mistletoe. At the heads of the larger creeks is generally a considerable growth of various small oaks, while the hillsides are covered with shin-oak and a species of laurel; and in Tom Green County the head draws of the creeks are full of cedar groves. There are no hills worth noting in Concho County, where the surface is level prairie, gently rolling and broken only by the creeks and dry ravines. It was once treeless but is now being rapidly covered with dwarf mesquit; in many places there is not even a shrub; other parts are well grown with cat-claw, algarita, chapparal, wahlilla (a kind of evergreen), and nopal catcus. In summer it is covered with hundreds of flowering plants, of which the ver-bena and lupin are most numerous. Tom Green County is more broken and has well-defined chains of hills dividing the upper water courses. They are not timbered, however, and, like the Castle Mountains on the plains, exercise no appreciable influence on our birds. The Pecos River is entirely devoid of timber, with exception of the ubiquitous button bush, and has no bird-life whatever peculiar to it, owing no doubt to the alkaline nature of its waters. There is a lake of fresh water on the plains which I have never examined. About a dozen species of catcus occur. A swamp on the head of South Concho is the only ground of the kind in the district; this has some very large live oak studding its borders, and water oak in it. Acres of thistles, in various places in both counties, form in winter admirable feeding grounds for various birds. The soil is very fertile, and underlaid with limestone, of the middle Eocene. Stock-raising was, until the last few years, the only pursuit; now farms are

numerous, and an increasing area is in cultivation every year, on which are raised millet and sorghum for the winter use of stock.

The prevailing wind throughout the year is from the south, tempered in winter every ten days (on an average) by a brisk norther that drives all the birds to the river and creek bottoms. The temperature in winter, though once recorded as below zero, is for December and January 35° in the morning, 45° to 70° at noon, and 40° at dusk. The winter of 1886-87 was exceptionally mild; the temperature has not gone below 10° , and it sleeted once, with a register of 20° . In spring the average temperature is 70° to 80° at noon, rising to 95° in April, and in summer touches 102° .

I have carefully hunted each creek with the sole exceptions of Grape Creek and North Concho—the latter scarcely touched—and have been to Pecos River four times, along the line of the Texas and Pacific Railroad, across the sand-hills, and south into Crockett County and beyond. After I became an observer for the Mississippi Valley District I noted arrivals every day carefully, as follows:—fall, 1884, Main Concho, near mouth; February to June, 1884, Middle Concho; fall, 1884, South Concho and Plains; 1885, spring, on Spring Creek; fall, on Kickapoo, Lipan, Main Concho, Middle Concho, and Plains; 1886, fall, Lipan and Main Concho, besides visiting all the other localities at various periods.

The record, besides including the following (about 240 species and varieties), should, I have no doubt, contain various others noted north and south of me, as the Blackburnian Warbler, Ground Dove, Prairie Falcon, etc., but as I have not been able to record them for the last three years, with Messrs. Sennett's, Brown's, Goss's, and Ragsdale's (Colorado City) lists to guide me, I have thought it best to make no remarks about them. Whilst having no new species or varieties to describe, my list considerably extends the range of the species named, while others are frequently first records for Texas, as the Western Goshawk, Wright's Flycatcher, Woodhouse's Jay, Black-chinned Hummer (?), Townsend's Warbler (?), and Lewis's Woodpecker.

I am under great obligations to Mr. Everett Smith, who first kindly aided me in my efforts to locate birds of this district, and later to Mr. Ridgway, whose time I am afraid I have considerably imposed upon by my frequent questions as to the status of species

here and elsewhere, and for the last three years to Prof. W. W. Cooke, who has revised my names frequently and given me every assistance in his power in preparing my list. Lastly to Mr. John A. Loomis, of Silvercliff Rancho, I am indebted for much assistance in my later work in Concho County, and who has been able to extend my list considerably, especially among the Game Birds and Raptores, as will be noted in connection with various birds mentioned in the list.

The arrangement and nomenclature is that of the A. O. U. Check-List.

