

as it was almost too far I tumbled to it, and killed it by a lucky snap. The flesh was exactly half way, being neither white nor brown.

"Some days after, Hiram told me he had seen the bird repeatedly the spring before, dancing with the Prairie Chickens in his garden.

"The crop was full of leaves of the mountain laurel, and I know he must have gone higher than chicken go, to get them, but something called him down into the orchard where Blue Grouse never are seen except occasionally in July or August."

Mr. Green is of the opinion that the cross is between male Richardson's Grouse and female Sharp-tail, but the appearance of the specimen inclines me to think it is a case of a female Blue Grouse wandering down in the spring into the Sharp-tail country; as in my experience a hybrid generally favors the male parent.

The specimen has been presented by Mr. Green to the Provincial Museum at Victoria.

ASPECTS OF BIRD DISTRIBUTION IN LOUISIANA AND MISSISSIPPI.

BY HENRY H. KOPMAN.

THE writer will explain at the outset that this article has reference chiefly to the southeastern part of Louisiana and to the coast of Mississippi. It is his belief, however, that when he presents a view of some of the characteristic conditions of these sections he will call attention to facts almost if not quite unparalleled in the experience of bird students in other parts of the United States.

Assuming the normal, settled summer bird population of these regions to be the primarily characteristic element in their avifauna, we recognize its chief peculiarity in the dearth of species represented, frequently offset by a great abundance of individuals, but in other cases, much rarer, resulting in an altogether attenuated state of bird-life. The significance of the periods of migration in such regions is therefore obvious, and will be fully discussed later on.

As the regions under consideration fall naturally into two distinct topographical types, it will be convenient, first, to give a brief description of each type, and, second, to discuss the subject chosen in relation to each type separately.

The coast district of southeastern Louisiana presents an absolutely flat surface, of a very fertile alluvial soil formation, supporting, with varying circumstances, marshes, swamps, or normal deciduous forest growths, of rather monotonous uniformity in any case. At distances varying from fifty to seventy-five miles from the coast this formation is replaced by slightly higher ground presenting an entirely different soil formation wooded chiefly with pine, especially the long-leaved pine (*P. palustris*). This latter is the one aspect of coastal Mississippi, and in the case of that State requires to be treated separately only because there such country borders the seashore.

The essential uniformity of coastal southeastern Louisiana, the area centering about the delta of the Mississippi River, is revealed by the fact that all arboreal species occur with almost equal abundance in every part of this region. For a region of interest so special, this section is very extensive. From points near the mouth of the Mississippi westward to Franklin and New Iberia, and thence eastward and northeastward to New Orleans and Baton Rouge, lie the boundaries of a region haunted indifferently in all parts during the nesting season by a practically invariable group of woodland species — the Yellow-billed Cuckoo, Southern Hairy, Downy, Red-bellied, and Pileated Woodpeckers, Crested and Green-crested Flycatchers, Cardinal, Red-eyed and White-eyed Vireos, Prothonotary, Parula, Sycamore, Kentucky, and Hooded Warblers, Carolina Wren, Tufted Titmouse, and Carolina Chickadee. A varying number of species that frequent open situations, such as the Orchard Oriole, Florida Grackle, and Blue-gray Gnatcatcher, are to be found throughout the same extent of country, but as their distribution depends more or less on artificial conditions, it is of less importance in determining the biotic questions involved.

The appearance of the interior of a deciduous forest in lowland Louisiana would readily suggest a rather limited avifauna in the nesting season at least. Elm, ash, tupelo, cypress, dogwood

