

THE ORIOLE

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ST. MARY'S, GEORGIA: 1878

FROM THE JOURNAL OF WILLIAM BREWSTER

EDITED BY FREDERICK V. HEBARD

(This is the last of three installments published in *The Oriole*. As in the previous installments, Mr. Hebard has here copied almost verbatim from the original journal. Figures in parentheses are the page numbers of the original journal.—Ed.)

(179) Tuesday, March 12. Clear most of the day with a light thunder shower in the forenoon. Rose early and got off in the wagon at about 8 o'clock. Took entirely new ground driving to and beyond "North River" until we struck the King's Bay road and returned, reaching home at 12 o'clock just before the shower. Birds of all kinds were very numerous. I shot nine in all: two male Yellow-throated Warblers, a male and female Red-cockaded Woodpecker, a male and female Red-bellied Woodpecker, two male White-eyed Towhees and one Crow.

The notes of the Red-cockaded Woodpecker are almost exactly like those of the Gray-headed Nuthatch but louder. One that I wounded hopped on the ground very nimbly and when I came near climbed up my leg to my waist. The Red-bellied Woodpecker seems extremely tenacious of life. I shot at a wounded one seven times and literally riddled it before it came down.

I had no idea of the abundance of Carolina Wrens in the pine woods (180) until this morning. When the sun first came out every thicket of palmetto seemed to shelter one of these Wrens. At one time I heard at least five different individuals singing.

I watched a pair of Loggerhead Shrikes at work upon their nest which was placed upon a horizontal pine limb about 30 feet up and 10 out from the trunk. Both male and female came alternately, from a ploughed field where they procured their material. I heard two Blue-headed Vireos singing in the pine woods.

I saw quite a number of Fish Crows among the pines near North River. I shot one which flew a short distance and fell: this attracted all within sight and they came flying about over *ca-ca*-ing wildly and excitedly. They however dispersed before I could get within gun shot and continued circling over my head but out of range.

I saw one Broad-winged Hawk in the pines near a hummock.

(181) Wednesday, March 13. Clear at sunrise but clouded up by noon. Started at 8:30 in the small sail boat with Henry Pratt as "skipper" and spent most of the day on the river and in the bay.

Shot nine birds, two Fish Crows, two Boat-tailed Grackles, one Meadowlark, three Redwings and one Willet.

I saw three or four Black Skimmers on a sandbar with a large assemblage of Gulls, Plover, etc. I think they had just arrived from the South. Numbers of Royal Terns were on the sand bar. Laughing Gulls were the most abundant Gull. Many have apparently full black hoods.

I saw hundreds of Golden-eyes in a vast congregation of Ducks and identified them beyond a possibility of mistake. I saw large numbers of Red-breasted Mergansers. (182) I shot at a Horned Grebe in the gray plumage but it dove and reappearing took flight, rising with some difficulty from the water.

I saw a pair of Oyster-catchers on a mud flat. They walked with a rather awkward, waddling gait like Ducks and rose before we got within range. A single Long-billed Curlew flew by on the marsh coming almost within range. It is called "Spanish" Curlew here. I saw one Marbled Godwit on the mud flats.

Fish Crows are very common along the river and fond of sitting on posts and stages over the water. Immense flocks occasionally passed overhead flying apparently aimlessly or for exercise, the numbers soaring in circles like buzzards crossing and recrossing each other. Upon watching a flock I found that they passed from one piece of woods to another. The stomach of one shot contained only berries. I saw numbers of Tree Swallows.