1. *Podilymbus podiceps*. PIED-BILLED GREBE.—Tolerably common in winter.
2. *Urinator imber*. LOON.—Two seen in the winter of 1880.
3. *Hydrochelidon nigra surinamensis*. BLACK TERN.—Tolerably common during the fall migration.
4. *Anhinga anhinga*. ANHINGA.—Tolerably common during the fall migration on South Concho.
5. *Phalacrocorax dilophus floridanus*. DOUBLE-CRESTED CORMORANT.—One shot in the fall of 1880.
6. *Pelecanus erythrorhynchos*. WHITE PELICAN.—Rare in spring and fall.
7. *Merganser americanus*. AMERICAN MERGANSER.—Common in winter.
8. *Lophodytes cucullatus*. HOODED MERGANSER.—Common in winter.
9. *Anas boschas*. MALLARD.—Abundant in winter.
10. *Anas obscura*. BLACK DUCK.—Tolerably common in fall.
11. *Anas strepera*. GADWALL.—Abundant in early winter.
12. *Anas americana*. BALDPATE.—Tolerably common in winter.
13. *Anas carolinensis*. GREEN-WINGED TEAL.—Abundant during spring and fall; a few remain through the winter. Arrives earlier than other Ducks.
14. *Anas discors*. BLUE-WINGED TEAL.—Abundant during spring and fall; a few remain through the winter. Arrives with the last, earlier than other Ducks.
15. *Anas cyanoptera*. CINNAMON TEAL.—Rare in fall.
16. *Spatula clypeata*. SHOVELLER.—Common during spring and fall.
17. *Dafila acuta*. PINTAIL.—Tolerably common in spring and fall. One female shot in June, 1881.
18. *Aix sponsa*. WOOD DUCK.—Migrant in fall; not observed in spring; winters on the Rio Llano.
19. *Aythya americana*. RED-HEAD.—Common in winter.
20. *Aythya vallisneria*. CANVAS-BACK.—Tolerably common in early winter.
21. *Aythya affinis*. LITTLE SCAUP DUCK.—Tolerably common in winter.

22. *Aythya collaris*. RING-NECKED DUCK.—Common in Concho County; some observed in Tom Green County.
23. *Charitonetta albeola*. BUFFLE-HEAD.—Rare; shot in the spring of 1886, in Concho County by Mr. Loomis.
24. *Eristmatura rubida*. RUDDY DUCK.—Rare; seen only during spring migration.
25. *Chen hyperborea*. LESSER SNOW GOOSE.—Tolerably common during the spring migration.
26. *Anser albifrons gambeli*. AMERICAN WHITE-FRONTED GOOSE.—Tolerably common in winter.
27. *Branta canadensis*. CANADA GOOSE.—Tolerably common in spring and fall.
28. *Branta nigricans*. BLACK BRANT.—Rare. Shot only in Tom Green County in the winter of 1884.
29. *Dendrocygna autumnalis*. BLACK-BELLIED TREE-DUCK.—Rare in fall on South Concho.
30. *Dendrocygna fulva*. FULVOUS TREE-DUCK.—Tolerably common during the winter of 1884, on the North Concho.
31. *Olor buccinator*. TRUMPETER SWAN.—Tolerably common in winter.
32. *Phœnicopterus ruber*. FLAMINGO.—Accidental visitor in August, 1881, and July, 1882.
33. *Botaurus lentiginosus*. BITTERN.—Common fall migrant.
34. *Botaurus exilis*. LEAST BITTERN.—Common fall migrant.
35. *Ardea herodias*. GREAT BLUE HERON.—Resident; breeds, but nest not found.
36. *Ardea candidissima*. SNOWY HERON.—Resident; breeds, but nest not found.
37. *Ardea cœrulea*. LITTLE HERON.—Resident; breeds, but nest not found. An abundant fall migrant.
38. *Grus americanus*. WHOOPING CRANE.—Rare spring and fall migrant.
39. *Grus mexicana*. SANDHILL CRANE.—Abundant spring and fall migrant.
40. *Porzana carolina*. SORA RAIL.—Rare spring migrant; abundant in fall.
41. *Fulica americana*. COOT.—Common for nine months of the year, and possibly breeds, as I have seen them in June and July.
42. *Phalaropus tricolor*. WILSON'S PHALAROPE.—Tolerably common spring migrant; not found in the fall.
43. *Recurvirostra americana*. AVOCET.—Common fall migrant.
44. *Philohela minor*. AMERICAN WOODCOCK.—Rare in fall and winter on Middle Concho River.
45. *Gallinago delicata*. WILSON'S SNIPE.—Common. Seen every month in the year. No nests or eggs found.
46. *Macrorhamphus griseus*. DOWITCHER.—Tolerably common in the fall. Arrives early in September.

