

was as near as one could generally approach. They frequented the vicinity of hammocks, and their habits, except the extreme shyness, appeared much like those of the common Red-shouldered Hawk of this region. The female, No. 6302, of the pair spoken of as beginning to build had eggs with the yolks almost developed, and would have laid within a week. From the appearance of the ovary and oviduct I believe that three eggs would have been laid.

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## A SUMMARY OF OBSERVATIONS ON THE BIRDS OF THE GULF COAST OF FLORIDA.

BY W. E. D. SCOTT.

(Continued from p. 160.)

*Colinus virginianus floridanus*. FLORIDA BOB-WHITE. — This species is abundant in the vicinity of Tarpon Springs, and breeds in numbers in early April. At least two broods are raised, for I have found birds but a few days old in the first week of July. As to the affinity of the form here with true *cubanensis* I quote from a recent letter received from Mr. J. A. Allen who kindly examined, at my request, a large series of the Quails from the vicinity of Tarpon Springs. He says: "None of the Quails very nearly approach *C. v. cubanensis*, which has the black extending more or less irregularly over the whole breast and onto the upper abdomen, and much chestnut on the flanks, and the bill rather small. The black is not so much confined to a well defined jugular band as in your specimens. The females are also quite different from any in your lot. Your birds seem to be all extreme (typical) *floridanus*, except the two females, 3226 and 3227, which lean a little toward *virginianus*, as do other East Coast specimens I have seen."

The two females referred to by Mr. Allen are from Miami, Florida, and all the rest of the series, some forty in number, are from the vicinity of Tarpon Springs.

Mr. Atkins says that the birds were only occasional in the immediate vicinity of Punta Rassa though abundant a few miles back in the country.

*Colinus virginianus cubanensis*. CUBAN BOB-WHITE. — Mr. Atkins procured a Quail, the only one he has taken so far on the Island of Key West, on July 5, 1888. It is very different from any of the Quails already noticed from about Tarpon Springs, and can only be referred to this subspecies. It is an adult male, and is No. 6086 of my collection. My

thanks are due to Mr. Atkins for kindly sending me the bird in question. Mr. Atkins further remarks that Quail seem almost unknown to the inhabitants of Key West and that the only additional records he has made there, are "one seen and another heard on May 11, 1888. One seen on May 22, 1888."

**Meleagris gallopavo.** WILD TURKEY.—This species is still common at most points on the Gulf coast, and is to be seen frequently in the markets of the towns. The breeding season begins about the last week in February, and but one brood seems to be reared.

**Columba leucocephala.** WHITE-CROWNED PIGEON.—A regular summer resident at Key West and vicinity, and Mr. Atkins also took it on one occasion at Punta Rassa (see Auk, Vol. V, p. 185). Though a regular summer resident it seems not at all common at Key West, though quite abundant on neighboring keys in July, August, and September. Mr. Atkins says that they arrive at Key West from May 1 to 15, and remain till November.

**Zenaidura macroura.** MOURNING DOVE.—Abundant resident, and breeds throughout the area under consideration. Mr. Atkins has observed it throughout the summer, though rarely, at Key West.

**Columbigallina passerina.** GROUND DOVE.—Common resident and breeds at all points on the Gulf coast where observations have been made. Also resident at Key West and breeds in numbers (J. W. Atkins).

**Melopelia leucoptera.** WHITE-WINGED DOVE.—Casual or accidental at Key West. One taken at Key West November 14, 1888, by Mr. J. W. Atkins (see Auk, Vol. VI, April, 1889, p. 160).

**Geotrygon montana.** RUDDY QUAIL-DOVE.—Apparently accidental at Key West. One taken by a gunner at Key West December 8, 1888—J. W. Atkins (see Auk, Vol. VI, April, 1889, pp. 160, 161).

**Geotrygon martinica.** KEY WEST QUAIL-DOVE.—This species must be of rare occurrence on the island of Key West, for during the two years Mr. Atkins has spent at that point the bird in question has not come under his observation.

**Cathartes aura.** TURKEY VULTURE.—Common resident. Breeds.

**Catharista atrata.** BLACK VULTURE.—Equally common with the last. Breeds. In early March, 1876, in Sumpter County, I found this species breeding. The young in this case were already several days old. They were two in number, which, I believe, is the regular complement. The nest, if such it may be called, was only a slight depression in the ground, the location being surrounded by a heavy growth of 'saw palmettos.'