(*Cornus stricta*), red maple, box elder, sweet gum, red, live, and water oaks, hackberry, cottonwood, and sycamore constitute the bulk of the sylva. Maple, elm, tupelo, and water oaks preponderate, growing very closely, and exhibiting great vigor, though the size of the elms and maples especially is not usually large. In these moist shady woods, the character of insect life that particularly attracts our smaller insectivorous birds is sparingly represented. There is a rather oppressive and monotonous side to the life here, which is reflected more or less closely in the behavior of the birds. The conditions being almost identical in all spots, and food being equally abundant everywhere, the stations of nesters are distributed with decided regularity. A tendency to colonize in the breeding season is of the rarest occurrence. The same conditions that render colonization unnecessary, that is, the uniformity of the environment, frequently give rise to rather wide ranging on the part of nesters. The preoccupation of the breeding bird is less conspicuous than usual, and intimate acquaintance with their home life more difficult to arrive at. As a matter of fact, these virgin lowland woods do not always serve for nesting haunts of the several species that frequent them in greater or less abundance. Where these forests border on cleared land, lower and more varied growths appear, and such spots frequently become meeting places of the woodland breeders and the more open-loving species. Forests without any undergrowth whatever attract practically no small species as breeders except the Woodpeckers, the Crested Flycatcher, Green-crested Flycatcher, Cardinal, Summer Tanager (?), Red-eyed Vireo, Parula Warbler, Prothonotary Warbler, Sycamore Warbler; the Parula Warbler nests in such woods wherever Spanish moss occurs, the same being true of the Sycamore Warbler, while the Prothonotary Warbler selects its usual sites, as do the Titmice and Woodpeckers. The Flycatchers, Cardinal, Summer Tanager, and Red-eyed Vireo necessarily nest high under these circumstances.

Although uninterrupted growths of forest trees of the kinds already designated cover a large part of the surface of southeastern Louisiana not in cultivation, there are also considerable areas primarily occupied by lower, more thicket-like growths, consisting of small maples, tupelos, etc., interspersed with palmetto,

smilax, dogwood (*C. stricta*), and several vines, especially *Tecoma*, *Rhus*, *Cissus* and, of course, *Rubus (villosus)*. Such growths commonly occupy the lowest and wettest parts of the delta region, and often border heavy cypress swamps. The Yellow-billed Cuckoo, Cardinal, White-eyed Vireo, and Prothonotary and Hooded Warblers are almost distinctive in this type of country. Of somewhat less certain occurrence are the Southern Hairy, Downy, and Red-bellied Woodpeckers, Crested Flycatcher, Red-eyed Vireo, Parula, Sycamore, and Kentucky Warblers, Florida Yellow-throat, Carolina Wren, Tufted Titmouse, Carolina Chickadee, and Blue-gray Gnatcatcher. There is, of course, more or less local variation to be considered in this connection.

Occasionally an undergrowth of dogwood, haw, deciduous holly, and possibly one or two rarer shrubby growths occurs in heavy woods of the prevailing character. Here, again, the Hooded Warbler is plentiful, and frequently the Kentucky Warbler. If a growth of switch cane (*Arundinaria tecta*) is also present, it proves very attractive to both these species, and seems to supply an indispensable condition for the presence of Swainson's Warbler, which, however, is seldom found even where the switch cane occurs. Where the distinctive woodland has these undergrowths, the Wood Thrush is most apt to occur as a breeder.

The summer bird-life of the delta region presents several further aspects as seen in the cypress swamps, in the marshes of the immediate coast district, and in the midst of cultivation and about the edges of the swamps and woods. Although the cypress occurs in practically all situations throughout the section under consideration, heavy swamps of this tree occupy rather restricted areas. Their interest from an ornithological point of view is small. Their principal nesting inhabitants are the Woodpeckers, the Green-crested Flycatcher, and the Prothonotary, Parula, Sycamore, and Hooded Warblers, of which the Sycamore and Prothonotary Warblers are the most conspicuous.

The marshes of southeastern Louisiana present no especial peculiarity. Red-winged Blackbirds and Boat-tailed Grackles are abundant in nearly all situations. The Florida Yellow-throat is uniformly distributed; the Long-billed Marsh Wren and Louisiana Seaside Sparrow are somewhat local in their occurrence. In

small numbers, the Orchard Oriole is thoroughly at home in the marshes, especially where bushy growths occur, and in such places in fact various other species not primarily marsh birds may be found. This is particularly true of the Yellow-billed Cuckoo, Kingbird, Cardinal, White-eyed Vireo, Titmice, Mockingbird, Carolina Wren, and Blue-gray Gnatcatcher.