47. *Micropalama himantopus*. STILT SANDPIPER.—Common in fall; arrives September 3 to 5. Rare in spring.
48. *Tringa maculata*. PICTORAL SANDPIPER.—Common spring and fall migrant; arrives in spring April 27 to 29; in fall in September.
49. *Tringa bairdii*. BAIRD'S SANDPIPER.—Common spring and fall migrant, arriving in spring May 9 and 10, and in fall August 30, leaving about October 20.
50. *Tringa minutilla*. LEAST SANDPIPER.—Common in spring and fall; arriving in spring April 10 to May 12; and in fall from July 20 to October 1.
51. *Tringa alpina*. DUNLIN.—Only one observed; shot by Mr. Loomis on Kickapoo Creek, October, 1886.
52. *Ereunetes occidentalis*. WESTERN SANDPIPER.—Common in spring and fall, arriving in spring April 10 to May 12; in the fall from September 4 to October 20.
53. *Totanus melanoleucus*. GREATER YELLOW LEGS.—Common in spring and fall, arriving August 30, some remaining through the winter.
54. *Totanus solitarius*. SOLITARY SANDPIPER.—Tolerably common from September 5 to 22; a few only remaining till October. Rarely noted in spring.
55. *Bartramia longicauda*. BARTRAMIAN SANDPIPER.—Abundant fall migrant, arriving the first week in July, and numerous until September 30. In spring tolerably common, arriving April 19.
56. *Tryngites subruficollis*. BUFF-BREASTED SANDPIPER.—One shot in a flock of Mountain Plover, August 31, 1886, by Mr. Chester Loomis.
57. *Actitis macularia*. SPOTTED SANDPIPER.—Abundant; a few stay to breed; no nests found.
58. *Numenius longirostris*. LONG-BILLED CURLEW.—Arrives August 7 to 12, and is frequently found in large flocks. Some remain to winter, and are again abundant in spring.
59. *Squatarola helvetica*. BLACK-BELLIED PLOVER.—One shot by Mr. Ridge Goodrum, August 31, 1886, is the only record for the district.
60. *Charadrius dominicus*. GOLDEN PLOVER.—All the birds of this species I have seen were shot by Mr. J. A. Loomis, who states that they are tolerably common in fall.
61. *Ægialitis vocifera*. KILLDEER.—Abundant resident. Found eggs March 9, 10, and April 24. In winter they take to the open prairie in flocks of six to ten.
62. *Ægialitis montana*. MOUNTAIN PLOVER.—Abundant migrant in spring and fall. Arrives in flocks August 31 (earliest date), and some remain to winter.
63. *Colinus virginianus texanus*. TEXAN BOB-WHITE.—Abundant resident. Raise two broods. Nest, a depression lined with dried grass at the roots of small bushes, generally 'algarita'. Eggs six to fifteen. Earliest clutch found May 6 (twelve eggs); latest August 10 (fourteen eggs). Range extends west to Pecos. In winter they frequently associate with the Blue Quail.