(183) Friday, March 15. Clear and very warm. Started off in Pratt's sail boat at 9 o'clock and spent the day cruising about the bay after birds. It was a peculiar day—with a dense haze almost as thick as fog, and the sun cast a lurid glow over the water. As we ran down the river before a light breeze, the songs of birds came to the ear distinctly from shores a mile away. A Quail was whistling *bob-white* at regular intervals on the edge of an old plantation and the notes of the Red Bird and Mocker filled the air. On the bay we were becalmed for nearly an hour at noon. The water was glassy smooth save for the long, regular, pulsating swell. At intervals the heavy rolls of a huge porpoise came to the ear, immediately followed by his peculiar deep drawn puff. On a sand bar a company of Laughing Gulls were having a merry time of plashing about in the shallow water and echoing (184) each other's shrill fiendish laughter. The sad wail of the Black-bellied Plover and the loud shriek of the Curlew also filled their places in the noontide chorus. Sand flies assailed us in swarms and made life a burden. About 2 P.M. a stiff easterly breeze sprang up and after that we had a glorious sail. I shot seven birds: one Louisiana Heron, three Laughing Gulls, one Fish Crow and two Willets. Had a good shot at a "Sickle bill" Curlew, but as a large flock of the same had just lighted a short distance off, I refused it so then of course the others took flight and escaped. Made a great deal better shooting today than heretofore killing quite a number of very long shots. The grass on the salt marshes is very beautiful, so tall and rank and varying so in color. It apparently grows all the winter thro'.

(185) I sailed up nearly within shot of a flock of fifty Long-billed Curlews. They looked very large, walked like other waders and fed apparently by picking up, not probing with their immensely long bills. Their flight is very slow, almost laborious, more like a Heron than a wader, but still unlike that with frequent intervals of sailing like a Hawk. Their bills are most conspicuous both when flying and sitting. I heard only two notes: one a loud shriek, the other a rather soft rolling whistle uttered by the whole flock when preparing to light. They flew in rather loose array, more like Meadowlarks than anything else. They were at first on the mud flats bordering the sound—afterwards on a large marsh. Saw several single ones flying about and lighting with the Gulls on the sand bars. (186) Of the two Willets I shot one was in immature gray plumage, the other in full breeding dress. Saw number of Greater Yellow-legs and several flocks of Black-bellied Plovers and many single ones uttering their plaintive wail. I also saw several large flocks of "peeps" at a distance which were either Western or Least Sandpipers.

One of the Laughing Gulls shot had a perfect black hood while the other two had white feathers among the black tho' loosely attached to the skin. I saw one Brown Pelican in the bay.

At high tide five Louisiana Herons came down to the water's edge and commenced stalking about. We sailed up within long range when I fired and broke the wing of one. It stalked gracefully over the marsh and when caught attempted to strike. No one who has not seen this bird alive can form any idea of its wonderful grace and beauty.

I heard a Florida (?) Bob-white calling on the edge of a plantation. A Parula Warbler was singing in the village.

(187) Sunday, March 17. Clear and warm. Spent the entire day in the house and about the place. The orange trees are beginning to blossom and the Cherokee rose is in full bloom.

A pair of Loggerhead Shrikes have a nest in the top of a small orange tree about ten feet up. The female (?) was sitting this morning. The pair attacked some Jays that came about the tree driving at them most fiercely and making a noise that sounded like the clicking of an Owl's bill and was, I suppose, produced in the same manner.

A pair of Killdeer came wheeling about over the garden this morning and finally lit on the turf carpeted green where I watched them for some time. They raised and lowered their heads with that peculiar automaton motion peculiar to others of the genus. They ran like Robins but, when startled, with exceeding swiftness. Their notes were two, a loud *dee-e-e-eee* and a rattling cry when they run. As I write at 9 P.M., I hear their cry over the house.