The sugar, rice, and trucking industries of lower Louisiana have effected, of course, certain very decided modifications in the nature of the growths. About the edges of most sugar plantations there is usually more or less land that has been roughly cleared in anticipation of its final cultivation. The rank productiveness of such soil, commingling in one astonishing mass of confusion the native lesser growths of the woods, and the escapes from the pastures, the ditches, and the railroads. Willow, button bush, elder, blackberry, tall coarse weeds, bindweeds, grasses, sedges, leguminous plants both native and introduced, and all the common native vines make almost impenetrable thickets. Even where introduced plants have gained small foothold, the growths are always more tangled on the edges of the fields than in the woods, and in either case, the bird-life is about the most profuse to be discovered in summer. The Yellow-breasted Chat is attracted almost exclusively to spots of this description. The plantation bird-life adds at least half a dozen other species to those occurring in summer by virtue of the native constitution of the country. In this category may be placed the Kingbird, Meadowlark, Cowbird, Indigo Bunting and Bluebird, which are commonest towards the western and northern limits of the delta region. The same is true of the Dickcissel, which, however, is much rarer than the others. The Painted Bunting is reasonably common in all localities, but most so towards the west. The distribution of the Summer Tanager throughout this region is decidedly irregular; there are few spots of woodland suited to its habits and it occurs most frequently among the groves of towns and plantations. The Wood Pewee has somewhat the same distribution. The Towhee is more or less common in summer about the edges of the woods except in the wetter localities. Considered with reference to the delta region as a whole, however, it can hardly be called a well established breeder there.

Before proceeding to the consideration of the relation of migration to this region, it will be well to give a list of the land birds breeding there, summarizing the preceding remarks: Resident species are indicated by an R: Bob-white, R; Wild Turkey (?); Mourning Dove, R; Turkey Buzzard, R; Black Vulture, R; Swallow-tailed Kite; Mississippi Kite; Sharp-shinned Hawk (?); Florida Red-shouldered Hawk, R; Bald Eagle, R; American Osprey, R; American Barn Owl, R; Florida Barred Owl, R; Florida Screech Owl, R; Great Horned Owl, R; Yellow-billed Cuckoo; Belted Kingfisher, R; Southern Hairy Woodpecker, R; Downy Woodpecker, R; Pileated Woodpecker, R; Red-headed Woodpecker (local), R; Red-bellied Woodpecker, R; Flicker, R (rare in summer); Nighthawk (rare as a breeder in this region except towards the west); Chimney Swift, Ruby-throated Hummingbird, Kingbird, Crested Flycatcher, Wood Pewee, Green-crested Flycatcher, American Crow, R; Fish Crow, R; Blue Jay (distribution rather local), R; Cowbird, R; Red-winged Blackbird, R; Southern Meadowlark, R; Baltimore Oriole (occurs rarely as a breeder about the northern limit of the region); Purple Grackle (is resident about Baton Rouge); Florida Grackle, R; Boat-tailed Grackle, R; Grasshopper Sparrow (commonest towards the north and west); Louisiana Seaside Sparrow, R; Lark Sparrow (?); Field Sparrow (nests about Baton Rouge and possibly elsewhere); Towhee, R; Cardinal, R; Indigo Bunting; Painted Bunting; Dickcissel; Summer Tanager; Purple Martin; Rough-winged Swallow (commonest towards the north and west); Loggerhead Shrike (if it breeds in this region, it does so with extreme rarity); Red-eyed Vireo, Warbling Vireo (is decidedly local; common at New Orleans, and probably at other points on the Mississippi); Yellow-throated Vireo (may breed about the northern limit of the delta region); White-eyed Vireo; Prothonotary Warbler; Swainson's Warbler (positive evidence of the nesting of this species in the section under consideration is lacking); Parula Warbler; Yellow Warbler (occurs rarely as a breeder about the northern limit of this section); Sycamore Warbler; Kentucky Warbler; Florida Yellow-throat, R; Yellow-breasted Chat; Hooded Warbler; Mockingbird; Carolina Wren, R; Long-billed Marsh Wren, R; Tufted Titmouse, R; Carolina Chickadee, R; Blue-gray Gnat-

catcher, R; Wood Thrush; Bluebird, R (local and never very common).