64. *Callipepla squamata*. SCALED PARTRIDGE.—Abundant resident. A depression under a bush, generally unlined, serves as a nest. I believe only one brood is raised here, as the latest clutch found was May 18 (15 eggs); earliest clutch April 26 (12 eggs). This notice, I believe, extends the range considerably to the eastward, as the bird is found as far east as the Colorado River. Locally known as the Blue Quail. Most abundant between Castle Mountains and Pecos River, in a sort of fine, loose, sandy soil.

65. *Cyrtonyx montezumæ*. MASSENA PARTRIDGE.—Resident in Tom Green County, on the plains near Castle Mountains, and east to within about 20 miles west of San Angelo, on Middle Concho. Also noted in Crockett and Edwards Counties, nearly due south. No nests found. Known as the Black Partridge. The new A. O. U. 'Code and Check-List' gives its habitat as Northwestern Texas, New Mexico, Arizona, and Northwestern Mexico. I have traced it as far south as a line east of Eagle Pass, in Nueces and Frio Cañons; so Western Texas may also be included.

66. *Tympanuchus pallidicinctus*. LESSER PRAIRIE HEN.—Winter visitor; seen in October and November in Concho County, and also in winter on Middle Concho in Tom Green County. Abundant near Colorado City on the Texas and Pacific Railroad. I believe this record extends the range to the south-west. Westward it was abundant to the foothills of the Davis Mountains. Said to have been driven from the Pan Handle counties by the numerous prairie fires.

67. *Meleagris gallopavo mexicana*. MEXICAN TURKEY.—Resident. Once very abundant on every creek, but now rarely to be met with. I flushed a hen from her nest—a depression in a patch of low bushes—May 29, 1882, containing eight eggs; but I have frequently heard of them further south with ten to fourteen eggs. Another brood was raised on a small rushy island in Brady Creek, in the eastern part of Concho County, the young running about June 1, 1883.

68. *Ectopistes migratorius*. PASSENGER PIGEON.—Though not observed in this immediate district, an immense roost was noted in the winter of 1881, near the head of Frio Cañon. The settlers informed me that they had been there all the winter, eating acorns on the hills, and passing and repassing morning and evening in myriads. It was about February 1, 1882, that I saw them.

69. *Zenaidura macroura*. MOURNING DOVE.—Abundant resident. In winter more local, but in large flocks, when they frequently change their roosting place, as a friend (Mr. Loomis) suggests, in consequence of being disturbed by the numerous Owls. He first noticed the fact by noting where they roosted, so as to shoot them as they came in, and returning three or four nights after they had altered their resting place, and did so again and again. They raise two if not three broods, as I found a nest containing two fresh eggs of this species the 20th September, 1886, the latest date I have recorded for any eggs. The earliest date is April 26. They frequently use old Mocking Bird's nests.

70. *Cathartes aura*. TURKEY VULTURE.—Arrives March 17 (earliest date recorded), and remains abundant through the summer, breeding in caves, but frequently on the bare edge of a bluff. Clutches found contain only two eggs (one, doubtful whether this or next, having three). First one found May 6; last one June 10. Leave in September.

After trying various experiments, I notice that although they may smell their prey finally, they often seize and devour it before it has time to smell. These Vultures, the Carrion Crows, and Ravens frequently line the trees or posts waiting for a sheep to die, if in an exposed place.

71. *Catharista atrata*. BLACK VULTURE.—Arrives March 10 to 20, and nearly equals the last in numbers. Breeds on bare rocks—June 13, 1884, two eggs.

72. *Elanus leucurus*. WHITE-TAILED KITE.—Rare fall visitor.

73. *Ictinia mississippiensis*. MISSISSIPPI KITE.—Common in fall, in flocks of two to ten. A few must breed, as I have noted them in all the summer months.

74. *Circus hudsonius*. MARSH HARRIER.—Abundant resident. No nests have been found referable without doubt to this species. A great pest to the poultry yard. I have seen them eating carrion. One at the present date (January, 1887), frequently eats the carcasses of birds I have skinned, standing on the ground for that purpose. Generally they fly off with their prey, but eat it on the ground. The Sharp-shinned Hawk turns the wire-fence bars to account, and the Cooper's occasionally will join the Marsh Harrier in eating a fresh-skinned carcass.

