

number appeared to be four with five in a few instances. The first eggs were taken April 2d, at which time one burrow had nesting cavity completed but no eggs laid. One nest contained three fresh eggs, probably incomplete. Two nests held four eggs each, one of these clutches being several days advanced in incubation. The fourth clutch—five eggs—was complete and incubation begun. On April 11th four burrows were examined. Two contained four eggs and one held five eggs; all of these were from a third to one-half advanced in time of incubation, while the fourth nest has already been referred to as holding three chicks just hatched and two pipped eggs.

By information gained from older residents I infer this owl is disappearing, in some sections at least, quite rapidly. The country is being settled; many small truckers are already scattered over the district and doubtless before many years these most interesting birds will be classed with the rarer of the Eastern species.

The following titles embraced much of interest pertaining to the Life History of this little Owl:

Scott, W. E. D. *The Auk*, Vol. VI, 1889, p. 249.

Hoxie, Walter, *Ornithologist and Oologist*, XIV, 3, p. 33.

Rhoads, S. N. *The Auk*, IX, p. 892.

Bendire, Maj. C. E. *Life Histories North Am. Birds*, I.

Palmer, Wm. *The Auk*, XIII, p. 99, 1896.

* Kennard, F. H.—*The Auk*, XXXII, April, 1915, p. 154.

THE BIRDS OF THE CAPE FEAR REGION OF THE NORTH CAROLINA COAST

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AND EXPERIMENT STATION

For two weeks this past summer I had the pleasure of camping in company with some other biologists on the ocean front a few miles above Cape Fear, and while my main interest was tracing out some of the relations of the animal life to the tidal zones I spent some time studying birds and always had an open ear and eye for our feathered friends. The region in which we were located is one that has not been much visited by biologists and a brief description of the locality may not be amiss. Starting with the Cape Fear River at Wilmington we find that we are some nine miles, as the crow flies, from the ocean, but the ocean

front and the river gradually converge until they meet at Cape Fear, some twenty-six miles southeast of Wilmington. It is this narrow peninsula that we were surveying and on which we were located. The area is principally light sand and not very suitable for cultivation, therefore, the southern half of the peninsula is practically without inhabitants and has grown up to a mixed growth of pines and oaks chiefly. The northern half is more thickly populated and supports some good truck farms and one or two summer colonies on the beach. A typical cross section of the southern half, starting at the river, would be as follows: a narrow river beach rising abruptly to a higher level, which continues for about three-fourths of the width of the peninsula, then a sudden drop to a broad salt meadow flanked by sand dunes just back of the broad ocean beach. These details are given that one may better understand our local situation. Further north the broad salt meadow is replaced by the sound, which is a favorite haunt for certain water birds.

Along the river front the most frequent birds were the Rough-winged Swallows and the Egrets. In the woods the Blue Jay, Carolina Chickadee, Tufted Titmouse, Carolina Wren, Yellow-throated and Parula Warblers held sway. In the salt marsh Clapper Rails and Chuck-will's-widow. Along the ocean beach Fish Crows, Least Sandpipers, Brown Pelicans, Gulls and Terns were most frequently observed.

From the standpoint of the birds observed the two weeks were most enjoyable, and what more pleasant memories could remain after half a year than that in spite of hard work and a blistering sun, in spite of mosquitoes in our tents and ants in our beds there remains the steady roar of the ocean on one side and the call of the Chuck-will's-widow and the plaintive frog-like clatter of the Clapper Rail on our land side to sing us to sleep.

In this connection a comparison of the list of birds by Fleisher, made between April 13 and April 20, on the land side of the river, is interesting (Auk, Oct. 1920, 565 - 572). Professor Fleisher saw ninety-eight species in April. I saw eighty-eight species in May and June, and sixty of the species are common to both lists.

From the standpoint of interest the chief records are of the Scarlet Tanager and the Redstart. This is the first record of the Scarlet Tanager and the Redstart along the coast in the breeding season. The Barn Swallow has been recorded only

occasionally. Thus we perhaps add another species to the list of birds that breed along the coast and in the mountains of North Carolina, but not in the intervening territory.

The following list of birds "seen" is appended, the records being taken from the field note book. No mere list with dry notes can convey any idea of the pleasure in the sight of the first Painted Bunting or Blue Grosbeak or the joy in getting acquainted with their songs and the songs of the Chuck-will's-widow. Nothing of the majesty of the Egrets and the relief that one feels when he knows that these beautiful birds have not been banished from the earth.

Herring Gull *Larus argentatus*.

Two were seen on Cape Fear River May 29. Five on the ocean beach June 3.

Laughing Gull *Larus atricilla*.

Seen occasionally on the ocean front.

Royal Tern *Sterna maxima*.

An occasional solitary individual was seen along the coast practically every day of our stay, May 29 to June 10.

Common Tern *Sterna hirundo*.

A few seen on several occasions; no definite dates kept.

Black Skimmer *Rynchops nigra*.

