

SUMMARY

The most abundant species in inland colonies in Alabama are the Little Blue Heron and Cattle Egret. Near the coast White Ibises may also be abundant colony members.

The nests are of stick construction, with leaves being typical in Cattle Egret and White Ibis nests. Height of nests varies with the colony site vegetation.

Eggs all differ, at least slightly. Those most nearly alike are the eggs of the Little Blue Heron, Cattle Egret, and Snowy Egret. They are about the same size and differ only slightly in color and shape. Common Egret and night heron eggs are larger than the other heron eggs, but similar in color. White Ibis eggs are usually speckled. Green Heron eggs are much smaller.

The young of the Little Blue Heron, Cattle Egret, and Snowy Egret are also somewhat similar. The Little Blue Heron nestling has dark primaries, green legs, and a dark bill with a lighter middle region. The Cattle Egret has completely white plumage, black bill with yellow tip, or rarely a yellow bill, and the legs are blackish green. The Snowy Egret has completely white plumage, a bill like that of the Little Blue Heron, dark green legs and yellowish toes. None of the other nestlings should be easily confused.

If in doubt of the identification, wait for the return of an adult to the nest or young.

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CHANGES IN ABUNDANCE OF MYRTLE WARBLERS
DURING SPRING MIGRATION AT TUSCALOOSA, ALABAMA

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In the spring of 1965, I undertook a project to ascertain the pattern of migration and the effects of weather on migration of birds in Tuscaloosa County, Alabama. A set schedule for periodically observing the birds as they appeared was followed. The objective was to compute the arrival and departure dates and migration peaks of migrant species--this paper being concerned only with the migration of one species, the Myrtle Warbler.

Great appreciation and gratitude go to those who made so many of the morning walks with me: John Hall, Jim Owens, and especially Charles Moses III, who met me with breakfast under one arm and binoculars under the other and made every one of my March walks with me. Invaluable aid was given by the Flight Service Station of the Federal Aviation Agency in Tuscaloosa for their 6:00 a.m. weather information bulletins. The habitat description of the Tuscaloosa area was based primarily on Dr. Roland M. Harper's Forests of Alabama. My deep thanks also go to Dr. Maurice F. Baker, Dr. William J. Calvert, Jr. and Mr. C. W. Summerour who have read this paper and made suggestions as to its handling.

Procedure

The count period was from the 1st of March to the 30th of April, 1965. A count was made on every day possible--the total being 52 counts made in 61 days. These counts consisted of daily walks made along the southeastern edge of the Warrior River. Each count lasted exactly 1½ hours and was begun every day at sunrise computed from the Standard Mean Time--the times of sunrise varying from 6:16 to 4:57 a.m. The starting point for the census was a wooded area 100 feet from the men's dorms on the northern boundary of the University of Alabama campus. The area covered was approximately 1½ miles of river-side habitat on the upper coastal plain in Tuscaloosa County. Each day all the birds seen and heard in the area were recorded as to species seen and total number of each species sighted.

The weather conditions for 6:00 a.m. were recorded from information supplied by the Federal Aviation Agency located at the Tuscaloosa airport. The following weather conditions were recorded: wind speed and direction; percent of sky covered by clouds and the height of the cloud base; temperature; visibility; and precipitation in the last 24 hours.

Habitat Description

Tuscaloosa lies within the short-leaf pine region, the largest of three regions of pine woodlands which comprise the central pine belt, based on Harper's forest classification. The topography is moderately hilly with wide level terraces occurring along some of the rivers, particularly along the Warrior at Tuscaloosa, the river

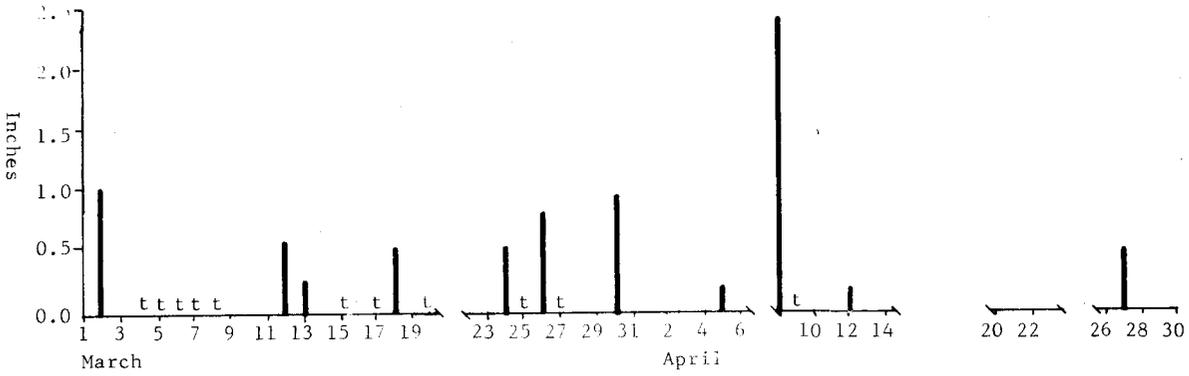


Figure 1. - Rainfall in inches during previous 24-hour period, recorded at 6:00 A. M. Traces indicated by t. Blanks in base line indicate days of no observation.