(188) Monday, March 18. Clear and cool. Thermometer 54° at house. After breakfast a messenger came up sent by Henry Pratt to tell me that a high tide had flooded the marshes and that a rare opportunity had come for shooting Clapper Rail so, hastily equipping myself, I went down to the wharf and embarked in a skiff with Pratt as "po'er." We had but a short distance to go. The broad marshes were covered with water three or more feet deep and pre-

sented the appearance of an immense lake. A stiff N.E. gale was blowing and the water was rough with choppy waves. Here and there patches of tall sedge appeared above the flood and several boats were poking about thro' them, the sportsmen firing at frequent intervals. We turned our attention to some thickets of bushes near the town, where I knew from last year's experience the Marsh hens abounded. And sure enough each clump was fairly alive with the birds. (189) They were in most cases discovered on a piece of drift wood or a half submerged branch and for the most part a pair, male and female, were within a few feet of each other. They made little attempt at escape or concealment seeming to realize it. I shot *sixteen* in less than an hour as the tide was falling when we started and our time short. When the water shallowed, I entered the bushes and beat them out and in this way shot the greater part of those bagged. They would allow me to approach within a few yards seeming to hope that they were not discovered, then gliding through the bushes would swim swiftly off and at length when closely pressed, take wing. They flew heavily but with a rail-like motion. They were all silent until the marshes were again left bare, when a chorus of voices uplifted a hymn of thanksgiving for their deliverance.

(190) I also shot a Wilson's Snipe as it came over down wind and saw another which rose from a floating bed of rushes. Also shot two Marsh Hares which were perched at least two feet over the water *in the bushes*. From a flock of Least Sandpipers that came along I killed eleven with two barrels. The Rail shooting reminded me strongly of Muskrat shooting on Concord River in a spring freshet, though after I took to walking them up the sport was really enjoyable. Getting back at 1 o'clock I reloaded a few shells and drove out into the woods with C. Shot a White-eyed Towhee and a Crow which struck me as the largest Crow I had ever killed. Saw nothing especially worthy of note.—Parula Warblers were abundant and in full song.

(191) Tuesday, March 19. Clear and cool. Wind N.E. Started out again after breakfast to try the "Marsh Hens" but made a mistake in hunting over the same ground where we so nearly decimated them yesterday. Saw only nine in all and shot seven only one of which I killed flying. Those which I have skinned are all rather thin: their flesh is tender; the irides are reddish hazel; their generative organs are quite well developed. I also shot a pair of Virginia Rails which were among the low bushes when I killed all the Marsh Hens.

At about 11 A.M. started off in the sail boat and had a delightful cruise. C. accompanied me. Fired several shots at Gulls and bagged a "Jackdaw" (Boat-Tailed Grackle—Ed.), only getting back at 4 P.M. A Bald Eagle has a nest in a tall live pine on Point Peter. The Willets are already beginning their amours and are getting very noisy.

(192) Friday, March 22. Cloudy all day. As C. was not feeling well, I did not go out at all. In the afternoon took the nest of the Shrikes in our garden. It was placed on the top of a small and very scraggy orange tree at the height of about 10 feet. The male spent most of his

time in the immediate vicinity and came to the nest every few minutes with a grasshopper or beetle for his sitting mate when there was always a little congratulatory chattering between them. I shot the male first. Then the female flew from the nest and lit where he lay on the ground and scolded with a chattering cry like a Wren. But she very soon afterwards left him, tho' I did not remove him and went back to the nest where she sat for an hour or so when I returned and killed her also, much against the prompting of my feelings. The nest contained six fresh eggs. I first saw the female sitting March 17th. Both birds were absolutely silent near the nest and drove all other species away.