75. *Accipiter velox*. SHARP-SHINNED HAWK.—Abundant in fall; less so in winter. An excessively bold Hawk. I have seen it fly away with a pullet as big or bigger than itself, so heavy that its legs dragged the ground.

76. *Accipiter cooperi*. COOPER'S HAWK.—Another pest of the poultry yard. One flying after some tame Pigeons flew with force through a window in the barn, and was picked up stunned. Abundant in fall; less so in winter,

77. *Accipiter atricapillus striatulus*. WESTERN GOSHAWK.—I shot a male that was digesting a Meadow Lark, in December, 1885, and saw its mate several times.

78. *Buteo borealis calurus*. WESTERN RED-TAIL.—Abundant resident. Breeds from April 22 to May 22. Full clutch, three eggs. Feeds on prairie-dogs, cotton-tails, jack rabbits, and occasionally brings a Scaled Quail to its young. The plumages vary greatly, some birds having very dark under-parts,—but I believe they are referable to this variety.

79. *Buteo lineatus*. RED-SHOULDERED HAWK.—Resident; rare. Breeds (May 10, 1882, three eggs). I have never seen them in winter, but my friend, Mr. Loomis, has several specimens shot by him in November and December, 1885.

80. *Buteo abbreviatus*. ZONE-TAILED HAWK.—Fall visitant. One noted September 10, 1884.

81. *Buteo albicaudatus*. WHITE-TAILED HAWK.—Fall and winter

visitor. I sent a description of this Hawk—seen often before and since—to Mr. Ridgway who says it probably is of this species.

82. *Buteo swainsoni*. SWAINSON'S HAWK.—Resident. Abundant in summer. Breeds in low trees in ravines, in wild china or hackberries, or on the top of bluffs in similar trees. Clutch, three eggs—later ones, strange to say, have only two. Thus nests found March 1, April 1, 4, and 6, had each three eggs, while nests found May 1, 2, and 20, had only two. The young are extremely handsome and seem to go through several changes of color, from light creamy to almost melanistic specimens. This, like the Red-tail, is clumsy, and unwary. It can, however, sail with great swiftness for several miles without flapping its wings. Goes in large flocks sometimes; one seen at Fort Davis, February, 1886, had 200 in it.

83. *Archibuteo ferrugineus*. FERRUGINEOUS ROUGH-LEG.—This species (abundant in winter) was first brought to my notice by Mr. Loomis, who has had great success in killing them in several phases of plumage. It may breed—a point to be ascertained shortly.

84. *Haliaeetus leucocephalus*. BALD EAGLE.—Abundant resident. Breeds, March to May. A couple were seen repairing a nest this Christmas, 1886, with cane stalks, and my informant says one bird is now sitting. The nest is in a high pecan, but others are found in mesquit, ten to fifteen feet high.

85. *Falco columbarius*. PIGEON HAWK.—Winter visitor. Common in Tom Green County, in 1883-84.

86. *Falco sparverius*. AMERICAN SPARROW HAWK.—Abundant resident. Nests in old Woodpecker holes in mesquit and live-oak. Nest with young found May 1, 1885; eggs found as late as July 1 (1884). Clutch, seven to eight. A flock of about fifty observed in September, 1885, in Concho County.

87. *Polyborus cheriway*. AUDUBON'S CARACARA.—Resident in the eastern part of Concho County; a few visit the western half in fall; none seen in Tom Green County. Breeds. Nest found in live-oak, about eighteen feet from the ground, with three eggs, April 24, 1881. The same nest was used for two years after. Though in the southern part of Texas they prey on carrion, in Menard and Concho Counties they hunt prairie dogs in couples. Not at all alarmed (as yet) at the 'human form divine.'