One seen on Cape Fear River May 29. None seen on the ocean front during the remainder of our stay.

Water Turkey *Anhinga anhinga*.

One seen on Cape Fear River May 29, near Orton Plantation.

Cormorant *Phalacrocorax auritus (floridanus)*.

One seen on Cape Fear River June 4.

Brown Pelican *Pelecanus occidentalis*.

One on ocean beach June 5.

Wood Duck *Aix sponsa*.

One male observed just beyond inner breakers June 3. Other ducks, thought to be the female of this species, were observed on several occasions.

Great Blue Heron *Ardea herodias herodias*.

Nine or ten on Cape Fear River May 29. Two on ocean beach June 4.

Egret *Herodias egretta*.

One on the river June 3, fishing from a net stake.

Snowy Egret *Egretta candidissima candidissima*.

Two on the sound June 4.

Little Blue Heron *Florida caerulea caerulea*.

Three on the river June 3.

Clapper Rail *Rallus crepitans crepitans*.

Common in the salt meadow behind the sand dunes.

Coot *Fulica americana*.

Five swimming just beyond the inner breakers on the ocean June 5.

Wilson's Snipe *Gallinago delicata*.

One seen on Myrtle Sound on an oyster flat June 5.

Least Sandpiper *Pisobia minutilla*.

Very common on the beach, apparently feeding on the beach flea and following the rising and receding waves, but always keeping its feet dry.

Spotted Sandpiper *Actitis macularia*.

Along the river, usually solitary. One or more seen practically every time we visited the river.

Killdeer *Oxyechus vociferus vociferus*.

Along the river May 29.

Oyster-catcher *Haematopus palliatus*.

One on the sound June 4.

Bob-white *Colinus virginianus virginianus*.

In woods along the river May 29 to June 5.

Mourning Dove *Zenaidura macroura carolinensis*.

In woods along river May 29 to June 3.

Turkey Vulture *Cathartes aura septentrionalis*.

Not very common.

Black Vulture *Cathartes urubu urubu*.

Not as common as the Turkey Vulture.

Bald Eagle *Haliaeetus leucocephalus leucocephalus*.

Full plumage adult on ocean front June 3.

Sparrow Hawk *Falco sparverius sparverius*.

One hunting above salt meadow June 2.

Osprey *Pandion haliaetus carolinensis*.

One seen fishing on ocean front June 2.

Screech Owl *Otus asio asio*.

One heard June 4.

Great Horned Owl *Bubo virginianus virginianus*.

One heard in woods May 30.

Yellow-billed Cuckoo *Coccyzus americanus americanus*.

One in woods near river June 2.

Belted Kingfisher *Ceryle alcyon alcyon*.

Along the river May 30, on the ocean June 2.

Southern Hairy Woodpecker *Dryobates villosus auduboni*.

In woods near river June 2.

Southern Downy Woodpecker *Dryobates pubescens pubescens*.

In old orchard near the river, June 2.

Pileated Woodpecker *Phloeotomus pileatus*.

In woods near the river May 30. Only one seen.

Red-headed Woodpecker *Melanerpes erythrocephalus*.

Only one seen, May 29.

Flicker *Colaptes auratus*.

Only one pair seen, June 3.

Chuck-Will's-Widow *Antrostomus carolinensis*.

One singing in salt meadow on several different nights, May 30 to June 10.

Whip-poor-will *Antrostomus vociferus vociferus*.

One flushed in woods near the river June 2.

Nighthawk *Chordeiles virginianus virginianus*.

One on the river May 29.

Chimney Swift *Chaturap pelagica*.

About two dozen at Carolina Beach June 4.

Ruby-throated Hummingbird *Archilochus colubris*.

One in the woods, June 6.

Kingbird *Tyrannus tyrannus*.

Wilmington Beach, June 4.

Crested Flycatcher *Myiarchus crinitus*.

Common in the woods.

Phoebe *Sayornis phæbe*.

One at Wilmington Beach June 4.

Wood Pewee *Myiochanes virens virens*.

Common in the woods.

Blue Jay *Cyanocitta cristata cristata*.

Common in the woods.

Fish Crow *Corvus ossifragus*.

Solitary individuals rather common along the beach. A small nest in a small oak, about thirty feet from the ground, may have belonged to this species or to the common crow. I only know that the flushed bird was a crow.

Red-winged Blackbird *Agelaius phænicus phænicus*.

Common in the salt marsh along the sound June 4.

Meadowlark *Sturnella magna magna*.

A pair in an old abandoned field, overgrown by broom sedge, June 6.

Orchard Oriole *Icterus spurius*.

One seen at an abandoned farm house June 1.

Boat-tailed Grackle *Megaquiscalus major major*.

Common at Fort Fisher, in the tidal marshes, June 1.

Goldfinch *Astragalinus tristis tristis*.

Full plumaged male and a female observed in the salt meadow back of camp on several occasions, May 30 to June 5.

English Sparrow *Passer domesticus domesticus*.

