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No. 2

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EDITOR

David W. Johnston, Department of Biology, Mercer University, Macon, Georgia

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J. Fred Denton, William W. Griffin, Ivan R. Tomkins

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THE BIRDS OF CHICKAMAUGA NATIONAL MILITARY PARK AT FORT OGLETHORPE, GEORGIA

By Adele H. West

The purpose of this paper is to present some comparisons between my observations over a period of three and one half years with those of Dr. L. Otley Pindar ("Birds of Chickamauga Park, Georgia," Oologist, 43: 86-93, 1926) who was a surgeon stationed at Fort Oglethorpe from November 7, 1918, until June 17, 1919. His opportunities for observing birds were limited in the early weeks, but increased gradually until circumstances permitted him several free hours daily during the last few weeks. My husband and various members of the Chattanooga chapter of the Tennessee Ornithological Society accompanied me on about one half of the estimated fifty field trips. The title of Pindar's report is misleading because some references are made to the Tennessee River area in Tennesse, and he also lists as breeding or possibly breeding a number of species that may do so on Lookout Mountain but probably do not breed in the park.

Chickamauga Park, embracing 5620 acres, is located in the Appalachian Valley, and its northern boundary is about 21/2 miles south of the Tennessee line. Highway 27 divides the park into two almost equal portions, and marks the boundary between Walker and Catoosa counties. The portion east of the highway is predominantly woodland with much cedar, pine, and oak, whereas the portion west of the highway is mainly smaller plots of pine and oak woodland interspersed with fields some of which are cultivated. The general elevation throughout the park is about 740 feet, with the highest point being Snodgrass Hill (el. 900 feet). Until 1933 the park was under the jurisdiction of the War Department. Grazing was allowed and fires were not taken seriously. Since 1933 it has been under the National Park Service. During World Wars I and II Fort Oglethorpe was activated, and there was a concentration of barracks and miscellaneous buildings in the northern portion. Temporary buildings were razed in 1948. Since that time the park has been relatively undisturbed, and it is in this northern portion where most of our field work was done.

Six hundred acres, or approximately one tenth of the area, consists of fields or meadows which have been mowed infrequently. For the past six years, these fields have been sown in wheat, barley, oats, buck-

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wheat, soy beans, or lespedeza. At all seasons, there is some cover on these fields, the waste grain and other foods being utilized by wintering populations of Mourning Doves, increasing numbers of nesting Blue Grosbeaks, and Bob-whites.

One small edge is bounded by Chickamauga Creek where very little time was spent observing birds. There are other small streams in the park. For the past three summers the park has been dry for weeks at a time.

In 18 months I recorded 114 species, and after three and one half years, my total has reached 132. This number is more impressive when one realizes that practically no species associated with water or marshes have been seen.

It is of interest to mention those species listed by Pindar for the park that are not on my list. They are: Ruffed Grouse, Duck Hawk, Whippoor-will, Alder Flycatcher, Cliff Swallow, Tree Swallow, Bank Swallow, Gray-cheeked Thrush, Warbling Vireo, Worm-eating, Black-throated Blue, and Cerulean warblers, and Lark Sparrow. Unfortunately we do not know exactly where Pindar saw these species but presumably they were all seen in the park. It is possible, therefore, that some of these species have just been overlooked by me.

The Chuck-will's-widow which he does not mention is now a common breeding bird in the park. I have never seen a Lark Sparrow in the Chattanooga area, but have a report of one in Tennessee about 20 miles away. One possible Warbling Vireo was heard indistinctly in Tennessee about five miles from the park.

One feature of an annotated list that is sometimes puzzling is the interpretation of the various terms of relative abundance. My use of the term "rare migrant" would apply to a species seen not more than once or twice in a season. Pindar, however, uses the term for so many species that the word loses its value unless you assume that there has been a remarkable change in the status of many birds in the park in the past 38 years, or that his field observations were inadequate. Here are some of his comments with which I do not agree: Purple Finch, rare winter habitant; Goldfinch, rare in winter; Towhee, rare in winter; Bay-breasted Warbler, rare migrant; Pine Warbler, seen at intervals but rare at any time; Canada Warbler, rare migrant; Redstart, rare migrant; White-breasted Nuthatch, rare resident; Blue-gray Gnatcatcher; rare summer habitant; Mockingbird, rare resident.