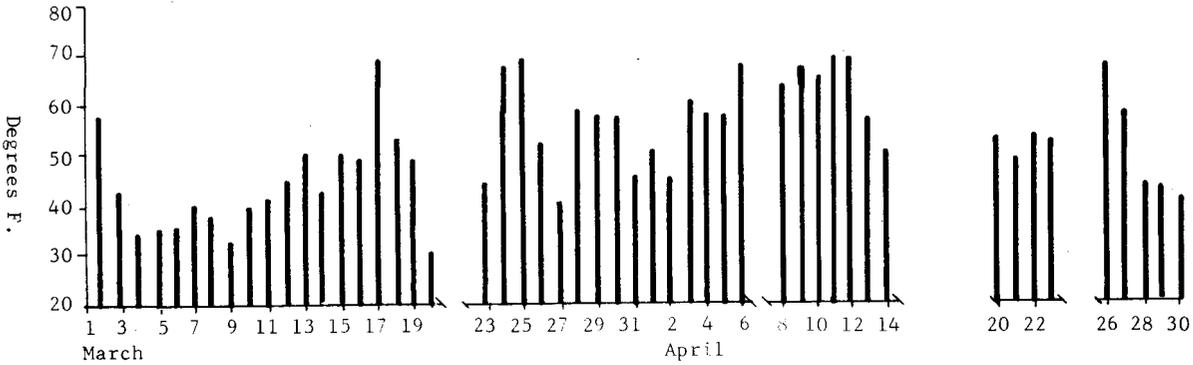


Figure 2. - Temperature in degrees Fahrenheit at 6:00 A. M.

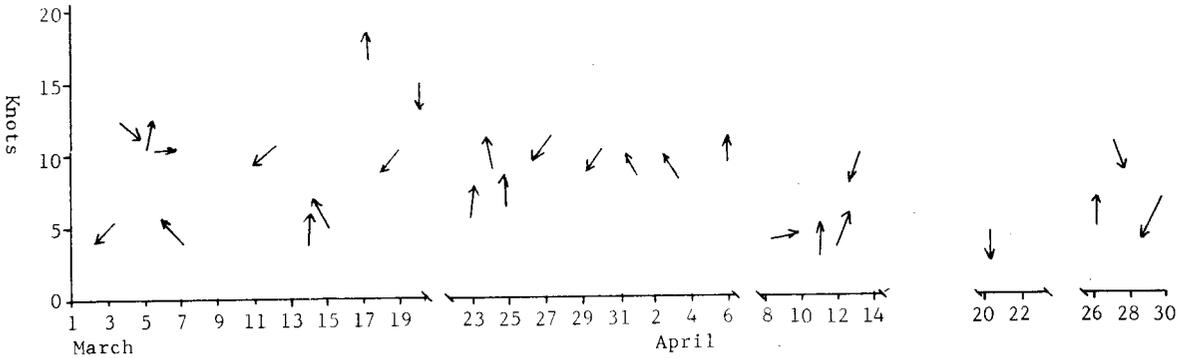


Figure 3. - Wind direction (arrows) and speed (elevation above base line) at 6:00 A.M. Blanks in base line indicate days of no observation.