88. *Pandion haliaëtus carolinensis*. AMERICAN OSPREY.—My authority for this as a fall visitor is Mr. Loomis, who noted one last fall (1885) on Kickapoo Creek.

89. *Strix pratincola*. AMERICAN BARN OWL.—Resident; rare; breeds. No nest found, but young met with in San Angelo, July, 1885. Seen in Concho County, in August, 1885. Known as the Monkey Owl, or Monkey-faced Owl.

90. *Asio wilsonianus*. AMERICAN LONG-EARED OWL.—Two specimens shot in the fall of 1886, and others noted.

91. *Asio accipitrinus*. SHORT-EARED OWL.—Tolerably common in fall; rare in spring.

92. *Syrnium nebulosum*. BARRED OWL.—Seems to be common on the

main streams, but, like nearly all other Owls, is far oftener heard than seen. No nests found, but undoubtedly a resident. May be var. *alleni*.

93. *Megascops asio mcallii*. TEXAN SCREECH OWL.—Abundant, at least in winter, on the river. Their notes can be heard from September 10 until March 10.

94. *Bubo virginianus subarcticus*. WESTERN HORNED OWL.—Abundant resident. Breeds from February 20 to end of May, in hackberry or mesquit on prairies, and in holes in the large pecans on rivers. I have rarely found more than two eggs in one clutch; three, however, occur in about one nest in six. Feeds on poultry, skunks, and rabbits, and is often on wing during the day. The birds seem to grow lighter with age.

95. *Speotyto cunicularia hypogæa*. BURROWING OWL.—Abundant resident. Breeds from April 1 to May 10, in old deserted dog-holes. Fly by day as well as night. I have found remains of Bell's Vireo, Savannah Sparrow, and other birds in their holes. In winter they hibernate, going in according to the severity of the weather. They appear just before the first migrants. I have noted them for several years, retiring December 1 to 10, and appearing March 1 or 2.

96. *Crotophaga sulcirostris*. GROOVE-BILLED ANI.—Fall visitor. One was shot by Mr. Loomis in October, 1885. I saw several, but did not procure any, in October, 1886. This record extends the range of this species considerably to the north, Mr. Sennett recording it for the Lower Rio Grande.

97. *Geococcyx californianus*. ROAD-RUNNER.—Abundant resident. Breeds from March 30 to May 10. Nest a huge structure in the middle of a bush, in thickets or dry ravines. Clutches number four, seven, six, five, five, eight, nine; average six.

98. *Coccyzus americanus*. YELLOW-BILLED CUCKOO.—Abundant in summer. Arrives first week in May; departs middle of September. My notes for 1884, 1885, 1886, respectively, give September 14, September 15, September 14, as latest records. First nest found June 2; last, July 30. Full clutches four-five. Nests in low hackberries, or high pecans. The nest is a very flimsy structure, of about twenty straws crossed, and so poorly put together that after a high wind eggs of both this bird and the Mourning Dove are frequently found on the ground, in pieces.

99. *Coccyzus erythrophthalmus*. BLACK-BILLED CUCKOO.—Spring and fall migrant. Not found west of Concho County.

100. *Ceryle alcyon*. BELTED KINGFISHER.—Abundant resident. Found in spring in small flocks. No nests found.

101. *Ceryle cabanisi*. TEXAN KINGFISHER.—Not detected on Pecos or Concho Rivers. Found in Nueces and Frio Cañons, in Edwards County. In the latter cañon in company with the Belted Kingfisher.

102. *Dryobates pubescens*. DOWNY WOODPECKER.—One shot on Middle Concho, in Tom Green County, January 1883.

103. *Dryobates scalaris*. TEXAN WOODPECKER.—Abundant resident. Breeds April 16 to May 28.

104. *Sphyrapicus thyroideus*. WILLIAMSON'S SAPSUCKER.—Irregular winter visitant. Tolerably common during the winter of 1883. Like all migrating Woodpeckers here, they are very local and may be common in places overlooked by me. Found on North Concho, and also in Nueces Cañon, in Uvalde County.

