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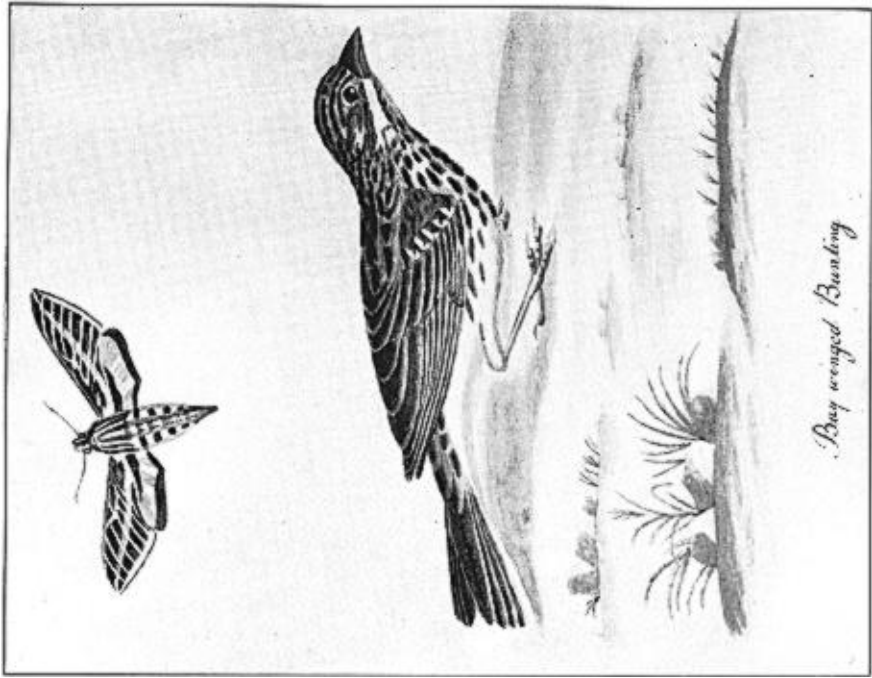
GEORGIA'S RARITIES FURTHER DISCOVERED IN A
SECOND AMERICAN PORTFOLIO OF
JOHN ABBOT'S BIRD PLATES.

BY SAMUEL N. RHOADS.

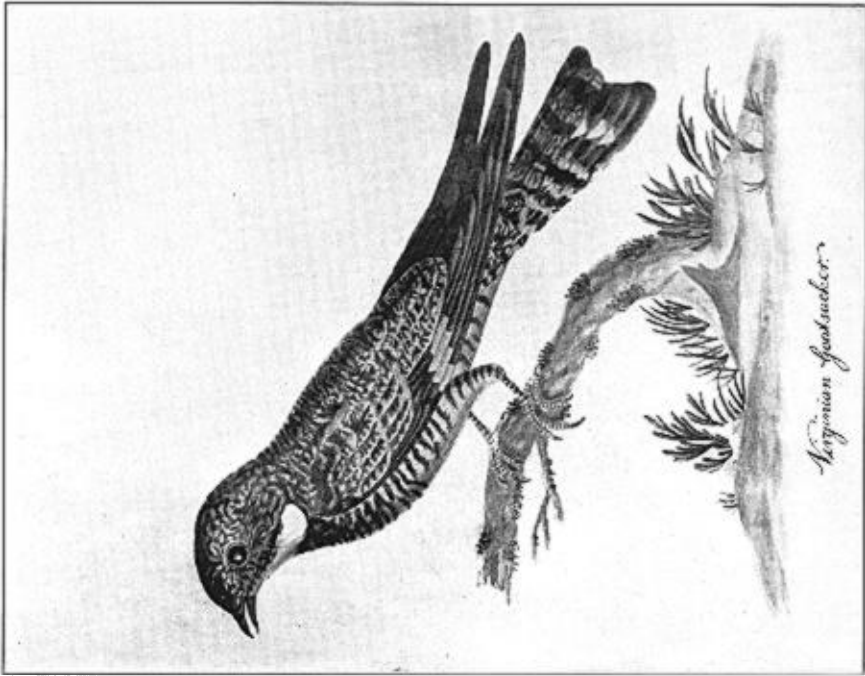
Plate IV.

If the expectant reader of this article will examine volume XIII of 'The Auk' for the year 1896 he will find, on page 204, the following title of a paper by Walter Faxon, 'John Abbot's Drawings of the Birds of Georgia'. I have worded my own subject to "carry on," as it were, an amplification of what was there published more than twenty years ago.