As the writer has discussed the subject of migration in Louisiana at some length in other papers appearing in 'The Auk,' he will merely restate in general terms what has appeared there, and then illustrate with several concrete instances. The substance of this matter is that purely transient species are rare in spring in the delta region, but much commoner in fall. The presence of such forms is limited largely to the latter part of spring, and even then occurs with more or less rarity and irregularity. There are rarely more than two or three days of comprehensive migrational activity between March 15 and April 15. In making many spring expeditions in the vicinity of New Orleans the writer has found it the rule that between the dates mentioned, only resident, summer visitor and lingering winter visitor species will be observed. On one of the seemingly most favorable days I have ever been afield in southern Louisiana, April 6, 1895, the only exclusively transient species I made certain of seeing were the Ovenbird and the Water-thrush! The day was warm and showery, with soft south winds, and seemed to supply exceedingly favorable conditions for migration; the weather was essentially spring-like, of the kind that gives the greatest impetus to the full development of all vernal resources, yet in no wise summery. All the familiar birds were present in great numbers; many, in fact, seemed just to have arrived, and the probability was that there were many transient individuals among those observed; but the fact remained that only a very slightly different element was added to the settled avifauna of the season. Viewed as an example of summer bird-life, however, the species observed were of prime significance. The songs of White-eyed Vireos, Prothonotary, Parula, Hooded, and Kentucky Warblers mingled incessantly; the notes of the Red-eyed Vireo and Sycamore Warbler were somewhat less obtrusive. These species, with the possible exception of the Sycamore Warbler, greatly outnumbered all other forms in the description of country first traversed, the normal moist woodland of the lowlands; but on reaching a tract of slightly higher and more varied woodland, with more undergrowth, we found Crested Flycatchers, Catbirds, and Brown Thrashers, while Summer Tanagers and Wood Thrushes were

unusually plentiful. Here, however, Parula and Hooded Warblers were, if anything, commoner than before, while the two Vireos were present in great abundance. It was in this neighborhood, that the Ovenbirds were seen. There was another species whose presence, chiefly in the open, evidenced that the time for a general passage of transients was ripe. This was the Indigo Bunting. While this species breeds in southeastern Louisiana, it is never common in most localities except during migration; individuals in all stages of plumage, including many old males, were observed. Tree Swallows had reached the height of their spring abundance also, and it is of interest to note that the history of their spring movements reflect very closely many stages of the general vernal advance of birds in southern Louisiana. Though this trip proved so unproductive as an opportunity for the observation of mid-spring transients, the largest number of species yet observed under somewhat similar conditions, and at the same time and place, include only the Black-and-white and Cerulean Warblers and the Redstart as exclusively transient species.

After the middle of April, the conspicuous occurrence of transients is by no means so rare. As explained by the writer in a previous paper, the presence of transients at this season usually occurs with fresher weather. Yet even on these occasions, I have never found any of the transients decidedly and uniformly common except Yellow Warblers, Catbirds, and Gray-cheeked, Olive-backed, and Wilson's Thrushes. At various times I have seen scattering Baltimore Orioles, Rose-breasted Grosbeaks, Scarlet Tanagers, and Black-and-white, Blue-winged, Golden-winged, Tennessee, Magnolia, Cerulean, Chestnut-sided, Bay-breasted, Blackburnian, and Black-throated Green Warblers, and Redstarts, but never the pervading hosts of these species observed at the height of spring in the north. When occurring, these species seldom if ever resort to the ordinary woodland, but usually to the edge of the woods, and to groves and thickets in the midst of cultivation. The extreme refinement of such creatures in their susceptibility to environment during the season of migration was very plainly illustrated to me by an incident which I will relate. On April 21, 1905, I visited a section of country just across the Mississippi from New Orleans, a locality, in fact, which I have explored

with profit on many occasions, and to which I have already referred. The morning was quiet and gray, but about noon a warm southeast breeze sprang up. The conditions of early summer seemed about to settle down upon the country. The expectation of observing any unusual birds seemed small, as, in the light of all previous experience, the weather was scarcely suitable for the movement of late transients. Making my way over the route I had always been accustomed to follow, I found only what I had expected, excepting a few Tennessee Warblers at one spot on the edge of the woods. On the edge of a large sugar plantation, lying at the usual limit of my expeditions through these woods was some newly cleared land, however, and in one place it was bordered by a rather varied thicket that had grown up on the lighter, better drained soil. Water oaks, low live oaks, honey locust, with some hackberry, sycamore, dogwood (*C. stricta*), haw, etc., formed an open wood, with brambles and other moderately thick undergrowth, forming an ideal resort for birds, and not only most of the customary species were found here, but the following ten purely transient forms: Rose-breasted Grosbeak, Scarlet Tanager, Yellow-throated Vireo, Black-and-white Warbler, Worm-eating Warbler, Tennessee Warbler, Chestnut-sided Warbler, Black-throated Green Warbler, Ovenbird, and Redstart. The thicket in which they were found contained familiar trees of the region, but there was an obvious difference between this spot and all the surrounding country. The entire extent of the place was only an acre or so; on two sides it was bordered by cleared land, on a third by a brake of switch cane, and on the fourth by an almost uninterrupted growth of sweet gum, in itself an unusual circumstance for the delta region. Whether this little association of species seen in the thicket was making a sojourn of several days was impossible to decide positively, but the probabilities inclined that way, as the weather had been stable for several days. The incident is unique in my experience.