(193) Saturday, March 23. Clear and a superb day. In the afternoon ordered Nolly at 4 o'clock and took my last drive into the pine woods. The afternoon was perfect: still and clear, the sunlight lying warmly in every little nook and glade in the more open pine woodland. The hardwood and deciduous trees were clothed in a delicate drapery of tender green leaflets and underfoot were wild flowers in the greatest profusion. Both high and low bush blackberry were in full blossom and even the somber live oaks were casting their old leaves and substituting a newer and fresher foliage. The road stretching straight ahead before me seemed to close in a cul-de-sac in the distance where the pines came together in converging lines before the eye and the bright glossy green of the undergrowth of saw palmetto filled in a solid mass beneath. It is a (194) curious optical delusion in these open pine woods which makes the thinly growing trees seem thicker together in the distance, an effect cumulative to the point where vision altogether fails to penetrate farther. I find myself constantly expecting to reach a thickly growing grove in the distance which as I approach invariably becomes thinner, until the point is reached, I find the woods as open as they have been all along behind me. I saw a great many birds but none worthy of especial note. Shot a pair of Red-cockaded Woodpeckers. Their notes are exactly like those of the Gray-headed Nuthatch but perhaps a trifle louder. I constantly fail in distinguishing them, even when the birds were in the same tree. (This is a natural mistake. Only when one knows the note of each species well does one realize the really great difference in them.—Ed.) In all its motions this bird resembles closely the Downy Woodpecker. It is exceedingly tame and unsuspicious, but rather restless.

(195) Sunday, March 24. Cloudless but very smoky. In the afternoon drove over to Borel with C. and called on the Fordhams there. A Cooper's Hawk comes regularly to the poultry yard and takes a chicken for its daily meal. While we were there a great outcry among the poultry announced the approach of their enemy. The next instant he was among them and, seizing a small black chicken, made off with it to the woods.

There is a double migration of Cedar Birds here as at the North. About two weeks since those which had apparently been resident here thro' the winter departed, leaving with the last stragglers of the Robins. Within a few days immense flocks have suddenly appeared and are now feasting upon the wild olive berries. The winter birds

did not come into the village at all but with the Robins fed on the gallberries in the woods.

Leave St. Mary's

(196) Monday, March 25. Clear and cool. Rose at 6 o'clock and left St. Mary's at 7:30 A.M. Henry Pratt took us over to Fernandina in his sail boat. On the way down the river saw a pair of Black Skimmers flying close to the surface with their lower mandibles cleaving the water. Occasionally they would rise a few yards into the air and then depress their flight to the former level.

At Fernandina we had two hours to spare before the train started so I hired a buggy and with C. drove over to the beach. Saw a number of birds there. As we crossed the sandhills, a large flock of Little Blue Herons was passing north over the ocean keeping steadily along just above the surface and outside the breakers. Only five birds were in adult plumage, the other—some twenty or thirty in number, being either white or piebald. They flew slowly as if tired and in a very compact body.

On the beach were Sanderling, Semipalmated, Piping and Wilson's Plover feeding on the smooth sandy beach. (Just as one will see now in March.—Ed)

Taking the cars at 11 A.M. we reached Jacksonville at 2:45 P.M.

1500 Walnut Street Building
Philadelphia, Pennsylvania

GENERAL NOTES

KING EIDER TAKEN NEAR SAVANNAH.—On November 8, 1953, a large sea duck was taken on that portion of the Inland Waterway in Chatham County, Georgia, known as the Vernon River at a point about twelve miles southeast of Savannah. It was recognized as an unusual bird and given to me for identification. With the aid of Ivan Tomkins, it was identified as a King Eider (*Somateria spectabilis*). The brown and black coloring indicated the bird was either a female or an immature male. Sex could not be determined. A skin was made and is now in Ivan Tomkin's possession for further study.—HERMAN W. COOLIDGE, *Isle of Hope, Savannah, Georgia*.

GOLDEN PLOVER AND ARKANSAS KINGBIRD IN CHATHAM COUNTY.—A single Golden Plover (*Pluvialis d. dominica*) came into a fresh-water pool three miles east of Savannah and was collected on November 8, 1953. The bird had a partly healed injury on the breast from an unknown cause, but otherwise was in good flesh.

On Sunday, November 29, 1953, two Arkansas Kingbirds (*Tyrannus verticalis*) were seen on Fort Screven, Tybee Island, and after a moderate amount of search one was collected. This bird, a female, had the skin of the abdomen bare as in incubation.—IVAN R. TOMPKINS, 1231 50th Street, Savannah, Georgia.