In brief, Dr. Faxon describes, with considerable minuteness, "a set of 181 water color sketches of birds," owned by the Boston Society of Natural History and labeled "Drawings of the Birds of Georgia by John Abbot." How the Society secured these was not known. They appear to have been originally classified, as a collection, by Abbot himself, and consecutively numbered from 1 to 200, Dr. Faxon inferring that nineteen of the original series had been lost. Abbot's handwriting, in pencil, consisting of names, largely in accord with the nomenclature of Wilson's 'Ornithology,' with memoranda of dimensions, migration data and color notes, appears on the plates, only one of which is inscribed (in ink) with Abbot's signature and the date, "1810."



Bay-winged Brantling



Virginia Yellowthroat

Unfortunately there is no mention of *locality* data, and the proof that they depicted specimens of the birds of Georgia only, and not also of the closely adjoining regions of South Carolina, appears to rest in that case, quite as much as in the one about to be narrated, largely on circumstantial evidence. Undoubtedly the great majority are Georgia records but whether all could be accepted as such, without question, in a present-day check-list, is doubtful.

Dr. Faxon goes on to give some account of this really remarkable naturalist, as the collector, artist and author of the earliest illustrated monograph of American insects, that splendid folio work of two volumes in colors, depicting the 'Rarer Lepidopterous Insects of Georgia.' Abbot was fortunate in having, as his editor and patron, Sir John Edward Smith in this publication, which appeared in London in 1797.

If he had been equally fortunate in securing an ornithological patron he would have forestalled by from fifteen to forty-five years many of the discoveries made in United States ornithology during the notable period covering the activities of Wilson, Audubon and Bonaparte.

So much by way of introduction; now for my story.

In December, 1916, I stopped at Savannah for two or three days, en-route for Cuba. During my stay I had the long anticipated satisfaction of visiting "Wormsloe," the country seat and plantation of the late Wymberley J. De Renne, situated on the Isle of Hope, one of the coast islands about three miles from Savannah.

Here is located, in a fine old colonial mansion the greatest and best single collection of books, manuscripts and other literature relating to the State of Georgia, and fittingly named by Lieut. Wymberley Wormsloe De Renne, the son and literary successor of Mr. De Renne, "*The Wymberley Jones De Renne Georgia Library.*" I was kindly escorted thither by Mr. L. L. Mackall of Savannah, the enthusiastic and efficient librarian of this fine collection, who, knowing my special taste for nature studies, soon produced some very precious items in that line. Among these was a folio volume of exquisitely drawn and colored original delineations of the reptiles and batrachia of Georgia painted by and for members of the noted Le Conte family.

Some of these were the originals of published illustrations of articles in scientific journals of an early day and in Holbrook's Herpetology. A companion volume to this one, both in size and modern binding, contained the water-color sketches of birds, forming the subject of this article. Mr. Mackall was anxious to have the tentative identification of these, as being of John Abbot's authorship, verified, but it was not until January of the present year that they were sent to me for that purpose. In this examination I have naturally made the archives of the Academy of Natural Sciences of Philadelphia and the good offices of the Editor of 'The Auk' my chief assistants.

The folio volume containing these illustrations was bound for Mr. De Renne in three quarter red morocco, say about twenty years ago, possibly longer. The date and source of purchase unfortunately cannot now be ascertained.¹ On the back of the binding is printed in gold: — "*Birds of Georgia*"; and at bottom: — "1797." There is no other attempt, either inside or outside of the volume, to record its authorship, origin or subsequent history.

A set of thirteen manuscript sheets, written in ink and of very recent date describes each plate in detail by number and name, with remarks as to pose, etc. These, together with a library reference filing card, stating that "the artist was probably John Abbot," were laid within the volume.

There are one hundred and twenty-two hand painted sheets of uniform size, make and quality of heavy, hand made, plate paper, some slightly discolored by age and moisture, one torn into and mended and the last one of the series lacking a considerable part of the upper margin, not affecting the illustration but removing the legend probably written on its back as in all other sheets in the set. There are no watermarks in the paper, as in the Faxon set, to indicate age, but it is similar in make-up to old English plate paper of the last two decades of the eighteenth century, and this, together with the nomenclature used by the artist, indicate that these sketches were made several years prior to those described by Dr. Faxon. The sheets measure nine and one-half by thirteen inches and evidently have not been trimmed since they were painted upon.

¹ As this paper goes through the press I learn that the plates were purchased for \$100. from Geo. D. Smith, a well known dealer of New York City, on April 23, 1906.

The accompanying half-tone illustrations (Plate IV) from two of the best of Abbot's sketches in this series, together with a reproduction of the artist's signature at end of his letter to George Ord,



will give a fair idea of his work and his autograph. Owing to the English names of the birds, given by Abbot below each, being written in red ink it was necessary to trace them over carefully in black ink on the prints from which these half-tones were prepared. While this does not materially alter the character of the handwriting it does not do justice to the neatness and smooth finish of the originals. With some exceptions, to be noted in the check-list of figured birds at the end of this paper, Abbot has aimed to write along the upper margin (or top) of the reverse side of each a repetition of the English name, and below this the binomial, followed by "length" in "inches." This also is written with red ink, which, curiously enough, has the same sort of peculiar sanguine, poke-berry tint which adorns alike the Cardinal, Scarlet Tanager, Purple Finch, and Red-headed Woodpecker!