**Elanoides forficatus.** SWALLOW-TAILED KITE.—A common migrant and summer resident in favorable localities. These are hammocks, particularly such as are in the vicinity of streams. I have never observed the birds in winter about Tarpon Springs, but they appear early in March and remain, though they are not common just here, till October. They breed in this vicinity early in April. Mr. Atkins has observed the species at Punta Rassa, August 25, 1886, and also at Key West, August 20, 1888. He says further in regard to the birds, "I have another taken by Lechevallier near Miami, where he found it breeding and took eggs."

*Ictinia mississippiensis.* MISSISSIPPI KITE.—The only point where I have observed this species is at Panasoffkee Lake, in Sumpter County. Here I saw three during January and February, 1876.

*Elanus leucurus.* WHITE-TAILED KITE.—I have not met with this species though it is of regular, but, I believe, rare occurrence in south-west Florida. A single specimen, 3218 of my collection, is before me. It is a male, and was taken by A. Lechevallier in the region below Cape Romano. Mr. Atkins has observed the species on Sanibel Island in winter.

*Rostrhamus sociabilis.* EVERGLADE KITE.—For remarks on this species previously published by me, see 'Bulletin Nuttall Ornithological Club', Vol. VI, January, 1881, pp. 14-21. At Panasoffkee Lake the birds were migrants, but at points south of Tampa Bay where they occur they are resident. At Panasoffkee Lake they bred in numbers in April.

*Circus hudsonius.* MARSH HAWK.—Common migrant and winter resident. I have no records of it in this region in summer, that is from May 1 till September. I have met with the adult male but twice in Florida, though the birds are abundant on the salt marshes of the Gulf coast. Mr. Atkins finds it in winter at both Punta Rassa and Key West. At both places it is common.

*Accipiter velox.* SHARP-SHINNED HAWK.—A regular though not common migrant and winter resident. I have no records of it in summer. Mr. Atkins obtained the species at Punta Rassa, where he regarded it as a rare migrant, but has not found it at Key West.

*Accipiter cooperi.* COOPER'S HAWK.—A casual visitor to the Gulf coast. During my observations here I have met with it but twice. Mr. Atkins took one at Punta Rassa in August in "very fine plumage." "Not noted at Key West."

*Buteo borealis.* RED-TAILED HAWK.—A rather rare winter visitor on the Gulf coast, and a rare resident in the region about Tarpon Springs throughout the year. It probably breeds in this vicinity, as a pair was observed on many occasions during the entire year of 1886.

*Buteo lineatus.* RED-SHOULDERED HAWK.—A common species and breeds. From a series of Red-shouldered Hawks, all adults, fourteen in number, four are typical, true *lineatus*. They are Nos. 5644, ♀, 5647, ♂, 5649, ♀, 6141, ♂, of my collection. All were taken at Tarpon Springs. In the series in question are three birds that are fairly intermediate between *B. lineatus* and *B. lineatus alleni*. They are Nos. 5817, ♀, 6022, ♀, and 5648, ♂.

*Buteo lineatus alleni.* FLORIDA RED-SHOULDERED HAWK.—This form is on the whole more common than the typical *lineatus* in the vicinity of Tarpon Springs. In the series of fourteen adult birds in my collection, seven, or half of the number are good examples of the pale form. These are Nos. 4350, ♀, 5312, ♂, 5646, ♂, 5640, ♀, 5645, ♂, 6075, ♂. The series of adult birds is further supplemented by a series of twelve birds in the gray or immature plumage, and the same relative proportion in distribution between the two forms seems to hold good here.

**Buteo latissimus.** BROAD-WINGED HAWK.—I have not met with this species in Florida, but Mr. Atkins took a single one at Key West on February 3, 1888. At the same place, on October 21, 1887, he saw "a large flock of Hawks, one hundred and fifty or more, which were mainly this species."

**Buteo brachyurus.** SHORT-TAILED HAWK.—A rather rare migrant and summer resident, breeding, in southern and southwestern Florida and coming regularly as far north at least as Tarpon Springs on the Gulf coast. For a detailed account see this number of 'The Auk,' p. 243.