BLUE GOOSE WINTERS NEAR ATLANTA.—On November 9, 1952, while investigating a report that a goose had arrived at the estate of Mr. Walter Candler near Atlanta in DeKalb County, Georgia, I was successful in finding a single sub-adult Blue Goose (*Chen caerulescens*) on the pond of the estate. The bird consorted with a group of Peking Ducks which Mr. Candler maintained on the pond. Later in the season, as the goose remained, a number of persons was enabled to observe it at very close range. The bird became rather tame and would readily take corn or other grain with the domestic ducks almost at the feet of the observers. I am uncertain of the exact date of departure of this bird; however, Mrs. Henry Sacre reported to me that the goose left during the third week of March 1953 or thereabouts.—WILLIAM W. GRIFFIN, 3232 Pine Ridge Road, N.E., Atlanta, Georgia.

SIGHT RECORD OF DICKCISSEL AT KINGSLAND.—On October 26, 1953, while watching several English Sparrows (*Passer domesticus*) feeding on the ground near my cottage at Kingsland, Georgia, I observed one bird in the group that appeared to be grayer in color than the others. I carefully studied this bird for some time with my field glasses from a distance of about fourteen feet, and was able to clearly distinguish the grayish upper parts and striped markings on the back. The pale yellow breast shading to white underneath, as well as the black markings on the throat, were also noted. With the aid of Peterson's *A Field Guide to the Birds* and Pough's *Audubon Bird Guide* as well as the detailed description given in Pearson's *Birds of America*, I was able to identify the bird as a Dickcissel (*Spiza americana*). The nearness of this bird while under observation, plus the fact that it was in company with English Sparrows, thus affording an excellent opportunity for comparison, makes me confident that my identification is correct.—S. C. WITTER, P. O. Box 354, Kingsland, Georgia.

LAPLAND LONGSPUR AT AUGUSTA, RICHMOND COUNTY, GEORGIA.—On Sunday, January 11, 1953, at the Municipal Airport (Bush Field), Augusta, Georgia, two Lapland Longspurs (*Calcarius lapponicus*) were observed by my son and me among a flock of 30 Horned Larks (*Eremophila alpestris*) feeding on the lawn in front of the terminal. These birds, one of which was rather brightly marked, were under observation at 15 yards in perfect light from 12:15 to 12:40 P.M. when they flushed and disappeared from view onto the airfield. The period of observation was a rather busy time at the airport and there was much traffic on the drive. When a noisy car passed or a door was slammed nearby the birds squatted motionless for a few moments then resumed feeding. This area which proved a favorite with the birds was sparsely covered with short grass and weeds interspersed with areas of bare clay.

Desiring to secure a specimen, permission was obtained the next day to try and collect one. I arrived at the airport at 4:00 P.M. and found the Horned Larks in the same area but neither of the longspurs was with them. Searching about the airport I located one longspur bathing in a rainpool with about 20 Water Pipits (*Anthus spinoletta*). This pool, located just within long gun range from the

north fence, was about 10 feet long, four wide and 2-3 inches deep. The longspur and pipits would fly over the pool, drop from the air into the water, splash water over themselves apparently by a rapid motion of the wings and take to the air again. Although the coming and going of the longspur could be followed by ear because of its characteristic twittering note uttered on the wing and its actions while bathing could be seen with the binoculars, it was impossible to get a satisfactory shot at it. This proved true on subsequent occasions when the birds could be found.

Still hoping to secure a specimen I returned to the airport January 13 at 3:45 P.M. During one and a half hours of observation one longspur came twice to the rainpool to bathe, each time in company with Water Pipits. The same afternoon another bird was noted feeding with nine Horned Larks on the front lawn where they were first discovered. Although several subsequent visits were made to the airfield, longspurs were seen only once, February 15. On this day two birds were again noted bathing in the rainpool along with Water Pipits, an estimated 200 of which were present on the field.