Although I do not have figures of absolute abundance for these and other species, the White-breasted Nuthatch and Blue-gray Gnatcatcher are not rare. In March the Pine Warblers are singing and nesting commonly, and I believe it is only their quietness in mid-winter that makes them appear rare. Bradford Torrey, who visited the park in 1894, referred to the Mockingbird and the Robin as rare at that time.

Apparently they have been on the increase since then. In one half or more of the cases, I would differ from Pindar's indication of relative abundance, and these differences lead me to assume that the relative abundance of many birds has changed noticeably in the past 38 years.

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Pindar lists several species as rare summer visitors which implies possible breeding. Whether he means on Lookout Mountain, he neglects to say, but even if he does, assumption of breeding is questionable. He mentions, for example, the Carolina Junco, Cairns' Warbler, Chestnut-sided Warbler, and Veery. Since he left the area on June 17, it is possible that he made these assumptions on the basis of some late spring dates of stragglers. My latest date on a Junco in the area is April 23 and for the Chestnut-sided Warbler, May 20. Since the latter species has been recorded as late as May 23 at Cloudland Canyon State Park (on Lookout Mountain), possibly it breeds in that area.

Of equal interest are the species which I have seen but were not on Pindar's list. These are: Marsh Hawk, Osprey, Wilson Snipe, Chuckwill's-widow, Nighthawk, Long-billed Marsh Wren, Water Pipit, Starling, Orange-crowned, Tennessee, and Parula warblers, Blue Grosbeak, Dickcissel, Pine Siskin, Red Crossbill, Bachman Sparrow, and Lincoln Sparrow. Some of these species were observed only once. The Dickcissel has been recorded by me once in the park and once in the Chattanooga area, but it should probably be seen more often because there is a colony of breeding birds near Chickamauga, Georgia (see Hight, Oriole, 18:34, 1953) a few miles away. It has also been found breeding at Rising Fawn, Dade County (see Howell. Auk, 26:129-137, 1909).

The Bachman Sparrow seems to be an irregular summer resident. On April 14, 1953, I saw one, and there were three singing on April 7, 1954. Apparently at least two pairs bred in the area, because, even though I did not locate a nest, newly fledged young were seen on June 14. In 1955 not a single bird was seen or heard anywhere in the park or around Chattanooga, but has been recorded on April 16, 1956.

A singing male Scarlet Tanager was seen in the park on June 14 and 16, 1954, and was possibly a wandering unmated male. A short flight of a few minutes would take him up on Lookout Mountain where this species breeds. The Blue Grosbeak has been the most interesting species over the past three seasons. First individuals of the season were seen and heard singing on June 3, 1953, April 23, 1954, and April 19, 1955. These Grosbeaks remain until October, the 20th being my latest date. Apparently the males return to the same spots each year, and there is a tendency for two pairs to settle close together. New pairs are being located each season, indicating that the species is on the increase here as well as in adjacent parts of Tennessee. In 1955 one pair was double-brooded for, on August 11, adults were feeding newly fledged young while the young of the first mating sat nearby. This species is almost always associated with grain fields in this area. The nests are at about eye level with a

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conspicuous piece of paper tied into the outer surface, and are frequently placed in young winged elms entwined with honeysuckle or in black-berry thickets. They sometimes nest only a few feet from an Indigo Bunting's nest.

The Red-cockaded Woodpecker is probably a permanent resident since it has now been seen in April, June, August, November, December, and February. The actual dates and numbers of individuals are June 30, 1954 (family group of 4), December 2 (3), August 18, 1955 (1), November 14 (2), and February 19, 1956 (1). The first observation was in a portion of the park I had never visited before, about 400 feet from the highway. I was attracted by the voices of four birds which I watched for 30 minutes. On the other occasions they have been seen along my usual route. The area within which they have been seen would not exceed one mile in diameter. Although this species is said to be associated with stands of pine, I have found them in mixed pine and deciduous woods where pine sometimes is dominant. No nests have been found.