Autumnal bird-life in the delta region is rather more varied on the whole than is that found in spring. From the latter part of July until November 1, transients of one species or another are nearly always present in considerable numbers. In the earlier part of the season the bulk of these birds are Kingbirds, Barn

Swallows, Black-and-white Warblers, Yellow Warblers, Waterthrushes and Redstarts; later come Indigo Buntings, Magnolia and Tennessee Warblers, Catbirds, and Olive-backed Thrushes, with variable but usually small numbers of Chestnut-sided, Bay-breasted, Blackburnian, and Black-throated Green Warblers. Coastwise, the Bobolink is very common in fall.

The common mixed woodland of the delta region is rather more uninteresting in fall than in spring; by September most of its few characteristic birds have grown inconspicuous; the greatest concourses of birds, summer visitors and transients alike, are to be found then in or near open situations. The Hooded Warbler holds its stations the most closely. The Prothonotary Warbler ranges rather widely as early as July, and in willow-dotted fields I have observed individuals in obvious transient progress during that month. The Parula Warbler is very variable in this respect, though their general tendency is to seek the open even more than during spring and summer. The deep woods in Louisiana, in fact, are never the characteristic situation in which to find this species.

Rank growths of tall weeds, especially elder, goldenrod, and 'blood-weed' (*Ambrosia trifida*), along ditches and about the edges of fields, often prove attractive observing grounds during the fall; warblers seem especially drawn to such places.

It is a strange circumstance that the characteristic woodland of the delta region should harbor at least as many birds in winter as it does in summer; as a matter of fact, there are probably more individuals quartered in these woods in winter than in summer. Woodpeckers, Blackbirds, Goldfinches, White-throated and Swamp Sparrows, Blue-headed Vireos, Orange-crowned and Myrtle Warblers, Titmice, Thrashers, Wrens, Hermit Thrushes, Robins, and Kinglets frequent the bare woods about as freely as they do the open and thickets of partially evergreen vines and bushes, such as wax myrtle, brambles, small oaks, baccharis, and smilax. The only species that will not be found in these woods in winter are those invariably found in fields in other regions: the Meadowlark, Savanna Sparrow, and American Pipit; the Palm Warbler, the Mockingbird and the Bluebird, of course, should be added to this list of exceptions, and probably both the Long-billed and Short-billed Marsh Wrens. The Winter Wren, the House Wren, and

Bewick's Wren are more commonly found about the edges of the woods; any moist ground with low cover is freely haunted by Swamp Sparrows in southeastern Louisiana. The Pine Warbler, which never breeds in the delta region, of course, is not common there even in winter. When occurring, it is usually seen about thickets of deciduous trees.

Before concluding this paper with a consideration of the long-leaved pine flats region in Louisiana and Mississippi, the writer wishes to restate the chief peculiarity of the delta region as being the uniformity of its woodland where undisturbed by agricultural operations, and the lack of variety in its breeding birds. Though the pine flats region presents a naturally more continuous topography than the delta woodland, which is interrupted by marshes and deep cypress swamps, and though it is less affected by agriculture, yet within itself it presents a considerably more varied appearance than the woods of the delta region; this is especially true of the pine flats region in southeastern Louisiana; its strictly indigenous avifauna is likewise more varied if less abundant than that in the delta section. The pine flats region, though low, is scarcely level even at its extreme lower border, and rises gradually northward to the long-leaf pine hills region; consequently, it shows two principal growths; (1) the long-leaf and kindred pines, occupying the greater part of the surface; (2) a mixed growth occurring along small streams and in depressions, and composed chiefly of magnolia (especially the 'sweet bay'), red maple, black gum (*Nyssa*), sweet gum, water oak, holly, wax myrtle, *Cyrilla*, and a variety of ericaceous shrubs, including *Azalea*, *Clethra*, and *Vaccinium*. In some places, dogwood and a variety of oaks dispute the higher ground with the pines. Of the resident species of birds found in this region, several are restricted almost entirely to the pines. These are the Red-cockaded Woodpecker, the Meadowlark, Loggerhead Shrike, Pine Warbler, Brown-headed Nuthatch, and Bluebird.