**Haliaeetus leucocephalus.** BALD EAGLE.—A common resident on the Gulf coast of Florida. Breeds in numbers. The old nests are repaired in the vicinity of Tarpon Springs in November; the eggs, generally two in number, are laid by the 10th or 15th of December, and by the middle of February the young are about ready to fly. But one brood is reared, varying from one to three young.

Mr. Atkins finds the Bald Eagle breeding both at Punta Rassa and at Key West, but remarks that at Punta Rassa "they disappear for a time, if not for the entire summer."

**Falco peregrinus anatum.** DUCK HAWK.—A rather rare winter visitor on the Gulf coast of Florida. Observed all winter (1875-1876) at Panasoffkee Lake, and regularly every winter that I have been at Tarpon Springs. Mr. Atkins has taken the species at Punta Rassa in fall and spring and has observed it at Key West in fall and winter. It arrives at Key West about October 1.

**Falco columbarius.** PIGEON HAWK.—For records of the occurrence of this species I am indebted to Mr. J. W. Atkins, who took it at Punta Rassa on September 26 and October 5, 1886, and also at Key West on October 16 and 18, 1888. I met with it rather rarely at Panasoffkee Lake during the winter of 1875-76, but have no records from the immediate vicinity of Tarpon Springs.

**Falco sparverius.** SPARROW HAWK.—Common resident. Breeds in the vicinity of Tarpon Springs in early April. Mr. Atkins says that though he has taken them at Punta Rassa in July, none remain at Key West in summer. The first noted to arrive at that island in the fall of 1888 was on September 30.

**Pandion haliaëtus carolinensis.** AMERICAN OSPREY.—Common resident. Breeds in January and February, according to locality. Mr. Atkins found this a common species at both Punta Rassa and Key West. He says: "I have a set of eggs from Marques Key, taken in November, 1887." Like the Eagle, the Fish-hawk did not remain in the vicinity of Punta Rassa in summer.

**Strix pratincola.** BARN OWL.—A rare resident. Probably breeds.

**Syrnium nebulosum alleni.** FLORIDA BARRED OWL.—Common resident. Breeds in the vicinity of Tarpon Springs in March. Mr. Atkins has seen this species at Sanibel Island in winter and has also records of them from Marco.

**Megascops asio floridanus.** FLORIDA SCREECH OWL. — Common in suitable localities, and resident. Breeds in March and April.

**Bubo virginianus.** GREAT HORNED OWL. — Not as common as the last two, but still a characteristic bird of the region under consideration. The time of breeding at Tarpon Springs and at Princeton, New Jersey, does not vary greatly. February finds the species with eggs at the latter place, though there is often snow on the ground, and the same month the eggs are laid about Tarpon Springs, though the climatic conditions are so very widely different.

**Speotyto cunicularia floridana.** FLORIDA BURROWING OWL. — At certain points in the interior in De Soto and adjacent Counties this species is resident and not uncommon. I have a series of thirteen birds before me that were taken in March, 1888, at Indian Prairie, De Soto County, Florida. They show little or no individual variation.

Mr. Atkins observed all the Owls I have mentioned near Punta Rassa, but has no record of the occurrence of any kind of Owl on the island of Key West.

**Conurus carolinensis.** CAROLINA PAROQUET.—With the settlement of the State this species has gradually disappeared till at the present time it must be regarded as a rare bird, though once so abundant and conspicuous. In the winter of 1875 and 1876 the birds were very abundant at Panasoffkee Lake, and the same season I saw many flocks on the Ocklawaha River. About Tarpon Springs they were formerly very common, and were looked upon by the few settlers as a decided enemy to the various fruit crops cultivated. They were wantonly mischievous and cut hundreds of young *green oranges*, peaches, and the like, from the trees almost as soon as the fruit was formed. This was up to within the last seven years. They were killed in great numbers while committing such depredations, being fearless and coming in large flocks. For the past five years but *one* small flock of some ten birds has been seen in this vicinity, and they were simply passing over and did not alight. No doubt the great number of these birds that have been killed in order to protect the fruit crops is a large factor in accounting for their disappearance, but it can hardly be regarded as the sole agent in the result that has been attained in most localities. The Paroquet seems to be one of the species that, like the Ivory-billed Woodpecker and others, disappears from settled regions, and it would seem to be a question of only a few years when Paroquets will be as unknown in most parts of Florida as they are in some of the States where the early settlers found them an abundant species.