My thanks are expressed to Dr. J. Fred Denton who made available to me Dr. Pindar's article, thus making these comparisons possible.

CONCLUSION—After considerable review of Dr. Pindar's article, I have come to the conclusion that it is the title, "Birds of Chickamauga Park, Ga." that makes it difficult to interpret his statements. Had he more properly entitled it "Some Birds of the Chattanooga Area," the student would find it easier to subscribe to his opinions. By combining his list with mine, and by excluding from his list Pied-billed Grebe, Lesser Scaup Duck, Canada Goose, and Raven (species which were not observed in the park), there is a total of 146 species recorded for Chickamauga Park.

1625 S. Clayton Ave., S. E. Chattanooga 11, Tennessee May 1, 1956

THE STATUS OF THE BREWER BLACKBIRD IN THE FITZGERALD, GEORGIA. REGION

By Milton N. Hopkins, Jr.

On January 18, 1953, in a twenty-acre field one mile southwest of Osierfield, Irwin County, Georgia, I noted a small flock of 16 blackbirds feeding on the periphery of a flock of approximately 600 birds consisting of Grackles, Redwings, and Cowbirds. Closer examination revealed them to be Brewer Blackbirds (*Euphagus cyanocephalus*). The observation was made from a parked vehicle at a distance of 50 to 75 yards. Burleigh (*Wilson Bull.* 45: 111-113, 1933) in his first encounter with this species in North Carolina expressed my beliefs concerning the actual

uniqueness of this bird in saying, "Something about its appearance, however, aroused my curiosity. There was no apparent reason why its identity should puzzle me, yet I felt instinctively that something about it differed from the blackbirds with which I was familiar."

Instinctive feelings without concrete field marks to base them on are difficult to express. To me the birds, appeared sleeker, glossier, broader winged, and less likely to flush and go to heights of more than 50 to 75 feet high than were other blackbirds in the field. They were more likely to rise and wheel in small circles before settling, and more likely to execute these short flights and remain in the same field.

In all of the observations of Brewer Blackbirds that I have made in this area, I have never seen one of the birds alight in a tree. They appear to be a ground-loving species, especially in large open areas of 40-100 acres, and have always been noted in fields with a minimum of vegetative cover, short pasture grass, or closely cropped oats.

In 1953, flocks were seen in Irwin County (one record from Ben Hill Co.) from January 18 until February 24, and again on November 13. They were observed in 1954 only on January 21. In 1956, the species was observed from January 15 until April 5. In all, 24 flocks have been seen, these flocks consisting of 3 to more than 100 birds, with the average flock size being 18 birds. Usually males outnumber females but my records of sex ratios in the flocks are incomplete.

Brewer Blackbirds have been recorded in the preferences of habitat "niches" as listed below:

- 1. plowed ground (or soil freshly worked by any farming operation)
- 2. peanut fields (consisting of mostly bare ground with a few scattered vines present)
- oat fields (especially where hogs have been rooting or where cows have grazed heavily)
- 4. pastures (open portions away from edges and trees)

None of these birds was observed closer than 300 yards to human habitations or barns. In many cases they have been associated with livestock, especially hogs. I have noted a Brewer Blackbird riding on the back of a hog as Cowbirds often do. Toward the end of January most observations have been made in large fields where ground was being harrowed and turned for planting. When planting time begins the birds alight in front of tractors or mules as is characteristic of Cowbirds, Redwings, Crows, and Grackles and remain on the ground until the planting machinery is within 10 or 15 feet of them before rising and wheeling around to the rear of the implement. This maneuvering is certainly a quest for freshly disturbed insects and not a hunt for corn seed as many farmers believe.

With good light behind the observer these blackbirds can be identified positively up to 40-50 yards with the naked eye after one has become accustomed to finding them. The greenish iridescence of the male appears to be more pronounced to me than as depicted in Peterson's Field Guide.