A year later on January 1, 1954, Glenna and Paul Schwab'e and I while making a Christmas Census stopped to look over the flock of 44 Horned Larks again wintering on the front lawn of the airport. Immediately we noted a well marked longspur among the larks not over 40 feet away. Previous and subsequent examinations of this flock revealed no other records of the longspurs during the season.

This is the second reported occurrence of the Lapland Longspur in Georgia, the first being two birds, one of which was collected, observed by Ivan R. Tomkins on Oysterbed Island, March 24, 1935.—J. FRED DENTON, 1510 Pendleton Road, Augusta, Georgia.

HOMING INSTINCT IN MALE CARDINAL.—On December 20, 1953, a few minutes before my family and I were leaving for Florida, I retrapped a male Cardinal (*Richmondia cardinalis*) wearing Fish and Wildlife Service band No. 52-131501. This bird was originally banded by me on January 27, 1953.

I put the bird in a carrying cage and carried him with us to the vicinity of Perry, Georgia, 100 speedometer miles south of Atlanta. At this point I released the bird. He flew to the top of a tall tree. After about one minute he flew high into the air, and after circling one time, departed in the general direction of Atlanta.

On December 31, 1953, this bird was back in my trap in Atlanta.

The above was not in the nature of an experiment but was for the purpose of getting rid of the bird. After he was banded originally, he not only returned to the trap continually but also chased other birds away from the trap. From the bander's point of view this sort of "trap habit" is not only a nuisance but also interferes with normal banding procedure.—RUFUS B. GODWIN, 1901 Windemere Drive, N.E., Atlanta, Georgia.

A DOWITCHER RECORD FOR MIDDLE GEORGIA.—On September 13, 1953, during a field trip of the Middle Georgia Audubon Society, a strange shorebird was located by G. G. Rohwer. At the time we were watching several small flocks of Killdeer (*Charadrius*

vaciferous) Pectoral Sandpipers (*Erolia melanotos*) and Least Sandpipers (*Erolia minutilla*) that were feeding around the shores of the small lake on Robins Air Force Base, Houston County. Careful study of the individual showed it to be a Dowitcher (*Limnodromus griseus*). It was 100 yards or more away from us across a bay of the lake, but we observed it closely through a 20-power telescope and noted the color pattern, the long bill, and the rapid jabbing of the bill into the wet ground around the lake margin. It was feeding in the immediate company of two or three Pectoral Sandpipers. The following day it was still at the lake, but I could not find it on either September 16 or 21.—NATHANIEL R. WHITNEY, JR., 4350 Meadowwood Drive, Rapid City, South Dakota.

RED CROSSBILLS IN ROME AREA.—On January 25, 1953, several Red Crossbills (*Loxia curvirostra*) appeared at my birdbath. One adult male, one immature male, and one adult female sat still while I studied them minutely with binoculars. It was hard to believe this bird which is rare in this section was really in my own backyard. I called Mr. G. L. Hight, Jr., who came over and saw the birds. There were about twenty in this flock. Eight birds were seen on the bird bath, and others were seen feeding on the seeds of the pine trees. These birds were seen until February 14, 1953. Mr. Hight banded three birds on February 7. The measurements on these birds were:

	Bill	Wing	Tail
Adult Female, Band No. 52-123605	.6"	3.1"	1.95"
Immature Male, Band No. 52-123606	.59"	3.16"	1.94"
Immature Male, Band No. 52-123607	.61"	3.34"	2.2"

Several bird students from Rome, Atlanta, and other points in Georgia were able to see these birds while in this area. Although keeping a close watch for them, they have not reappeared in 1954 to my knowledge.—DR. FRED CRENSHAW, *Batley Hospital, Rome, Georgia.*

RECENT LITERATURE

FUNDAMENTALS OF ECOLOGY. By Eugene P. Odum. W. B. Saunders Company, Philadelphia, 1953: vii, 384 pp., 119 figs. \$6.50.