It should be stated that the numerical sequence of plates in this portfolio and their consecutive numbering in rather crude lead pencilling is evidently modern and with no regard to system, zoological or artistic, as the quoted list will show.

Certainly Abbot had no hand in this feature of the collection. That he was responsible for all the red ink chirography on these sheets is however readily proved by a comparison of it with the handwriting of his fine folio autograph letter to Ord in the archives of the Academy of Natural Sciences which was published in full in 'The Auk' (1906, p. 365) by Dr. Witmer Stone.

In a comparative analysis of the two bird portfolios it will be seen that, of the ninety-two species identified in the De Renne series, there are twenty-seven species not present in the set described by Faxon. There are also two unidentified hawks, Plates 27 and 59, one of them possibly representing an additional species. These two, for convenience of reference, are designated

by an asterisk (*) in the list given. The two Abbot portfolios therefore represent 174 species, presumably all of birds procured in Georgia, and, for a period of approximately 110 years ago, a remarkable showing in the annals of early American Ornithology, produced as it was by an Englishman who was primarily a hard working field entomologist, dependent thereon for his living and at the same time remarkable for his accurate and beautiful sketches of insects and the trees and flowering plants upon which they feed. As intimated by Faxon, the number of bird species is also noteworthy because of the small number of marine or tide water forms depicted, due, no doubt, to the distance of sixty miles or more separating Abbot's home in Screven County from the seacoast.

Of gulls and terns, only two species each are given. Of the Limicoline Shore-birds, so abundantly represented by species frequenting the coast line of the Southeastern States, all of Abbot's plates show but seven species of those peculiar to the coast and some of these are known to straggle inland along such a waterway as the Savannah River, near which our artist's home was located. Comparing again with Faxon's list, we note that the De Renne series numbers twenty-one Warbler species to sixteen: also in Flycatchers (*Tyrannidae*) the ratio is four to one.

The De Renne series has thirteen plates of Hawks showing variations of probably eight species as against four species in the other series. The disparity in number of water-bird plates in the two folios is markedly in favor of the Boston Society's collection, being fifty-two to eleven. If our conjecture as to the Boston series being of later production is correct it is in accord with the natural trend of a collector's researches to go farther afield, and may be found to tally with Abbot's residence in or near Savannah for a period prior to his return to England.

It is unfortunate that Dr. Faxon did not publish at least a representative series of quotations from the pencil annotations which Abbot is stated to have made on his drawings, especially of the names or localities there given. One of the most interesting features of the collection here described is Abbot's nomenclature, both vulgar and technical, which I have taken pains to reproduce, without any alteration, and within quotation marks. It is desirable that some one, having access to the Boston Society's portfolio,

make a report on the noteworthy portions of those pencil notes which are said to lie in obscurity beneath the cryptic camouflage of Dr. T. M. Brewer. By so doing he may bring to light a few more secrets which time and patient research are adding to the real biography of the hermit naturalist of Georgia.

Some of Abbot's common names are recognizable as those of Catesby, Edwards and Pennant, his English models; a few are apparently quite local, as "Flax Bunting" for the American Goldfinch, "Cat Flycatcher" for the familiar Cat Bird, "Blue Warbler," not inaptly given to the Blue Bird, "Black Bunting" for Snowbird, "Pigeon Hawk" for Mississippi Kite, "Little Sparrow" for the "Chippy," etc. Some of the names are evidently Abbot's own for species he thought undescribed, "very rare," or that he could not identify: as "Barred-tail Sandpiper" for the Solitary species, "Black-rumped Sandpiper" for the Pectoral, "Yellow Warbler" for the Blue-winged Yellow, "Yellow-poll Warbler" for Chestnut-sided, "Georgia Wren" for Long-billed Marsh Wren and "Magnolia Warbler" for the Cape May species. His name of "Red-breasted Thrush" for our so-called "Robin" is worthy of universal adoption. His classing all the American "Starling" Blackbirds as "Oriole" strikes one nowadays rather strangely, though it has a more real and generic meaning than the vulgar name now applied to that group. It also seems a bit queer to think of Vireos as "Flycatchers," though Wilson so termed them while Audubon used the name as an alternative and more than half their food is flies or flying. We are not a little indignant, too, to find our familiar and much loved Song Sparrow damned by such faint praise as to be called the "Spotted breasted Sparrow"! No doubt a careful analysis of these English names would reveal much as to the artist's real sources of literary knowledge, both of books and persons. That he was in steady correspondence with English men of science is matter of record and no doubt some of his contemporaries abroad received from him the types and drawings of American birds, now recognized, which were there first described. His personal association with Alexander Wilson in Georgia is recorded by Ord, but to what extent the 'American Ornithology' is indebted to the discoveries of the Georgia naturalist may now be left to the research of others.