The Brewer Blackbird is undoubtedly a common winter visitant throughout this area and has apparently been overlooked in the past. I must confess that I was searching for, and hoping to find, a Yellow-headed Blackbird among the huge flocks of Icterids common to this area when the species under discussion was noted. Brewer Blackbirds should be expected and looked for beginning in early November, and they probably leave by the middle of April although I have made no concentrated effort toward determining migration extremes.

202 West Roanoke Drive Fitzgerald, Georgia May 8, 1956

GENERAL NOTES

ARE MALE PINE WARBLERS SIGNIFICANTLY HEAVIER THAN FEMALES?-

Although it is widely known that male passerines tend to weigh more and to have larger measurements than do females, we find in the literature only scanty information on the precise degree of difference or the significance thereof. The following information on weights of Pine Warblers (*Dendroica pinus*) trapped, banded, and released near Tifton, Georgia, between February 27 and March 24, 1952, is therefore worth placing on record. The warblers, which had not started breeding, were handled on comparable dates and at comparable times of day. It is assumed that the sexes were about equally distributed among any migrant individuals that may have been present, and that first-year birds are not significantly different from adults.

Sex	Number	Time Caught (Mean)	Weight (Grams): Mean with Standard Error	Standard Deviation	Coefficient Variability
Male	14	2:27 p.m.	15.12 + 0.34	1.28	8.48
Female	19	12:26 p.m.	13.95 + 0.25	1.07	7.67

The data were subjected to a "t test" in which the following formula was used (see Arkin and Colton's An Outline of Statistical Methods, College Outline Series, Barnes and Noble, Inc., New York, N. Y.):

Ad Actual difference between the two means (1.17 grams) = t value

SEd Standard error of the difference between the two means

The denominator, SEd, is the square root of the following expression—

$$\frac{(VM + VF) - (NM + NF)}{(NM) - (NF)}$$

where VM is the variance (the *square* of the standard deviation) for the male sample, VF the variance for the female sample, NM the number of males, and NF the number of females. This formula or one of its algebraic equivalents (Arkin and Colton, *ibid*.:127) should be used when samples are small (less than 30), as in the present case. Larger samples provide more reliable data and are therefore manipulated somewhat differently (*ibid*.:120-122).

After substituting, we extract the square root of the following fraction—

$$\frac{(1.64 + 1.25) \quad (14 + 19)}{(14) \quad (19)}$$

obtaining 0.598 (SEd), which divided into 1.17 yields a t value of 1.96. Employing a "t table" (available in many statistical works, including Arkin and Colton's *Tables for Statisticians*, Barnes and Noble, Inc., New York, N. Y.), we find that for 33 "degrees of freedom" (that is, NM plus NF), the probability that the weight difference between male and female Pine Warblers arose from pure chance is rather low and that, as a consequence, the difference may be regarded as fairly significant. To be more specific, this particular t value with 33 degrees of freedom indicates that there is less than one chance in 10—in fact, it is nearly as low as one chance in 20—that the actual difference between the means (1.17) might have come about as a result of chance. Thus we obtain an exact measure of the degree of difference in weights which may prove useful in comparisons of differences between species or between other mensural characters (such as wing length).

It is evident that with but a few tools—among them, a balance for weighing and statistical aids (the Arkin and Colton books may be bought for about a dollar apiece)—the bird bander can make valuable contributions to our present knowledge of bird biometry.—Robert A. Norris (Resident Ecologist, University of Georgia-AEC Savannah River Plant), 535 Powderhouse Road, Aiken, South Carolina. January 4, 1956.

EVENING GROSBEAKS IN THE ATLANTA AREA.—On April 4, 1955, about 7:30 a. m., I found twelve Evening Grosbeaks (Hesperiphona vespertina) on Blackland Road, N. W. near its intersection with Northside Drive in Atlanta, Georgia. They were on a lawn under some pine trees and were evidently eating fallen pine seeds. There was one adult male bird and the others were females or immature males. Mr. W. W. Griffin located the birds a short time later in pine trees in the same vicinity, and during the morning they were also observed by other members of the Atlanta Bird Club.—MARENE W. SNOW, North Johnson Ferry Road, Marietta, Georgia. April 28, 1956.