Dr. Eugene P. Odum's *Fundamentals of Ecology* is a broad treatment of our essential knowledge of how organisms (both the plants and animals) react to their living and non-living environment and, in turn, how the environment acts on them. His book helps to satisfy a growing demand for an accurate, understandable, and usable textbook for the undergraduate student. Dr. Odum, in collaboration with his brother, Dr. H. Thomas Odum, has produced a short text (384 pages and 14 chapters) that is designed for a one term course—as the reviewer can testify, having just finished using it this spring.

Southern biologists will be pleased to note that Odum draws many of his excellent examples of various ecological conditions from the southeastern region of this country and his ornithological associates will be interested to find that he often selects birds to illustrate ecological concepts. The biologically inclined layman will discover that one need not be a professional to carry on accurate and signifi-

cant ecological research. A classical example of this cited by Odum is the excellent work on the song sparrow by a house-wife, Mrs. Margaret M. Nice of Columbus, Ohio.

Without slighting the outstanding ecological work on or before the turn of the century, Odum has given his book a modern "flavor." The majority of the references in his bibliography of over 300 papers are since 1940. It is a healthy sign that these papers are generously cited in the body of the text so that the student may know who did the work and also have ready access to primary sources.

The author's decision to divide his book into three sections dealing with *Principles and Concepts*, *Habitat Approach*, and *Applied Ecology* is both realistic and workable. This arrangement is also flexible enough for the instructor to vary assignments to meet specific local needs. Throughout his text, Odum emphasizes the fact that field experience is the heart of any ecology course and for a real understanding and feeling for the subject, the student must make observations first-hand.

Not only do the Odums write in an easy style pitched at the intelligent undergraduate level but also they explain essential terms by examples from both secular and scientific life. Their statements are clearly and concisely presented with pertinent explanations. They have used a system of cross-references which is tremendously helpful in bringing to bear all the information in the book on a particular subject.

Eugene Odum's book is not a carbon copy of past findings since both his and H. T. Odum's views are also expressed. This is particularly true concerning communities or organisms. Since the publication of classical studies by Elton on communities,¹ it has been the custom to construct graphic "pyramids" by plotting numbers of organisms against their size; thus, it is seen that in any major community (exclusive of parasites) there is a tremendous number of small rapidly reproducing forms. As one "builds" the pyramid, each level represents fewer and larger forms until at the top an apex of relatively few but largest animals is reached. Odum appreciates Elton's pyramid of numbers as being helpful to our further understanding of community relationships, but he also points out that pyramids based on living weights (biomass) of organisms as well as pyramids of energy (in calories) give a more basic understanding of complex community relationships than do mere numbers and size.

Ecologists have long relied on a complex nomenclature to describe the interaction (commensalism, mutualism, predation, etc.) of organisms. Not only has this system been cumbersome, but it has also lead to confusion. To resolve this difficulty, Odum has suggested a system of symbols (O, +, and —) to represent such relationships. He also urges the use of mathematical models in the form of simple equations to express such phenomena as growth, birth and mortality rates. By manipulation of these equations, new relationships may be revealed which would be difficult to predict by any other means.

1. Elton, Chas. 1927. *Animal Ecology* XX +209 pp. London, Sidgwick and Jackson, Ltd.

In almost all first editions there are some sections not as strong as others. These are revealed by use. Some students who may rely on this text without reference to the literature may need assistance from their instructors for a fuller interpretation of some graphs and equations. Subjects dear to the heart of the reviewer that have been omitted are a review of ecological methods; theories on animal migrations; the part ecology plays in relating genetics to speciation; and more material on the well documented but short section on *Applied Ecology*. These and other profitable changes will come in time, and we predict that the enthusiastic reception of the *Fundamentals of Ecology* will quickly exhaust the first printing and thus enable essential changes to be made in the next edition.

