

satisfied that it breeds at about the same elevation in the vicinity of Fort Klamath, Oregon, where, however, these birds were rather scarce.

An abundant and suitable food supply has unquestionably a great deal to do with the movements of these birds, and while they might be called resident in most places where they are found, they, like many other species usually considered residents throughout the year, are more or less migratory. Their range northward is very extended, specimens having been obtained on the Putnam River, Alaska, close to the Arctic Circle and to the tree limit.

SUMMER BIRDS OF EASTLAND COUNTY, TEXAS.

BY E. M. HASBROUCK.

EASTLAND County, Texas, is situated between latitudes 32° - 33° and longitudes 98° - 99° or a little northeast of the geographical centre, and is known throughout the country as the poorest and most unattractive portion of the State. The elevation varies from twelve hundred to sixteen hundred feet, and the entire County, as well as a number of those lying to the east, is one series of terraces, beginning a little west of Cisco and extending through Erath and Bosque Counties, until the valley of the Brazos is reached. Water is extremely scarce and the timber, although pretty generally distributed, is almost entirely of oak, and comprises four species, known as post-oak, bur-oak, black jack, and 'shinnery.' This last is a short, stunted bush, frequently covering hundreds of acres and rarely exceeding four or five feet in height.

The observations recorded were made while accompanying the Geological Survey, and while this list of sixty species is by no means complete, still it will, I hope, be of some value in showing the partial distribution of certain peculiar and rare forms. Several species of Hawks, which were numerous, I was unable to secure and identify, as my time was not my own.

1. *Ardea herodias*. GREAT BLUE HERON. — Present, but rare from scarcity of water; two individuals seen. A number were observed on

Pecan Bayou near Brownwood in Brown County some sixty miles south, but this has a permanent flow of water the year round.

2. *Bartramia longicauda*. BARTRAMIAN SANDPIPER. — Common throughout the prairie and upland regions. Found singly or in flocks of a dozen or more. Their abundance was particularly noticeable at night when they could be heard calling to each other while flying overhead.

3. *Actitis macularia*. SPOTTED SANDPIPER. — As rare as *Ardea herodias*; but two observed on the tanks or cattle ponds.

4. *Ægialitis vocifera*. KILLDEER. — Extremely common, found throughout the country in flocks and particularly abundant near the tanks.

5. *Colinus virginianus texanus*. TEXAN BOB-WHITE. — One of the commonest of the birds; I have seldom seen Quail more plentiful or in larger flocks than through this section of country, and in this respect it is a perfect sportsman's paradise.

6. *Zenaidura macroura*. MOURNING DOVE. — The commonest of Texas birds; breeds everywhere.

7. *Cathartes aura*. TURKEY BUZZARD. — An extremely common resident, as it is throughout the southern and western part of the continent.

8. *Catharista atrata*. BLACK VULTURE. — Equally abundant with the preceding, and more so in certain localities, especially in the southern part of the County.

9. *Circus hudsonius*. MARSH HAWK. — Not common, a few seen at various localities throughout the County.

10. *Accipiter cooperi*. COOPER'S HAWK. — The rarest of the Hawks, only three noted during the trip.

11. *Buteo lineatus*. RED-SHOULDERED HAWK. — Fairly abundant, and distributed throughout the County.

12. *Buteo swainsoni*. SWAINSON'S HAWK. — Tolerably common, of a roving disposition, and like the foregoing, distributed throughout the County.

13. *Haliaeetus leucocephalus*. BALD EAGLE. — A single one was observed hovering around the Comanche Mountains near Rising Star on Nov. 11.

14. *Falco sparverius*. SPARROW HAWK. — The commonest of the Hawks, in fact I have never seen a locality where they are so numerous. Specimens collected appear much richer in color than those from more northern localities.

15. *Syrnium nebulosum*. BARRED OWL. — Common everywhere along the creeks and river bottoms, and occasionally found on the uplands.

16. *Megascops asio mcCallii*. TEXAS SCREECH OWL. — Common everywhere, and as bold and daring as others of the genus. I remember one occasion when I had a fine string of Teal hanging in camp. I was awakened by the hooting of one of these birds on a limb directly over my head and but a few feet above me; securing him and returning to rest, I had no sooner rolled up in my blankets than his perch was taken by another which, it is needless to say, followed the fate of the first.

17. *Bubo virginianus subarcticus*. WESTERN HORNED OWL.—Common; their hootings may be heard regularly every night, and in some localities as many as a dozen or more are found together. Their notes are distinguishable at once from those of *Bubo virginianus* proper, and vary greatly in intensity of tone with individuals.

18. *Geococcyx californianus*. ROAD-RUNNER.—This bird, while tolerably abundant in adjacent Counties and even common in some, is quite rare here, owing to the unfitness of the country for them. Not over a dozen were seen, and but three secured.