Faxon has referred to the work of Abbot from both artistic and scientific aspects and I fully agree with his conclusions. It may seem invidious to compare his bird sketches with those of Wilson, whose perfected illustrations have so long been over-praised by many, who, appreciating his literary and field work and his desperate struggles in the publication of his 'Ornithology,' have been unduly biased in his favor as an artist. Anyone examining the uncolored pencil and pen drawings which formed the great bulk of the originals which Wilson handed to his engraver, Alexander Lawson, will be convinced that Abbot's colored plates are in a different class. Several of Wilson's original sketches, or rough drafts, on scraps of paper, are mounted in a portfolio presented to the Academy of Natural Sciences of Philadelphia many years ago by the descendants of Lawson. In this, Lawson has mounted the Wilson drafts opposite a highly finished proof impression of the engraved plate in two states, the one, plain, on India paper, the other, carefully colored, on heavy plate paper. An examination of these will convince the most skeptical how much of the credit given the authors of illustrated works is rightly due to their engravers. Even Audubon was no exception to this. Abbot's great ability with the brush, as an off-hand colorist and at the same time a faithful recorder of seasonal and racial plumages in birds, is on a par with his work on moths and butterflies and their larvæ. Considering the difficulty of depicting, in natural pose and proportion, the mounted bird specimens which evidently were his models, as compared with copying from flat mounts of the *Lepidoptera*, it is surprising how well his portfolios were executed in one of the "Lost Towns of Georgia" at a period when the crude illustrations of ornithological literature had advanced little beyond those of the age of Linnæus. The remarkable similarity of make-up and style between Abbot's bird plates and those of George Edwards in his fine old color plate quartos of the 'Natural History of Birds,' begun in 1743, convinces me that the inspiration came from that publication more than any other, especially in view of the large number of American species which were there figured for the first time. We see in both the stereotyped accessories of the taxidermist,—a miniature tree, often leafless, decked with bits of moss and lichens, a conventional stand, or groundwork of grass patches,

moss, pebbles, frozen flowers, Dutch tulips, etc. On the margins, — sky, if you think so, — sports a curious fly or beetle, a gorgeous moth or even a bug or spider, in brilliant contrast to the sombre sparrow or blackbird that forms the centerpiece.

On the other hand, to compare Abbot's work to that of Audubon would be as far from the mark as to perpetuate the fallacy of making such comparisons between Audubon and Wilson. Of the three, Audubon alone was the real bird artist, revealing life, action, color, shade and landscape often in wondrous combination. As such, he was the greatest, and for many years, the only pioneer in artistic and natural illustration of faunal ornithology.

None of Abbot's birds in the De Renne portfolio show action, other than perfunctory woodpecking by a woodpecker, the eyeing of a green worm by the "Toupet Tit," the half opened wings of the "Red-winged Oriole" to display his epaulets, the inspection of a curious red fish by the Kingfisher, whose quizzical look is quite amusing, but not more so than that of the "Tyrant Shrike" in the garb of a Kingbird leaning over to inspect a green grasshopper seated upon the ground! Abbot had a curious and unaccountable trick of placing the pupils of his bird's eyes in a forward position. On this account, most of them may be said to be squinting or cross-eyed when there is no occasion for it. Not one in five has the pupil centered as is normally the case in nature. The plate of two Common Crossbills has the eyes centered but in other respects as to markings, pose, etc., it is the only one which does not seem to belong to the collection. Such a rare bird is this, in the lowlands of Georgia, and so crude is the sketch, it seems likely he copied the drawing from some other source than the birds themselves. The fine mottling and vermiculation of the plumages of the Chick-will-widow and the Night Hawk show not only great fidelity to nature but also most skilful handling of brush and colors. Perhaps the most artistic picture is that of a pair of Gnatcatchers, but those of the Goldfinches, the Redstarts and the Kinglets are nearly as good. His "Bay winged Bunting" and "Virginian Goatsucker" are here reproduced as two of the best examples of Abbot's art.

In conclusion, let me emphasize the conviction, that, not only in England, to which country Abbot returned and there ended his days at an advanced age, but also in the United States, there rest

concealed many manuscripts and other archives which would not only satisfy our curiosity about the man but would reveal historic and scientific data. His portrait, in colors, was published in Scudder's work on American insects, but in the same volume Scudder says that no specimen of his autograph name was available. The reproduction of an example of it with this paper and the information in the fine letter from which it is taken should be an encouragement to our English brethren to "start something" in this line of enquiry. Here are some queries: — Where was Abbot born and when? When did he return to England and when deceased? Was he married, and a parent? Did he own land in either country and keep house or board in lodgings? Where was he buried, and is there any notice of his death in local newspapers or in genealogies of Abbot families?