105. *Melanerpes erythrocephalus*. RED-HEADED WOODPECKER.—Irregular visitant. One shot August, 1885, and another seen but not secured. Only noted on Kickapoo Creek.

106. *Melanerpes torquatus*. LEWIS'S WOODPECKER.—Winter visitor, to the heads of creeks that rise in the plains. Tolerably common on Spring Creek. This record considerably extends the range of this species southward, and is the first (undoubted) notice for Texas.

107. *Melanerpes carolinus*. RED-BELLIED WOODPECKER.—Tolerably common winter resident on Main Concho.

108. *Melanerpes aurifrons*. YELLOW-NAPE WOODPECKER.—Abundant resident. Breeds in holes in mesquit, pecan, and live-oak, from April 10 to May 14. Clutch six. I have traced this bird west to the Castle Mountains, near Pecos River, in Tom Green County, and north to line of Texas and Pacific Railroad, so its range is considerably extended from that given in the A. O. U. 'Check-List,' which merely gives Southern Texas, etc. None found west of Pecos River.

109. *Colaptes auratus*. FLICKER.—Winter visitor. Tolerably common, but excessively wild.

110. *Colaptes cafer*. RED-SHAFTED FLICKER.—Winter visitor. More common than the last and less wild. I have found it due south as far as Frio Cañon, in Uvalde County. Arrives in fall from September 20 to October 6. Latest seen April 17.

Intermediate or 'hybrid' specimens between this species and the last occur in winter.

111. *Antrostomus vociferus*. WHIP-POOR-WILL.—Summer resident. Found only in the eastern part of Concho County.

112. *Phalacroptilus nuttalli*. POOR-WILL.—Abundant summer visitor. First seen in 1884, March 6; in 1885, March 20. Last seen in 1884, November 23; in 1885, October 8. Breeds, and I have undoubtedly found eggs, but stupidly thinking they should be speckled, I thought they were Dove's and left them. Its note is easily imitated. Midnight is their favorite hour on moonlight nights. They lie close in shubbery during the day, or on open flats, and are not easily flushed. Mr. Loomis last year told me they rested on limbs of trees on the creek during the day, to test which statement I went with him and we flushed several as stated.

113. *Chordeiles texensis*. TEXAN NIGHTHAWK.—Abundant summer visitor. Arrives last week in April, in flocks, and at once mate. Raise two broods, and breed on little gravelly ridges on bare ground. Clutch always two. Eggs found May 14, 29, 30, June 1, 30, and July 4. Departs first week in October.

114. *Trochilus colubris*. RUBY-THROATED HUMMINGBIRD.—Abundant summer visitor, arriving April 10-11. I have noted nests only in May, but

it must breed earlier. In fall (September) the eastern migrants are abundant for a week in Concho County; not detected in Tom Green County.

115. *Trochilus alexandri*. BLACK-CHINNED HUMMINGBIRD.—Abundant summer visitor. Males arrive April 1; common April 7. Seen in flocks during the fall migration (September 21 to 28). Raise two broods. Nests found from May 12 to July 2.

Mr Nathan C. Browne first added this species to the Texas avi-fauna; he found it at Boerne, and surmised that it bred to the north of that place, so its range is thus much extended beyond its previously known habitat, *i. e.*, "Pacific coast region, from California east to Arizona, and Utah, and southward."

116. *Milvulus forficatus*. SCISSOR-TAILED FLYCATCHER.—Abundant summer visitor. Earliest arrival March 14; not common until ten days later. Departs, main body, about October 20; a few linger till the first severe norther. Breeds commonly on prairies in mesquit thickets, but often in high pecans. First nest May 6, clutch 5; latest July 16, clutch 5. In ten nests examined only one clutch was 4.

117. *Tyrannus tyrannus*. KINGBIRD.—Fall visitant. Two recorded in fall of 1886.