19. *Coccyzus americanus*. YELLOW-BILLED CUCKOO.—Fairly abundant, the 'natives' calling it 'Rain Crow,' and asserting that it is an infallible foreteller of approaching storms.

20. *Ceryle alcyon*. KINGFISHER.—A few individuals seen, but as rare as the water upon which they depend for their food supply.

21. *Dryobates villosus*. HAIRY WOODPECKER.—Common, and usually found in company with any of the following Woodpeckers.

22. *Dryobates pubescens*. DOWNY WOODPECKER.—Tolerably common; generally found in company with *scalaris*.

23. *Dryobates scalaris*. TEXAN WOODPECKER.—This handsome little Woodpecker is abundantly distributed throughout the whole of central Texas; I have found it common in over a dozen Counties.

24. *Ceophlœus pileatus*. PILEATED WOODPECKER.—This species is fairly abundant throughout the various Counties of central and western Texas that I have visited; they seldom visit the dry upland, regions although they at times do so, preferring the more densely wooded bottom lands of the Leon and Satana Rivers.

25. *Melanerpes erythrocephalus*. RED-HEADED WOODPECKER.—Abundant throughout this and adjacent Counties.

26. *Melanerpes carolinus*. RED-BELLIED WOODPECKER.—More common if anything than the preceding. Specimens from this particular locality appear smaller and less richly colored than those from the eastern United States.

27. *Melanerpes aurifrons*. GOLDEN-FRONTED WOODPECKER.—A bird of strictly local occurrence. In the single locality in Eastland County where they are found, they may be said to be fairly common, but outside of an area of twenty-five square miles they are unknown in the County. This particular region begins at a place known as Merrill's on the Cisco and Brownwood road ten miles south of Cisco, and runs in a northeasterly direction to the Carbon and Rising Star road, a distance of about six miles, then follows this with comparative closeness for about five miles, then back to Merrill's, forming an irregularly triangular tract of country. The statement that they are not found outside of this district may at first appear strange, but when I state that I have surveyed entirely around it, and through it in several directions, it is evident that I have substantial reasons for the assertion. This section of country certainly presents peculiar characteristics; the timber is entirely of post-oak, and the ground more or less thickly covered with 'shinnery,' and differs from the surrounding

country in that the tops of the trees were affected some years ago with a blight, and now this entire area is one mass of dead-topped trees, and this is what apparently suits the present species. They have a peculiar habit of perching for many minutes in these tops, silent and motionless, that at once distinguishes them from their near relative *M. carolinus*, and although the two are frequently found together in the same tree, a little practice will suffice to separate them at a glance. Their note is peculiar, combining the 'chirp, chirp' of *carolinus* with a certain shrillness and accent of their own, while the call note, either flying or at rest, is similar to that of *M. erythrocephalus* and at the same time not unlike that of *Colaptes auratus*. While their notes once learned are readily recognized, still it takes not a little practice to distinguish between a Red-head in one tree and the Golden-front in the next, or between a Golden-front and a Flicker when both are on the opposite side of a ravine and hidden from view; and I have more than once shot *carolinus* even when morally certain it was what I wanted. The range of this bird is given as "Valley of the Lower Rio Grande, eastern Mexico and southern Texas"; I therefore have the pleasure of extending its range some hundreds of miles.

28. *Colaptes auratus*. FLICKER. — Common everywhere, and almost invariably found in company with the following.

29. *Colaptes cafer*. RED-SHAFTED FLICKER. — Common but extremely shy. Among those taken was one of that peculiar form described some years ago as *hybridus* (now ignored), combining the characters of both species.

30. *Phalænoptilus nuttalli niditus*. HOARY POOR-WILL. — Central Texas may be truly said to be the home of this bird; I doubt if any of this family are more abundant in any locality. Although seldom seen by daylight unless flushed from their retreat, no sooner does darkness settle down than hundreds may be heard calling from every direction. Their notes when heard from a distance are a plain, 'poorwill, poorwill,' but on close approach are as plainly tri-syllabic as those of the male Quail in spring, and are a perfect 'Will-whip-er-will-whip-er,' with a slight pause after the 'will,' which also bears the accent, and with the final syllable just audible.

31. *Chordeiles virginianus henryi*. WESTERN NIGHTHAWK. — Very common throughout the central part of the State, and on the prairies at dusk dozens may be seen skimming over the ground in pursuit of moths.

32. *Milvulus forficatus*. SCISSOR-TAILED FLYCATCHER. — Extremely abundant; found everywhere, more especially on the mezquite prairies and around the clearings of the settlers. Breeds everywhere and as conspicuously as does our Kingbird.

33. *Contopus richardsoni*. WESTERN WOOD PEWEE. — Rare; more abundant further south in Brown and Lampasas Counties.