If the correspondence and manuscript collections of Sir James Edward Smith are preserved they will almost certainly yield some of these desiderata. This accomplished botanist, author and patron of science was founder and first president of the Linnæan Society of London. As Smith owned the unrivalled autograph collections of Linnæus and of many of his celebrated correspondents, it is probable these treasures yet exist in the archives and are accessible to students.

Let us hear from them by return mail.

List of John Abbot's Water Color plates of the "*Birds of Georgia*," now bound in one folio, one-half red morocco binding, belonging to the "Wymberley Jones De Renne Georgia Library," Wormsloe, near Savannah, Georgia.

Copied from the plates and identified February, 1918, by S. N. Rhoads, Haddonfield, N. J. (In the order of binding.)

1. "White eyed Flycatcher. *Muscicapa cantatrix*, length 5 Inches" = *Vireo griseus griseus*, ♂.
2. "Flax Bunting—length 4½ inches." = *Astragalinus tristis tristis*. (♂ and ♀).
3. "Fowl Hawk" = *Accipiter velox*.
4. "Toupet Titmouse. *Parus Bicolor*: length 6¼ inches." = *Bæolophus bicolor*.

5. "Chuck wills widow. Length $12\frac{1}{2}$ inches." = *Anrostomus carolinensis*.
6. "Bay-winged Bunting. *Emberiza Graminea*. length $6\frac{1}{2}$ inches" = *Poocetes gramineus gramineus*.
7. "Virginian Goatsucker. *Caprimulgus Virginianus*, length 8 inches." = *Chordeiles virginianus virginianus*.
8. "Great Carolina Wren. *Certhia Caroliniana*, length $5\frac{3}{4}$ inches." = *Thryothorus ludovicianus ludovicianus*.
9. "Great Meadow Lark. *Alauda Magna*, length $9\frac{1}{2}$ inches." = *Sturnella magna argutula*, ♂.
10. "Cat Flycatcher *Muscicapa Carolinensis*, length $8\frac{1}{2}$ inches" = *Dumetella carolinensis*.
11. "Pine-creeping Warbler. *Sylvia Pinus*, length $5\frac{1}{2}$ inches." = *Dendroica vigorsi*, ♂ and ♀.
12. "Chestnut-winged Oriole. Length $7\frac{1}{2}$ inches" = *Agelaius phoeniceus phoeniceus*, ♂.
13. "Barred tail Sandpiper, length $8\frac{1}{2}$ ins." = *Helodromas solitarius solitarius*.
14. "Loggerhead Shrike. *Lanius Carolinensis*, length $8\frac{1}{2}$ Inches." = *Lanius ludovicianus ludovicianus*.
15. "White-throated Finch. *Fringilla Pensilvanica*, length $6\frac{1}{2}$ Inches." = *Zonotrichia albicollis*, ♂.
16. "Brown Thrush. *Turdus fuscus*, length 7 Inches" = *Hylocichla ustulata swainsoni*?
17. "Indigo Bunting. *Emberiza cyanea*, length 5 Inches." = *Passerina cyanea*, ♂.
18. "Golden-legged Sandpiper. Length 12 Ins." = *Totanus melanoleucus*.
19. "Black Bunting. *Emberiza Hyemalis*. length $5\frac{1}{2}$ Inches." = *Junco hyemalis hyemalis*.
20. "Black and White Creeper. *Certhia maculata*, length $5\frac{1}{4}$ Inches." = *Mniotilta varia*, ♂.
21. "Towhe Bunting *Emberiza Erythrophthalma*. length $8\frac{1}{2}$ Inches." = *Pipilo erythrophthalmus erythrophthalmus*, ♂.
22. "Yellow breasted Warbler. *Sylvia Trichas*. length $5\frac{1}{2}$ inches." = *Geothlypis trichas ignota*, ♂.
23. "Black rumped Sandpiper. length 9 inches." = *Pisobia maculata*.