This book and others like it usher in a new era in Ecology. The younger student and experienced but non-professional naturalist can now have ready access to a growing and intensely interesting literature. There is no monopoly on accurate observations and intelligent theories and both of these are facilitated successfully by Odum's fresh and vigorous approach to old and complex problems.—W. D. BURBANCK, *Department of Biology, Emory University*.

NEWS AND COMMENTS

SPRING MEETING, 1954.—The thirtieth semi-annual meeting of the Georgia Ornithological Society was held in Augusta, Georgia, May 7, 8, and 9, 1954, with headquarters at the Hotel Bon Air.

Registration began on Friday night at a desk in the lobby of the hotel for early arrivals and was continued on Saturday from 10:00 A.M. until 5:00 P.M., with a total registration of fifty-nine.

An executive meeting was held during the luncheon period on Saturday.

During the afternoon many of the group went on rewarding field trips in Richmond County and returned in time for the scheduled visit to the Augusta Museum to see the Murphey bird collection and to the Garden Center to view an exhibition of bird paintings by Richard Parks.

At 7:00 in the evening seventy-four members and guests gathered at the Garden Center for the banquet, which was followed by the business meeting, presided over by the president, Mrs. Charles Neal. Her first act was to present to Tom and Hedwig Cater a birthday cake bearing two candles since the day was their joint birthday. The group sang "Happy Birthday" with good will.

The President thanked Herman Coolidge, First Vice President, for his efficient work in organizing the meeting. Mrs. Neal also expressed appreciation to the local group for the effective management of arrangements, with special mention of Mrs. Snyder, Chairman, and her co-workers, Miss Buckner, Miss Gates, and Mrs. Strauss.

Mrs. Snyder welcomed the Society on behalf of Augusta.

The President introduced Miss May Puett, President of the Carolina Bird Club, and Miss Frances Hames, President of the Key West Bird Club.

Mrs. Neal stated that it had been suggested that the fall meeting be held in Savannah. Other suggestions were solicited.

Mrs. Tom Cater gave the Regional Vice Presidents' reports and thanked them for their cooperation and for the concise form in which the reports were submitted.

In the absence of Harold Peters, Chairman of the Education Committee, Mrs. Tom Cater gave the report on the activity of that committee. The members of the committee are in favor of sponsoring a hawk and owl law similar to that which a number of other states have adopted. The President urged members to pass on any ideas and suggestions to the Education Committee.

The business meeting having been concluded, Herman Coolidge introduced Herbert Stoddard of Thomasville who gave an account of the progress of Thomas D. Burleigh's forthcoming book, *Georgia's Birds*. The completed manuscript has been edited and submitted to the Fish and Wildlife Service for approval and release for private publication. Plans for financing the publication can not be put into effect until this approval and release has been obtained. One of the original paintings made for the book and a reproduction of it were on display.

Mr. Stoddard was followed by Milton Hopkins who gave a paper on the status of Brewer's Blackbird in Georgia. He also displayed some interesting charts showing the length of singing periods of different birds, a result of notes taken by himself and Robert Norris.

Ivan Tomkins then delivered a paper on the calendar of the Eastern Willet on the Georgia coast. This paper was based on observations made over a period of many years by Tomkins and Gilbert Rossignol.

The final feature of the program was the showing of an excellent series of color slides of birds, animals, and plants by Ralph Ramsey.

On Sunday morning field trips were held along the Savannah River and in the pine lands. At noon a picnic was enjoyed at the recreation area of the New Savannah Lock and Dam south of Augusta. The combined count listed 107 species of birds. Among the interesting birds seen were the Mississippi Kite, Painted Bunting, and Swainson's Warbler at its nest.

NEWS OF MEMBERS AND FRIENDS.—At the last meeting of the American Ornithologists' Union ROBERT NORRIS was elected to full membership in that organization. ROBERT, who is studying at the University of California, will return to the East soon to teach at Duke University . . . DAVID JOHNSTON, also now at the University of California, will return to assume teaching duties at Mercer University.