A NOTE CONCERNING A HAWK FEEDING WITH VULTURES.—At 3:00 p. m. on December 22, 1955, while I was riding along a dirt road ¼ mile west of Osierfield, Irwin County, Georgia I noted a group of Turkey Vultures (Cathartes aura) feeding on a hog carcass. Among them, from a distance, was a large "brownish" appearing bird. Upon closer observation I noted 14 vultures and one Red-tailed Hawk (Buteo jamaicensis) flush from the carcass. The hawk had been feeding beside the vultures, and flew off soaring in characteristic fashion. When I returned to the location one half hour later the hawk was again feeding with the vultures.

On January 2, 1956, I again noted a Red-tailed Hawk feeding with 3 Turkey Vultures. This observation was made on a paved highway two miles south of Osierfield, Georgia. The birds at this time were feeding on a rabbit carcass, and after they were flushed from the carrion only the hawk returned although the vultures remained perched in nearby trees. These occurrences of multiple sharing of carrion indicate that the two species are not always incompatible with one another. Milton N. Hopkins, Jr., Fitzgerald, Georgia, May 8, 1956.

BLACK GALLINULE AT MACON IN WINTER.—On December 25, 1955, an immature female Black Gallinule (Gallinula chloropus) was shot at Reis' Lake, 2½ miles southeast of Macon, Georgia. This is the second known record from the Macon area: an adult was taken alive on the campus of Mercer University in May, 1952. Both specimens are preserved in the collections of the Biology Department of the University.—T. P. Haines, Department of Biology, Mercer University, Macon, Georgia. May 23, 1956.

NASHVILLE AND MOURNING WARBLERS AT ATLANTA.—In a wooded area of Piedmont Park in Atlanta, Georgia, on April 23, 1956, I observed a Nashville Warbler (*Vermivora ruficapilla*). Hearing an unfamiliar bird song, I soon located the singer feeding among the lower branches of a large oak. Although at some distance, I was convinced of its identity and by "squeaking" brought the bird quite close where the identification was confirmed. After the warbler lost interest in me and resumed feeding, I followed and kept it under observation for about ten minutes until it moved out of sight in the upper branches of a large tulip tree. This is the first spring record of this scarce migrant for the Atlanta area, the only previous records having been in the fall.

Early on the morning of May 17, 1956, I collected a male Mourning Warbler (*Oporornis philadelphia*) in DeKalb County about five miles northeast of the center of Atlanta. I was attracted to the bird by its call note, which I thought similar to the Yellow-throat, but it was louder and sharper. Although said to be a ground-loving bird of dense thickets and difficult to observe, this individual was feeding about twenty feet from the ground in a young tulip tree in the manner of most of the

migrant wood warblers. This species is known from Georgia by only one previous record, a specimen having been taken near Roswell, Fulton County on May 23, 1931 (Greene, et al., Birds of Georgia, 1945).—RICHARD A. PARKS, 2303 Pembrook Place, N. E., Atlanta, Georgia. June 7, 1956.

UNEXPECTED BIRDS KILLED AT ATLANTA AREA CEILOMETERS .-

On the night of September 26-27, 1955, a number of migrating birds were killed at ceilometers and television towers near Atlanta, Georgia. The following morning M. Alma Cooke and I examined 556 carcasses of 36 different species of birds near the ceilometers at the Atlanta Municipal Airport and Dobbins Air Force Base. Richard A. Parks counted additional specimens at the two Atlanta television towers exceeding 1000 feet in height. While this mass kill was not as large in number of victims as the October, 1954, catastrophe described by Johnston (*Oriole*, 20:17-26, 1955), it nevertheless disclosed the presence of several species as fall migrants which have not heretofore been frequently encountered in the Atlanta region. Among the more unexpected species represented were the following:

Alder Flycatcher. Empidonax trailii trailii. A single specimen of this species was found dead near the Atlanta Municipal Airport ceilometer near Hapeville in Fulton County. No deterioration of body tissues was noted and I can only conclude that the bird was killed the previous night. Dr. John W. Aldrich of the United States Fish and Wildlife Service has identified this specimen as a representative of the eastern subspecies; it is now in my collection. There is no previous record for this species in the Atlanta area, but it is a species which cannot be safely separated from others of its genus in the field, and the lack of an adequate series of Empidonax study skins from the region has prevented determination of its abundance.

Philadelphia Vireo. *Vireo philadelphicus*. Three specimens of this vireo were examined by me. Two were found at the Atlanta Municipal Airport and one was picked up at Dobbins Air Force Base near Marietta in Cobb County. Less than ten individuals of this species have been previously recorded from the Atlanta area, and as late as 1945 there were only four records for the State. Its regular inclusion in the random samples of fall migrants killed at ceilometers and television towers in northern and middle Georgia certainly indicates, however, that ornithologists in these regions have simply been missing this bird and that it is probably a regular but scarce fall migrant there.

Nashville Warbler. *Vermivora ruficapilla*. An adult male of this species was picked up at the Atlanta Airport. This specimen, as were all others mentioned in this note, was apparently killed the previous night, for no deterioration of body tissue was noted. There is only one previous record of this species from Atlanta.

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Blackcapped Warbler. Wilsonia pusilla. Two birds of this species were examined. A female was found at the Atlanta Airport and a male was found at Dobbins Air Force Base. Like the Philadelphia Vireo this species has been reported in the literature less than ten times from the Atlanta region. Presumably it too will be found to be a regular, though scarce, migrant in the area.

Dickcissel. Spiza americana. No Dickcissels to my knowledge had ever been recorded during the fall migration about Atlanta until they were found among the victims of this kill. Surprisingly eight specimens were picked up at the Atlanta Airport. None was found at Dobbins Air Force Base; however, I am informed by Richard A. Parks that he identified two specimens among the television tower kill of the same night. Obviously, the species was migrating over the region on this night in some numbers to be represented so well. At the Atlanta Airport over two per cent of the total number of individuals killed were Dickcissels. As with some of the other species mentioned in this note, I strongly suspect that this is a bird which occurs regularly about Atlanta each fall and that its nondetection in the past has been due to lack of knowledge of its preferred habitat at this season.—WILLIAM W. GRIFFIN, 3232 Pine Ridge Road, N. E., Atlanta 5, Georgia. July 9, 1956.

FROM THE FIELD

A nearly adult Bald Eagle was shot at the Perry Farm, Lumpkin County, on April 15, 1954. Milton N. Hopkins, Jr. found a dead male Lincoln Sparrow at Osierfield on March 24, 1956. A complete albino female Red-winged Blackbird was shot in Bartow County on November 21, 1955 and was prepared by David W. Johnston. T. P. Haines prepared a male Gull-billed Tern which was shot at Bowen's Mill, Ben Hill County on June 15, 1956. This is the first inland record for this species in Georgia. W. A. DuPre trapped and banded a Lincoln Sparrow at Rome on April 25, 1956. Six Black Ducks were observed at Macon on June 19, 1956, by David W. Johnston. A Sora was observed at Rome on April 28, 1956, by W. A. DuPre. On June 5, 1956, a Spotted Sandpiper was seen at Wilkinson Lake, Houston County by Gladys B. Black.

NEWS AND COMMENTS

SPRING MEETING, 1956.—The thirty-fourth semi-annual meeting of the Georgia Ornithological Society was held in Rome, Georgia on April 27, 28, 29, 1956, with headquarters in the Greystone Hotel. Registration on Friday afternoon was followed by an Executive Board meeting and an informal meeting. A total of 103 persons registered with 69 members and 34 visitors.