24. "Little Thrush. *Turdus Melodes*. length 7 Inches." = *Hylocichla fuscescens*.
25. "Mottled Oriole. length 10 Inches" = *Euphagus carolinus*, ♂ in winter.
26. "Hairy Woodpecker. *Picus villosus*. length 8½ inches." = *Dryobates villosus auduboni*.
- *27. "Sharp-tailed Hawk. *Falco caudacuta*. length 20 Inches. very rare." Not identifiable. Possibly a *Buteo*.
28. "Yellow bellied Woodpecker. *Picus varius*. length 8 Inches." = *Sphyrapicus varius varius*, ♂ old adult in spring; with remarkable amount of white on upper parts.
29. "Red shouldered Hawk. Female." = *Buteo lineatus alleni*.
30. "Cockaded Woodpecker. *Picus querulus*. length 8½ inches." = *Dryobates borealis*, ♂.
31. "Black cap Hawk. female." = *Accipiter cooperi*.
32. "Brown Lark. Length 6½ inches." = *Anthus rubescens*.
33. "American Teal. *Anas Carolinensis*. length 14 Ins." = *Nettion carolinense*, ♂.
34. "Least Nuthatch. *Sitta Pusilla*. length 4¼ Inches." = *Sitta pusilla*.
35. "Pewit Flycatcher. *Muscicapa Nunciola*. length 7 inches." = *Sayornis phabe*.
36. "American Crossbill. *Curvirostra Americana*. length 5¾ Inches." = *Loxia curvirostra minor*. ♂ and ♀.
37. "Carolina Chatterer. *Ampelis Garrulus*. length 7 Inches." = *Bombycilla cedrorum*.
38. "Marsh Hawk. Length 20 inches." = *Accipiter cooperi*.
39. "Rice Bunting. *Emberiza Oryzivora*. length 6¼ Inches." = *Dolichonyx oryzivorus*, ♂, spring adult.
40. "Red winged Oriole. *Oriolus Phanicceus*. length 8½ Inches." = *Agelaius phanicus phanicus*, adult ♂.
41. "Canada Titmouse. *Parus Atricapillus*. length 4½ Inches." = *Penthestes carolinensis carolinensis*, ♂.
42. "Painted Bunting. Nonpareil. *Emberizis Ciris*. length 5½ inches." = *Passerina ciris*, adult ♂ and ♀.
43. "Virginia Rail. *Rallus Virginianus*. length 13 Ins." = *Rallus elegans*.
44. "Hooded Warbler. *Sylvia Mitrata*. length 5½ Inches." = *Wilsonia citrina*, ♂ and ♀.

45. "Ground Pigeon. *Columba passerina*. length 7 Inches." = *Chæmepelia passerina terrestris*.
46. "Yellow headed Warbler. Length $4\frac{1}{2}$ Inches. Very rare." = *Dendroica virens*, Juv. ♂, or ♀ in fall plumage?
47. "Red breasted Thrush. *Turdus Migratorius*. length 10 Inches." = *Planesticus migratorius migratorius*.
48. "Red Grosbeak. Female." = *Zamelodia ludoviciana*.
49. "Swamp Sparrow. *Fringilla Palustris*. length $5\frac{1}{2}$ Inches." = *Melospiza georgiana*.
50. "Mimic Thrush *Turdus Polyglottus*. length $9\frac{1}{2}$ Inches." = *Mimus polyglottos polyglottos*.
51. "Yellow poll Warbler. Length $5\frac{1}{4}$ inches. very rare." = *Dendroica pensylvanica*, spring adult ♂.
52. "Common Creeper. *Certhia Familiaris*. length $6\frac{1}{2}$ Inches." = *Certhia familiaris americana*.
53. "Golden crowned Wren. *Motacilla Regulus*. length 4 Inches." = *Regulus satrapa satrapa*.
54. "Fox coloured Sparrow. *Fringilla Rufa*. length 7 Inches." = *Passerella iliaca iliaca*.
55. "Ferruginous Thrush. *Turdus Rufus*. length 11 Inches" = *Toxostoma rufum*.
56. Passenger Pigeon. *Columba Migratoria*. length 16 Inches." = *Ectopistes migratorius*, ♂.
57. Carolina Pigeon. *Columba Carolinensis*. length $12\frac{1}{2}$ Inches." = *Zenaidura macroura carolinensis*, ♂.
58. "Purple Swallow. *Hirundo Purpurea* length $7\frac{3}{4}$ Inches." = *Progne subis subis*, ♂.
- *59. "Slate-coloured Hawk. *Falco Pennsylvanicus*. length $13\frac{1}{2}$ Inches. Female 16. [Inches]." = Apparently a hybrid between *Accipiter cooperi* and *Falco columbarius*! Not *Buteo platypterus*. May be *Accipiter velox*.
60. "Sparrow Hawk. female." *Falco sparverius sparverius*.
61. "Blue Warbler. *Sylvia Sialis*. length 7 Inches." *Sialia sialis sialis*, ♂.
62. "Blue eyed Warbler. *Sylvia Citrinella*. length $4\frac{3}{4}$ Inches." = *Dendroica æstiva æstiva*, ♂.
63. "Great Thrush. *Turdus Magnus*. length $7\frac{1}{2}$ Inches" = *Hylocichla mustelina*.