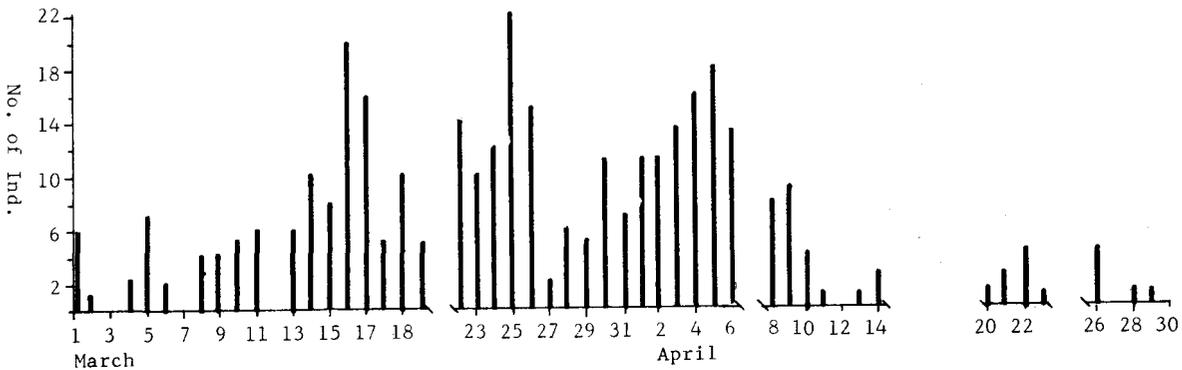


Figure 4. - Total number of Myrtle Warblers observed daily

at this point flowing NE to SW. The streams flowing into the Warrior from the Tuscaloosa area are highly polluted with industrial waste, garbage, and animal pollutants.

Dr. Harper states that forests of this region contain more species of trees than most others do and that the proportion of evergreens in the original forests would be estimated at about 50%. This is a high percentage as compared with other regions of the state, but not too high for the coastal plain.

Climatic data (from Harper) are as follows:

1. 65°F -- average annual temperature,
2. 200 to 240 days -- annual growing season,
3. 50 to 55 inches -- total yearly rainfall.
(Winter and Spring -- wettest months)

The area surveyed is 1/8 mile from the University of Alabama campus having a land survey system number of: Tuscaloosa Co., R10W, T21S, section 14. Altitude from sea level ranged from 130' to 200'. The path taken for the walks has cleared spaces to either side for a total cleared width of 15 feet. The distance of the walk as mentioned earlier is 1 1/2 miles--about 80% of which was within 35 feet of the river. Habitats covered and time spent in each area are given following.

Open clearing--Hardwood border with oaks and small hickorys, low grasses and blackberries. 15 min.

Pine uplands--Mostly being loblolly pines with an understory of small hardwoods, primarily flowering dogwood and red buckeye. Dense vines of Japanese honeysuckle covered much of the forest floor and approximately 50% of the lower vegetation. 10 min.

Moist river bottom--Black willows with scant undercover of common elderberry. A mudflat was sometimes visible when the river water level was low. 20 min.

Mixed pine hardwood border--Loblolly pines averaging 50' in height and hardwoods, mostly oaks with some red maples, averaging 35'. 30 min.

Hardwoods--Mature aged oaks and hickorys. 15 min.

Results and Discussion

The species selected for this paper from the data collected on the migrants was the Myrtle Warbler. This bird was present immediately before the count was started (although the species does winter in the state, not commonly in my area), and oddly enough ended its migration in the area on the 30th of April. Other birding trips were made in this same area after the survey was finished, but no other myrtles were sighted. This does not mean that the birds were not in the area, but it does show that the population level of this species was low enough at that hour of the day to reduce the probability of their being sighted.

Since the only variables were the birds and the weather, it should be possible to demonstrate the effects of the weather on the birds and trace the curve of the migration peak so as to show the relative abundance of the species at any one time at this location in Alabama.

Precipitation, temperature, wind and Myrtle Warbler abundance data are presented in Figures 1 to 4 respectively. Days when no observations were made are indicated by interrupted lines. Study of these figures reveals a relationship between warbler abundance and wind direction. It seemed that the highest concentrations of the warblers were always found when the winds were from a southerly direction and the lowest numbers when the winds were from a northerly direction. This tends to run counter to some studies in which it was found the highest numbers of birds were sighted when their flight was retarded and they were grounded by winds going opposite to their direction of flight--northerly in the spring migration. Such conditions are more common along the Gulf Coast where, because of the exhausting flight, a coastline affords a respite from the trans-gulf crossing. Possibly the waves found with southerly winds at my location are the birds that have been held up on the coast by northerly winds.

Quality of the habitat study area is probably the most important determining factor with respect to observed abundance. The greatest numbers of warblers anywhere along the river were always found in the moist river bottom along the route where feeding conditions seemed to be very good for the birds. These bottom lands, with their food production, apparently enticed a relative percentage of the birds crossing over every night leaving an index of the migration the next morning.

Summary

A set schedule for censusing migrant birds during the spring of 1965 was undertaken. This completed project was meant to be a statistical paper giving an idea of the peak migration for Myrtle Warblers occurring in Tuscaloosa, Alabama. It is to be realized that this project has been done only one spring, and because of the author's changing residence, it is not likely to be repeated. Therefore, the information shown on the graphs was unchecked on a repeated census. It is hoped that the figures will give a better understanding of the occurrence, relative strength, and periodicity of spring Myrtle Warblers in the west central portion of the state.

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