The summer visitor species of birds found in this region are attracted chiefly to the mixed growths, and, of course, do not differ very materially from those found in the delta region. The Broad-winged Hawk is common; the Nighthawk is rather common, and nests in the open pinewoods; the Chuck-will's-widow is com-

mon in the bottoms; the Chimney Swift is common; the Hummingbird is rare; the Kingbird, Crested Flycatcher, and Wood Pewee are all common, nesting in various situations; the Green-crested Flycatcher nests in the broad-leaved growths in the bottoms; the Orchard Oriole is found about homes and farms; the Summer Tanager is common and uniformly distributed; the Purple Martin is common; the Red-eyed Vireo is common and restricted to broad-leaved growths; the White-eyed Vireo frequents the undergrowth; the Prothonotary Warbler is rather common, as are also the Parula, Kentucky, and Hooded Warblers; few favorable situations for the Sycamore Warbler occur; the Wood Thrush is distributed rather irregularly and is never very common as a nester.

In addition to the resident species previously mentioned in connection with the delta region are the following not found there: Wild Turkey; Cooper's Hawk (?); Sharp-shinned Hawk (?); Chipping Sparrow (uncommon in summer); Brown Thrasher; White-breasted Nuthatch.

There is little doubt that of the summer visitors to the delta region, the Warbling Vireo is entirely absent in the pine flats region; the Painted Bunting is rare; while it is doubtful whether the Purple Grackle, Field Sparrow, and Dickcissel breed in the pine flats region. Other species breeding freely in the delta region have a more restricted summer range in the pine flats region; the Red-winged Blackbird is unusual except on the coast of Mississippi and along the rivers; the Florida Grackle is local and never very common; the Boat-tailed Grackle is found chiefly along the coast of Mississippi; the Florida Yellow-throat finds suitable situations chiefly on the coast of Mississippi and along the rivers; the Long-billed Marsh Wren occurs chiefly along the coast of Mississippi.

The course of the migrations in the pine region is much less erratic than in the delta region; exclusively transient forms are decidedly commoner in spring, and in fall likewise, there is a greater variety of steadily common transient species than in the delta region; in all cases, however, the species occurring as transients are much the same as in the delta region. When present these transients resort chiefly to the broad-leaved growths. Of the species decidedly more common in the pine regions during the migrations than in the delta region, the following should be espe-

cially noted: Alder Flycatcher, Least Flycatcher, Scarlet Tanager, Yellow-throated Vireo, Chestnut-sided Warbler, Blackburnian Warbler, Black-throated Green Warbler, Cerulean Warbler, Prairie Warbler, Redstart, Catbird, Wilson's Thrush and Olive-backed Thrush. Species somewhat less common during migration in the pine flats region are the Indigo Bunting and Tree Swallow.

The winter bird life of the pine region is not essentially different from that of the delta region; the greatest difference appears in the case of the sparrows; the Chipping Sparrow, which is never found in the delta region, and which is only a casual breeder in the pine flats region, becomes very abundant there in winter; the Song Sparrow, which is almost unknown in the delta region is sparsely distributed in the pine flats region; the Junco is found sparingly in the upper part of the pine flats region; the Savanna, Swamp and White-throated Sparrows are very much less common than in the delta region; the Vesper Sparrow is much commoner; the Pine Siskin, Purple Finch, and White-crowned and Fox Sparrows are about equally rare in both sections. The Palm Warbler is commoner in the pine region, especially in Mississippi. The Blue-headed Vireo and Orange-crowned Warbler, two species characteristic of the delta region in winter, are almost entirely absent from the pine flats region, perhaps entirely so in the case of the Orange-crowned Warbler. The Brown Creeper, however, is commoner in the pine region. From the nature of the country, Pipits are necessarily less common in the pine flats region. In all other essential respects, the winter bird life of the two sections is identical. It should be added, that among the winter visitors to the pine flats region as among most other elements of its bird population, the deciduous growths attract the greater variety of species.