64. "Yellow rump Warbler. *Sylvia Coronata*. length 6 Inches." = *Dendroica coronata*. Spring ♂ and ♀.
65. "Yellow throated Warbler. *Sylvia Flavicolis*. length 5¼ Inches." = *Dendroica dominica dominica*. ♂ Spring.
66. "Belted Kingfisher. *Alcedo Alcyon*. length 12¼ Ins." = *Ceryle alcyon alcyon*; ♀ with fish.
67. "Black-throated Warbler. *Sylvia Canadensis*. length 5¼ Inches." = *Dendroica caerulescens cairnsi*. Spring ♂, with black-spotted back.
68. "Black cap Hawk. *Falco Atricapillus*." = *Accipiter cooperi*. (See No. 31.)
69. "Black-headed Nuthatch. *Sitta Carolinensis*. length 5¼ Inches." = *Sitta carolinensis carolinensis*.
70. "Pigeon Hawk, or Louisiana Kite. *Falco Columbarius* length 14½ Inches." = *Ictinia mississippiensis*.
71. "Black-billed Cuckoo. *Cuculus Erythrophthalma*. length 11½ Inches." = *Coccyzus erythrophthalmus*.
72. "Noisy Plover. *Charadrius Voceferus*. length 10 Ins." = *Oxyechus vociferus*.
73. "Spotted breasted Sparrow. *Fringilla Melodia*. length 5 Inches." = *Melospiza melodia melodia*.
74. "Yellow Warbler. Length 5¾ Inches. rare." = *Vermivora pinus*; Spring ♂.
75. "Cardinal Grosbeak. *Loxia Cardinalis*. length 9 inches." = *Cardinalis cardinalis cardinalis* ♂.
76. Chicken Hawk. Length 17 Inches." = *Buteo lineatus alleni* in immature plumage.
77. "Carolina Cuckoo. *Cuculus Americanus*. length 12 Inches." = *Coccyzus americanus americanus*.
78. "Little Hawk. Length 10 inches." = *Buteo platypterus*.
79. "Water Thrush. *Turdus Aquaticus*. length 6 inches." = *Seiurus motacilla*.
80. "Boat-tailed Grackle. *Gracula Barita*. length 13 Inches." = *Quiscalus quiscula aglaeus*, ♂.
81. "Wood Pee wee Flycatcher. *Muscicapa Rapax*. length 6 Inches." = *Myiochanes virens*.
82. "Yellow red poll Warbler. *Sylvia Petechia*. length 5½ Inches." = *Dendroica palmarum hypochrysea*, ♂ and ♀.

83. "Aculeated Swallow. *Hirundo Pelasgia*. length $5\frac{1}{4}$ Inches." = *Chætura pelagica*.
84. "Ruby crowned Wren. *Sylvia Calendula*. length $4\frac{1}{2}$ inches." = *Regulus calendula calendula*, ♂ and ♀.
85. "Golden crowned Thrush. *Turdus Aurocapillus*, length 6 Inches." = *Seiurus aurocapillus*.
86. "Sharp-tailed Finch. *Fringilla Caudacuta*. length $4\frac{3}{4}$ inches." = *Ammodramus lecontei*, ♂.
87. Tyrant Shrike. *Lanius Tyrannus*. length 8 Inches." = *Tyrannus tyrannus*.
88. "Georgia Wren. Length 5 Inches. very rare." = *Telmodytes palustris* (subsp.?).
89. "Red-shouldered Hawk. *Falco Lineatus*. length 19 Inches." = *Buteo lineatus alleni*, ♂.
90. "Red Tanager. *Tanager Rubra*. length 7 inches." = *Piranga erythromelas*, ♂.
91. "Yellow breasted Flycatcher. Length $5\frac{1}{2}$ Inches." = *Lanivireo flavifrons*.
92. "Great Heron. *Ardea Herodias*. Length 4 feet." = *Ardea herodias herodias*.
93. "Summer Sparrow. Length 6 Inches." = *Peucæa æstivalis bachmani*.
94. "Prairie Warbler. *Sylvia Minuta*. length $4\frac{1}{4}$ Inches." = *Dendroica discolor*, ♂.
95. "Blue yellow backed Warbler. *Sylvia Pusilla*. length $4\frac{1}{4}$ Inches." = *Compothlypis americana americana*; 2♂'s.
96. "Crested Flycatcher. *Muscicapa Crinita*. length $9\frac{1}{2}$ Inches." = *Myiarchus crinitus*.
97. "Yellow winged Sparrow. *Fringilla Passerina*. length 5 Inches." = *Ammodramus savannarum australis*.
98. "Brown Gallinule. Length 12 Inches." = *Gallinula galeata*.
99. "Mottled Oriole. Female." = *Euphagus carolinus*, ♀.
100. "Marsh Wren. *Certhia Palustris*. length 4 Inches." = *Cistothorus stellaris*.
101. "Spotted Heron. Length $23\frac{1}{2}$ Inches" = *Nycticorax nycticorax nævius*. Juv.
102. "Black-crowned Warbler. Length $5\frac{1}{4}$ Inches." = *Dendroica striata*, ♂.