34. *Empidonax flaviventris*. YELLOW-BELLIED FLYCATCHER. — But one observed; taken in the Leon River bottom Sept. 4, 1888.

35. *Cyanocitta cristata*. BLUE JAY. — Extremely rare; but two observed.

36. *Corvus americanus*. COMMON CROW.—Abundant. Specimens taken are much smaller than those from the East.

37. *Icterus galbula*. BALTIMORE ORIOLE.—Rare; but four specimens observed.

38. *Chondestes grammacus strigatus*. WESTERN LARK SPARROW.—Extremely common everywhere in flocks of from a dozen to fifty.

39. *Amphispiza bilineata*. BLACK-THROATED SPARROW.—I saw these birds but once and then only a small company of perhaps fifty individuals on a chaparral hill. They were extremely shy and it was with difficulty I was able to secure some.

40. *Peucæa cassini*. CASSIN'S SPARROW.—Rare; but two specimens taken, on Sept. 3 and 4, respectively.

41. *Melospiza fasciata montana*. MOUNTAIN SONG SPARROW.—Rare in some localities, but extremely common in others, especially along the water courses.

42. *Cardinalis cardinalis*. CARDINAL.—Common everywhere throughout the country in the vicinity of water.

43. *Passerina ciris*. PAINTED BUNTING.—Very rare; not more than half a dozen observed.

44. *Spiza americana*. DICKCISSEL.—One specimen taken Sept. 3, 1888.

45. *Piranga rubra*. SUMMER TANAGER.—Fairly abundant along the water courses, not observed elsewhere.

46. *Lanius ludovicianus excubitorides*. WHITE-RUMPED SHRIKE.—Abundant throughout this and adjacent Counties.

47. *Vireo bellii*. BELL'S VIREO.—Common along the streams, unknown on the uplands.

48. *Dendroica æstiva*. YELLOW WARBLER.—Not common; some half dozen were observed during the latter part of August and first of September.

49. *Anthus pensilvanicus*. AMERICAN TITLARK.—Common throughout the prairie regions and frequently seen in the clearings.

50. *Mimus polyglottos*. MOCKINGBIRD.—Fairly abundant and pretty generally distributed.

51. *Catherpes mexicanus conspersus*. CANON WREN.—I have not found this bird in Eastland County, but further east and in nearly the same latitude I found a number of them in 1887 at Meridian in Bosque County, at the 'Bee rocks.*'

52. *Thryothorus ludovicianus*. CAROLINA WREN.—Tolerably common along the water courses, especially the Leon and Satana Rivers, Copperas, Rush, and Palo Pinto Creeks.

53. *Thryothorus bewickii bairdi*. BAIRD'S WREN.—Very abundant throughout the County; I was extremely surprised to hear them frequently sing very similarly to some of our Warblers, and often searched diligently for a Warbler before discovering the author of the song. It was such a

*See 'Scientific American,' April 28, 1888, p. 263.

strange departure from the general run of Wren songs that it was not until I had been repeatedly fooled that I finally accepted it as a case of 'truth stranger than fiction.'

54. *Certhia familiaris americana*. BROWN CREEPER. — A single individual observed at Cisco.

55. *Sitta carolinensis*. WHITE-BELLIED NUTHATCH. — Fairly abundant everywhere.

56. *Parus atricristatus*. BLACK-CRESTED TITMOUSE. — Extremely common throughout the County; not distinguishable by note or habits from *bicolor*, but conspicuous for the black crest plainly visible when close by.

57. *Parus carolinensis agilis*. PLUMBEOUS TITMOUSE. — It was with pleasure that I found Mr. Sennett's variety in this locality and fairly common. Those mentioned by him from southwestern Texas were taken some distance from this locality, thus giving me the pleasure of extending its range some distance north and east.

58. *Poliophtila cærulea*. BLUE-GRAY GNATCATCHER. — Rare. A few observed along the Leon and Satana Rivers.

59. *Sialia sialis*. BLUEBIRD. — One of the commonest of Texas birds, seen everywhere.

A BIRD WAVE.

BY PHILIP COX.

EARLY one morning in April, 1885, I started from Newcastle, New Brunswick, for a day's duck shooting on the Miramichi River, which was then free of ice. Snow was falling when I left my house, the tumbling flakes forming a strange contrast with the blossoms, bursting buds, and catkins of the trees and shrubs. Presently birds were seen flying eastward, and upon looking upward, through the snow, which was by this time falling thick and fast, I saw hundreds of Robins (*Merula migratoria*), Song Sparrows (*Melospiza fasciata*), and Juncos (*Junco hyemalis*) mingled together in an unbroken column and passing noiselessly on. Some of the birds were only a few feet above the tops of the tallest trees, while others were higher up, the column extending so far skyward that the topmost line could with difficulty be outlined amid the falling flakes. The width of the column—from flank to flank—appeared to average about twenty-five yards.