Early morning field trips were held Saturday morning, April 28, both before and after breakfast. Lunch was followed by a Business Meeting with the President, Herman Coolidge, presiding. Reports were given by the Treasurer, Gordon L. Hight, Jr., and by the editor of The Oriole, Dr. David W. Johnston.

Amendments to the By-laws of the Society were passed as follows: To Article III, Section 1 of the By-laws, paragraph g will be added to read:

"Annual dues shall be payable at or before the Fall meeting of the society. The fiscal year of the Society shall begin with the Fall meeting and terminate immediately prior to the next Fall meeting."

Article V, Section 6 shall be amended to read:

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"The Treasurer shall receive all moneys belonging to the Society; keep an account of all dues, and of all receipts and expenditures; notify each member when his dues are payable. He shall place funds received from patrons in the Publications Fund. He shall report the state of the Treasury at the semi-annual meeting. At the close of the two-year term of office, his books shall be audited by a group of three chosen by the Executive Committee. Proceeds received from life membership shall be invested by the President and Treasurer in such investments as are legal for fiduciary investments under the laws of the State of Georgia. Only the income from these investments may be expended by the officers of the Society."

Article IV, Section 2 shall be amended to read:

"In the event that a vacancy shall occur through an officer's death, resignation, or removal from the state of Georgia, the President shall appoint a successor to such an office."

Mr. George Sciple, First Vice-president, then presided at the paper session which included:

"Breeding Bird Records on Sapelo and Little Egg Islands, Summer, 1955"-H. C. Robert.

"Birds of Chickamauga National Military Monument"-Mrs. E. M.

"Differences between Georgia and Alabama Birds"—T. A. Imhof.

"Observation of a Western Tanager at Warner Robins, Georgia"-Mrs. Wayne Black.

"A Tale of Two Sittas"—Dr. Robert A. Norris.

After the paper session short field trips were made to the airport and to Berry Schools. At 8:00 the banquet was held at the Greystone Hotel. Afterwards Mr. Ben Maulsby, President of the Floyd County Audubon Society, introduced Mr. John Yarbrough, First Commissioner of Rome, who gave a welcome address. President Herman Coolidge gave a response and welcomed all out-of-state visitors. The program for the evening was given by Dr. Oliver Austin who showed slides of the Byrd Expendition to the South Pole.

On Sunday morning, April 29, members and guests left the hotel for an all-morning field trip to Tight-squeeze gap, north of Rome. Gordon L. Hight, Jr. demonstrated the use of Japanese mist nets for banding. A barbecued chicken dinner was served with the Floyd County Audubon Society as hosts.

A total of 125 species of birds was reported for the three days of the meeting.

RECENT LITERATURE

A LABORATORY AND FIELD MANUAL OF ORNITHOLOGY.—by Olin Sewall Pettingill, Jr. Burgess Publishing Co., Minneapolis, Minn. 3rd edition, revised, 1956, viii and 379 pp. \$5.00.

For many years Pettingill's manual has been used widely by classes of ornithology, but with the appearance of this new edition we have practically a new book. Whereas the older editions were designed primarily for laboratory and field exercises, the present edition has been expanded so that now it is more like a textbook in ornithology. The twenty chapters begin with the standard laboratory procedures for studying skeletal features, feathers, plumages, anatomy, physiology, and systematics. There are rather extensive chapters on migration and ecology, and several chapters deal with the various phases of life history studies: territoriality, song, mating, nesting, eggs, young, and parental care. New chapters and illustrations plus up-to-date expanded data have added 132 pages to this edition. Each of the chapters may be used as adjuncts to lecture material, and will serve to stimulate field problems.

Of especial interest and value are the seven appendices at the end of the manual, each of which will be useful to student and instructor alike. Outlined for the reader is material dealing with field methods and the preparation of a scientific paper. Five appendices then treat bibliographical data by several topics including life history studies, papers on birds of North America, and general references on birds.

This revised manual should be a welcome addition to the library of both amateur and professional ornithologist. It will stimulate the interested person to pursue a variety of research problems from backyard investigations to more technical laboratory and field problems.—D. W. J.