103. "Black headed Flycatcher. *Muscicapa Ruticilla*. length $5\frac{1}{2}$ Inches." = *Setophaga ruticilla*. ♂ and ♀, ad.
104. "Red eyed Flycatcher. *Muscicapa Olivacea*, length 6 Inches." = *Vireosylva olivacea*.
105. "Orchard Oriole. *Oriolus Castanus*. length $6\frac{1}{2}$ Inches" = *Icterus spurius*, ad. ♂.
106. "Blue Grosbeak. *Loxia Cærulea*. length $6\frac{1}{2}$ Inches" = *Guiraca cærulea cærulea*. ad. ♂.
107. "Little Sparrow. Length $5\frac{1}{2}$ Inches." = *Spizella passerina passerina*, ♂ and ♀, ad.
108. "White billed Woodpecker. *Picus Principalis*. length 20 Inches." = *Campephilus principalis*; ad. ♂.
109. "Red headed Woodpecker. *Picus Erythrocephalus*. length $9\frac{1}{4}$ Inches." = *Melanerpes erythrocephalus*.
110. "Mississippi Kite. *Falco Misisippiensis*. length 2 feet." = *Elanoides forficatus*.
111. "Little Woodpecker. *Picus Pubescens*. length $6\frac{1}{4}$ Inches." = *Dryobates pubescens pubescens*, ♂.
112. "Worm eating Warbler. *Sylvia Vermivora*. length $5\frac{1}{4}$ Is." = *Helmitheros vermicivorus*.
113. "Black Oriole. *Oriolus Niger*. length 10 Inches." = *Euphagus carolinus*, Spring ♂.
114. Solitary Flycatcher. *Muscicapa Solitaria*. "length $5\frac{1}{2}$ Inches." = *Lanivireo solitarius* (subsp.?).
115. "Screech Owl. Length $8\frac{1}{2}$ Inches." = *Otus asio* (subsp.?).
Gray phase.
116. "Brown Ibis. *Tantalus Fuscus*. length 2 feet." = *Guara alba*, juv. ♀.
117. "Small blue gray Flycatcher. *Muscicapa Cærulea*. length $4\frac{1}{2}$ Inches." = *Poliophtila cærulea cærulea*. Ad. ♂ and ♀.
118. "Wood Ibis. *Tantalus Loculator*. length 3 feet." = *Myceteria americana*.
119. "Gold winged Woodpecker. *Picus Auratus*. length 12 Inches." = *Colaptes auratus auratus*; ad. ♂.
120. "Carolina Woodpecker. *Picus Carolinus*. length $12\frac{1}{2}$ Inches." = *Centurus carolinus*; ad. ♂.
121. "Prothonotary Warbler. *Sylvia Protonotarius*. length $5\frac{1}{2}$ Inches." = *Protonotaria citrea*; Ad. ♂ and ♀.
122. "Magnolia Warbler." = *Dendroica tigrina*, Ad. ♂.

List of Insects represented in Abbot's Portfolio of Georgia Birds.

- Plate 6. "*Sphinx lineata*."
 " 20. "Small blue Butterfly" = *Lycæna*.
 " 25. "*Noctua guaræ*."
 " 32. "Great Tiger Moth" = *Arctia*.
 " 45. "Clouded yellow Butterfly" = *Cobias*.
 " 61. "Great meadow brown Butterfly" = *Satyrus*.
 " 62. "Purple hair streak Butterfly" = *Thecla*.
 " 65. "None so pretty Moth" = *Deiopeia*.
 " 67. "Cream spotted Tyger Moth." = *Callomorpha*.
 " 85. "*Papilio arythia*" = *Junonia*.
 " 87. (Grasshopper on ground; not named) = *Chortophaga*.
 " 88. "Ajax Butterfly." = *Papilio*.
 " 91. "Yellow spotted Tyger Moth" = *Alypia*.
 " 106. "Small yellow Butterfly" = *Terias*.
 " 111. "Yellow hook tip Moth" (Bombycid?).
 " 122. (Butterfly — name cut off) = *Agraulis*.

 NOTES ON THE ANATOMY OF THE CUBAN TROGON.

BY HUBERT LYMAN CLARK.

THANKS to the kindness of Mr. Outram Bangs and Mr. J. L. Peters, a Cuban Trogon (*Priotelus temnurus temnurus*) collected by Mr. Peters, was some time ago placed in my hands for study. It was well preserved in alcohol and in excellent condition.

The pterylosis of the trogons was described by Nitzsch, who examined four species, but probably from skins. Subsequent writers seem to have relied on Nitzsch's figures. The spinal feather tract is quite passerine and those of the ventral surface are nearly as much so. The Cuban Trogon was not however seen by Nitzsch and shows some peculiarities which are worthy of descrip-