118. *Tyrannus verticalis*. ARKANSAS KINGBIRD.—Spring migrant. I noted a pair June 1, 1885, in Tom Green County, which had evidently stayed to breed.

119. *Myiarchus crinitus*. GREAT-CRESTED FLYCATCHER.—Summer visitant. Arrives May 31 (probably before); breeds. Nest found in a hole in a mesquit, June 8, 1884; five eggs. Very abundant migrant during September.

120. *Myiarchus cinerascens*. ASH-THROATED FLYCATCHER.—Abundant summer visitor. Arrives the day after or same day as the Scissor-tailed Flycatcher, *i. e.*, after the first cloudy weather in middle of March. Departs a month before the Scissor-tail, but one or two linger for a fortnight after the bulk go. Last seen October 7. Breeds in holes of trees—generally in old Texas Sapsucker holes—and clutches range from 4 to 7; ordinary clutch 6. First clutch found May 9; last, June 9.

121. *Sayornis phœbe*. PHŒBE.—Resident; rare in summer and winter; common in fall. Nests on rocky ledges in caves; clutch 4 to 6. First nest found April 4; last, May 4. Does not winter in Tom Green County.

122. *Sayornis saya*. SAY'S PHŒBE.—Tolerably common winter resident. First arrival, October 10; departs April 13. Ranges east as far as the Colorado River, Texas.

123. *Sayornis nigricans*. BLACK PHŒBE.—Rare summer visitor. Found only in Tom Green County, on Spring Creek. Arrives end of March. Breeds April 4; one clutch found, 6 eggs; nest on a ledge.

124. *Contopus borealis*. OLIVE-SIDED FLYCATCHER.—Fall migrant; tolerably common in September. Not observed in spring.

125. *Contopus virens*. WOODPEWEE.—Summer visitor. Not observed until May 5; last seen October 21. Tolerably common on South Concho, in Tom Green County, where it breeds. No nests were found, but young

were shot in June. Common in Concho County for two months in the fall.

126. *Contopus richardsonii*. WESTERN WOOD PEWEE.—Two shot in fall of 1886, in Concho County.

127. *Empidonax pusillus*. LITTLE FLYCATCHER.—Tolerably common summer visitant. Breeds. Young shot.

128. *Empidonax pusillus trailli*. TRAILL'S FLYCATCHER.—Spring migrant in the western half of Concho County, and I believe it breeds—a point I thought I had already ascertained, but as there may be some doubt, I cannot positively record it yet as breeding.

129. *Empidonax minimus*. LEAST FLYCATCHER.—Tolerably common summer visitant. Abundant in fall. Have shot young; no nests taken. Arrival noted April 27, 1885.

130. *Empidonax hammondi*. HAMMOND'S FLYCATCHER.—Fall migrant. Rare in Concho County; tolerably common in Tom Green County and the most abundant *Empidonax* across the Pecos River.

131. *Empidonax obscurus*. WRIGHT'S FLYCATCHER.—Rare fall migrant. Secured twice in Tom Green County.

132. *Otocoris alpestris arenicola*. DESERT HORNED LARK.—Abundant winter visitor. Arrives October 20; departs March 6. This is the only Horned Lark noted for either county. None occur in summer to my knowledge, although I have looked especially for them.

(*To be continued.*)

THE RED-HEADED WOODPECKER A HOARDER.

BY O. P. HAY.

THE Woodpeckers are eminently an insect-eating family, and their whole organization fits them for gaining access to situations where the supply of their normal food is perennial, if not always abundant. There are, however, in all probability, few members of the group that will not, when opportunities are offered, forego their accustomed animal diet and solace themselves on soft fruits and luscious berries; and when the blasts blow cold, and the soggy limb is frozen hard, and the larva no longer betrays its location by its industry, the few Woodpeckers of the species which brave our winters are, no doubt, glad to avail themselves of such dry forms of nutriment as grains, seeds of grasses, and the softer nuts.

Notwithstanding the many sagacious traits exhibited by birds, it is, to judge from the books, rather unusual for them to lay up