Abundant about an abandoned farm house.

Chipping Sparrow *Spizella passerina passerina*.

With the preceding.

Field Sparrow *Spizella pusilla pusilla*.

Only one seen, June 6.

White-eyed Towhee *Pipilo erythrophthalmus (alleni)*.

"Towhees" were abundant in the woods. They undoubtedly represent the subspecies *alleni*.

Cardinal *Cardinalis cardinalis cardinalis*.

One male at an abandoned farm house, seen and heard on several occasions.

Blue Grosbeak *Guiraca cærulea cærulea*.

One singing in the bush on old beach June 1.

Indigo Bunting *Passerina cyanea*.

Five or six seen.

Painted Bunting *Passerina ciris*.

One sang in a small oak near our trail to the well every evening during our stay. It was not heard during the day.

Scarlet Tanager *Piranga erythromelas*.

One full plumage male seen by one of our party at Fort Fisher June 10.

Summer Tanager *Piranga rubra rubra*.

Not uncommon in the woods. One nest found.

Purple Martin *Progne subis subis*.

Five or six at "fish factory" May 29.

Barn Swallow *Hirundo erythrogastra*.

At Wilmington Beach. A single nest in dancing pavilion June 4.

Rough-winged Swallow *Steigodopteryx scripennisi*.

Carolina Beach, June 4, seven or eight; others along the river at various times.

Cedar Waxwing *Bombycilla cedrorum*.

Small flock in open cut over woods June 1.

Red-eyed Vireo *Vireosylva olivacea*.

Several in the woods.

White-eyed Vireo *Vireo griseus griseus*.

Abundant about swampy places in the woods along river.

Parula Warbler *Compothlypis americana americana*.

Fairly common in the woods. A nest with two eggs found in hanging Spanish moss, about six feet from the ground, June 2.

Black-and-White Warbler *Mniotilta varia*.

One seen June 7.

Prothonotary Warbler *Protonotaria citrea*.

One in cypress swamp along the river June 10.

Yellow-throated Warbler *Dendroica dominica dominica*.

Common in the woods.

Pine Warbler *Dendroica vigo vigo*.

Common in the higher pine woods.

Maryland Yellow-throat *Geothlypis trichas trichas*.

One singing in dense brush along old beach on several occasions.

Yellow-breasted Chat *Icteria virens virens*.

One in the garden of an abandoned farm house June 6.

Hooded Warbler *Wilsonia citrina*.

In woods along river, two or three.

Redstart *Setophaga ruticilla*.

Full plumage male in full song, seen June 5 in dry woods.

Mockingbird *Mimus polyglottos polyglottos*.

Several seen about houses. One nest at Fort Fisher, three young.

Catbird *Dumetella carolinensis*.

One seen on several occasions at old farm house.

Brown Thrasher *Toxostoma rufum*.

Frequently seen at abandoned farm house.

Carolina Wren *Thryothorus ludovicianus ludovicianus*.

Common about farm houses and in the woods.

White-breasted Nuthatch *Sitta carolinensis carolinensis*.

One in dry pine woods June 2.

Brown-headed Nuthatch *Sitta pusilla*.

A pair in oak woods June 7.

Tufted Titmouse *Baeolophus bicolor*.

Common in the woods.

Carolina Chickadee *Penthestes carolinensis carolinensis*.

Common in the woods.

Blue-gray Gnatcatcher *Polioptila caerulea caerulea*.

Two nests found. Common in the woods.

Wood Thrush *Hylocichla mustelina*.

One nest found June 7, near river, in abandoned garden.

Southern Robin *Planesticus migratorius achrusterus*.

Only one seen, near a country school house.

Bluebird *Sialia sialis sialis*.

Several seen on different occasions.

BIRD BANDING AS AN OPPORTUNITY TO STUDY CHARACTER AND DISPOSITION

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Birds and animals have as much character and disposition as people, and bird banding offers an excellent chance to study individuality in birds when they are actually in your hands where you may make a close-up examination and note their actions.

The Waukegan, Ill., Bird Banding Station has studied the action of the birds handled for the last five years and have enjoyed watching some very interesting characters in the different birds handled.

The White-throated Sparrows arrived at our station about October 4th, 1921, and kept coming until October 25th, when the last new bird was banded, and from then on only a few repeating birds were trapped. These seemed to like our restaurant and became regular boarders. Early in November we noticed that a certain five were always together in some of the traps at night. We handled them so often that it was noticeable that each had a different disposition. There was The Fighter, a female that always fought as long as it was held in the hand and when released it invariably would turn back and take one last peck at the fingers before flying. The next was The Squealer and it squealed continually throughout the entire time it was held in the hand. Then there was The Quiet One; she was just as gentle and quiet and as good a little bird as could be. Sometimes she would take a little hold of your finger but never pinch. We were sure by her actions that she would be the kindest little bird-mother that ever lived and we could not resist stroking her little head before releasing her. The Kicker