At a point in Hernando County, in the vicinity of a place called Linden, the birds are still fairly common, and I have procured a series from that place this past winter (1888-1889). The ovaries of the female birds, taken about the middle of February, seemed to indicate that the breeding season would begin not later than the last of April. Mr. Atkins writes me, "I have no personal records of the occurrence of this species, but I have in my collection several specimens, and have seen others from

time to time that were taken in the Okeechobee region where the birds seem to be fairly common.

**Coccyzus minor.** MANGROVE CUCKOO.—That there are two forms of Mangrove Cuckoos occurring on the Gulf coast of Florida is apparent even from the limited amount of material that has come under my immediate observation. These birds are five in number, two of which were taken on the mainland; No. 3790 at Tampa, Florida, by Mr. Stewart, and No. 5465 at Punta Rassa, Florida, by Mr. J. W. Atkins. These two birds, as well as the others, I have submitted to Mr. J. A. Allen for comparison with the material in the American Museum at New York. He says: "Nos. 3790 and 5465 may be referred to *C. minor* proper, though much paler than *C. minor* from St. Vincents, Guadaloupe, Porto Rico, and Dominica; on the other hand, they just match specimens of *C. minor* from St. Thomas and Santo Domingo. Probably the West Indian *C. minor* runs into several races, your Florida examples being referable to those from the Larger Antilles, while those from the Lesser Antilles are not only *much* more deeply colored, but are larger birds. There is much more difference between specimens from Guadaloupe and St. Thomas than between your Florida examples and the St. Thomas specimens." I believe, from data accumulated during my researches on the Gulf coast of Florida, that *C. minor* will be found to be a regular migrant and summer resident almost as far north as Tarpon Springs, and that the species breeds on the mangrove keys off the coast in limited numbers. These birds are restricted to such localities in the breeding season almost in the same way as is the Black-whiskered Vireo, but are not nearly as common as that species.

**Coccyzus minor maynardi.** MAYNARD'S CUCKOO.—Through the kindness of Mr. J. W. Atkins of Key West, I have before me three examples of this subspecies, taken on the island of Key West. These birds, Nos. 5466, 5467, and 5468 of my collection, have been submitted for examination to Mr. J. A. Allen, and he agrees with me in referring them to this form. Mr. Atkins tells me by letter that "these Cuckoos are rather rare here (Key West) but I have good evidence that a few at least breed here in late May and during the month of June."

**Coccyzus americanus.** YELLOW-BILLED CUCKOO.—A common migrant and summer resident, breeding in numbers on the Gulf coast of Florida. They also breed commonly at Key West, Mr. Atkins tells me, and I have young birds collected by him there. Comparison of a large series of these birds with the same species taken in New York and Pennsylvania, shows no appreciable difference between birds from the several localities.

**Coccyzus erythrophthalmus.** BLACK-BILLED CUCKOO.—I have not met with this species in the areas visited, and am indebted to Mr. Atkins for the record of three individuals "taken at Key West in the fall," which is the only point where he has met with the Black-billed Cuckoo in Florida.

**Ceryle alcyon.** BELTED KINGFISHER.—A common winter resident, and some breed, in the region about Tarpon Springs. Mr. Atkins says

"This is a common winter resident both at Punta Rassa and Key West. Last spring note at Key West, May 22, 1888, and not seen again till August 30, 1888."

**Campephilus principalis.** IVORY-BILLED WOODPECKER.—For remarks on this species the reader is referred to 'The Auk,' Vol. V, No. 2, April, 1888, p. 186. Mr. Atkins regards it as rare in the vicinity of Punta Rassa, and has not observed it at Key West.

**Dryobates villosus audubonii.** SOUTHERN HAIRY WOODPECKER.—A not very common resident in the region about Tarpon Springs, where the breeding season is in April. Not noted by Mr. Atkins at either Punta Rassa or Key West.

**Dryobates pubescens.** DOWNY WOODPECKER.—Rather more common than the last, and breeding at about the same season. Observed by Mr. Atkins at Punta Rassa as a resident species, though rare, and not seen by him at Key West.

**Dryobates borealis.** RED-COCKADED WOODPECKER.—Common resident. Breeds in the vicinity of Tarpon Springs in April. This species seems to be confined to the pine woods, and I cannot recall an instance of meeting with it in the hammocks of the Gulf coast. Not observed by Mr. Atkins at either Punta Rassa or at Key West.

**Sphyrapicus varius.** YELLOW-BELLIED WOODPECKER.—A not common winter visitor on the Gulf coast, where I have met with it as far south as Clearwater Harbor. The birds remain in the vicinity of Tarpon Springs as late as the last week in March.

Mr. Atkins says the Yellow-bellied Woodpecker is rather common at Punta Rassa and at Key West during the migrations. First one noted at Punta Rassa April 6, 1886. Returning, it arrives at Key West early in September, and can be found now and then throughout the winter. "Key West, April 1, 1889. First northward flight of year."

**Ceophloeus pileatus.** PILEATED WOODPECKER.—Common resident. Breeds late in March and early in April in the vicinity of Tarpon Springs. Observed by Mr. Atkins at Punta Rassa, but not at Key West.

**Melanerpes erythrocephalus.** RED-HEADED WOODPECKER.—In certain regions of the Gulf coast this species is a rather common resident, and in others it is almost unknown. For instance, at Tarpon Springs I have never met with it, but at a point seven miles north of that place and about a mile inland from the Gulf, there is a region of pine woods of perhaps five hundred acres in extent, where the Red-headed Woodpeckers are a conspicuous element of the bird life the year round. Mr. Atkins has not observed the Red-headed Woodpecker either at Punta Rassa or on the Island of Key West.

**Melanerpes carolinus.** RED-BELLIED WOODPECKER.—Common resident. Though it is met with everywhere, the hammocks seem to be preferred to the pine regions by this bird. Breeds in April and May in the vicinity of Tarpon Springs. Mr. Atkins found this species a common resident at Punta Rassa, and resident, but not nearly so numerous, at Key West.

**Colaptes auratus.** FLICKER.—Common resident, but rather more abundant in December, January and February than at other seasons.

“Common in winter at Punta Rassa; not observed there in summer. Rather rare at Key West, where it has only been met with in the fall.”—J. W. Atkins.

**Antrostomus carolinensis.** CHUCK-WILL'S-WIDOW.—Resident on the Gulf coast at least as far north as Tarpon Springs, where in winter, December and January, they are rather rarer than at other seasons of the year. There the birds begin to sing in February, but are not in full song as a general thing till the first week in March. The mating season seems to continue through this month, and the eggs are not laid till the middle or last of April, or even later. The period of song continues till late in July, when it ceases and the birds are silent till the beginning of the following breeding season.

Mr. Atkins says: “Arrives at Punta Rassa in early April, after which their notes are heard on all sides. May 6, found a nest with two eggs on the bare ground in a swamp. The incubation about half completed. Last birds observed at Punta Rassa October 30. At Key West, noted first on March 3, and on the southern migration is very common from August 28 to September 18. Have yet to hear their notes here.”

**Chordeiles virginianus chapmani.** CHAPMAN'S NIGHTHAWK.—For remarks on the breeding of this form see ‘The Auk,’ Vol. V, p. 186. The birds, as far as I am aware, are migrants and summer residents on the Gulf coast of Florida. In the vicinity of Tarpon Springs they arrive about the middle of April and in a few days become very abundant. They breed here in numbers, and become particularly abundant in late August and September, remaining till late in October and rarely into November. Observed by Mr. Atkins at Punta Rassa and at Key West, at both places as a common migrant and summer resident.

**Chætura pelagica.** CHIMNEY SWIFT.—Common migrant and summer resident, and very rarely observed during the colder months. Near Tarpon Springs the birds regularly arrive from the south late in April (24–30), and become abundant in a few days. Most of them pass on to the north after a short interval, but many remain to breed in the immediate vicinity.

**Trochilus colubris.** RUBY-THROATED HUMMINGBIRD.—Common spring and fall migrant, and a rare summer resident. About Tarpon Springs the birds appear late in February or early in March, according to the season, and for a month or six weeks are very common, after which time they disappear. The only records I have of the species in summer, near here, is of one seen July 10, 1888, and another August 4 of the same year.

Of the Ruby-throated Hummingbird Mr. Atkins says: “It is very common at Punta Rassa in winter, arriving early in September. By the middle of April all have departed. At Key West it is fairly common in winter. Last noted in spring, April 10.

(To be continued.)