

elevation of the larger islands, especially of Vitilevu, occurred during tertiary time.

The labor of excavating these sedimentary deposits, both stratified and other, is by no means difficult, and rarely calls for any tools except pickax and shovel. It was by these simple means that the present fossil was unearthed.

From the same excavation were taken a number of other organized petrefactions—shells of mollusks, leaves, small cocoanuts, branches of trees, etc., evidently fallen into the fresh volcanic stream of soft mud, beneath which they sank, perhaps to be still more deeply buried by further waves of hot, semi-liquid material. It was an ideal preservative—this aseptic, pultaceous, marly mudstone, and in that particular reminds one of the tarry lakelets that engulfed and preserved through geologic ages the wild life of the Los Angeles asphalts. In any event, all the resurrected remains found in the Suvan soapstones had preserved their external markings despite the many eons they had lain in their rocky bed.

In this connection, H. B. Brady (*Quarterly Journ. Geolog. Soc.*, Vol. XLIV, 1888) believes that the volcanic mud-rocks of Vitilevu are undoubtedly of post-tertiary origin. Samples of Suva soapstone examined by him were found to contain 5 to 6 per cent of lime and displayed shells of pteropods and other mollusks, foraminifera, etc., in deposits of different heights up to 100 feet above sea level. All but five species of the foraminifera are known to be now living in the Pacific.

Kandy, Ceylon.

BIRDS OF BARDSTOWN, NELSON COUNTY, KENTUCKY.

BY BENEDICT J. BLINCOE.

DURING the ten years from 1911 to 1921, I identified one hundred and fifty-seven bird species in the vicinity of Bardstown, Nelson County, Kentucky. About thirty years before my observations commenced, Charles Wickliffe Beckham collected and observed at Bardstown, and in 1885, his 'List of Birds of Nelson County,' comprising one hundred and seventy-one species, was published by the Kentucky Geological Survey, his studies covering a period

of five or six years subsequent to 1877. It is not to be expected that the bird life of a third of a century ago would remain constant when such great changes, brought on by the advances of civilization, have come over the country, destroying the natural haunts of many birds, and at the same time opening the way for others. Therefore, in the preparation of this paper the fundamental motive has been toward comparison with rather than criticism of Beckham's records.

Bardstown lies about six hundred and thirty-five feet above sea-level and is situated near the center of Nelson County about thirty-nine miles southeast of the city of Louisville. Nelson County is on the western rim of the famed "Blue Grass Region;" about one-half its area, mainly north and east of Bardstown, is gently rolling, well cleared, productive land that is typically "Blue Grass" in appearance. To the south and west, approaching within five or six miles of Bardstown, there extends across the country a range of conical hills which appear almost mountainous against the horizon, and are spoken of throughout Kentucky as "The Knobs." Less productive than the northern and eastern sections of the county, the "knob" region is considerably more wooded, but everywhere the big timber has been cut. In the immediate vicinity of Bardstown thickets of small area individually are numerous. Several varieties of oak, white ash, sugar maple, white and red elm, tulip tree, wild black cherry, black walnut, pig hickory, hackberry, redbud, mulberry, sassafras and persimmon are among the more common deciduous trees of general distribution. The beech is quite common in some places and the sweet gum occurs in the "knobs." Sycamores and willows are abundant along the streams. The red cedar is one of the predominating trees, often forming pure stands in small thickets, particularly on the thin soil of rocky ridges or hillsides. The scrub pine is rather common in some sections, mainly in the hills.

As Beckham remarks in his report, water birds are not numerous as there is but little to attract them. The Beech Fork River crosses the county near the center flowing through a rather narrow valley in which the formation of extensive sloughs has been impossible. There are no swamps or natural lakes and artificial ponds are few; consequently the scarcity of water birds is largely due to the lack of their natural element, water.

As an amateur bird student my field study was done mainly on Sundays and at odd times during slack seasons on the farm on which I lived. While the country near my home was more thoroughly worked over, frequent short trips were made in several other localities in the county. I collected or examined in hand one hundred and fifteen species mentioned in the list. My observations were suspended from May 1, 1918, to June 21, 1919, during which time I was in the U. S. Army, otherwise they were continuous from the summer of 1911 to September 1, 1921. As far as possible I kept record of all species seen each day, while at my work as well as on field trips; thus I was able to keep in close touch with the birds and their movements, and to note many incidents that would not have come to my attention had I not lived on a farm. Several species have been omitted from the list because I was not fully satisfied as to their identity.

Some remarks regarding the arrangement of the list, also concerning the annotations which follow each species, will be essential to a clear understanding of the whole. As two species of recent introduction had not become established as a part of the local avifauna, they were not included in the main list; also, there is appended a list of twenty-nine species that are included in Beckham's list, but my observation and inquiry failed to verify their occurrence during my period of activity. A single asterisk follows the names of twelve birds indicating that Beckham found them breeding although my observations yielded no direct evidence that they did so. A double asterisk marks sixty-two species found breeding both by Beckham and myself. A triple asterisk occurs only six times and refers to species which I found breeding, but were not found breeding by Beckham. In view of the scarcity of Beckham's list I have cited his general statement for most species; wherever I have made no comment on the quotation my observation corresponds with the statement cited.

To the following gentlemen I wish to acknowledge my thanks for various courtesies that have greatly aided me in the study of the bird life of the Bardstown region: Mr. Albert F. Ganier, President of the Tennessee Ornithological Society, Nashville, Tennessee; Dr. R. S. Tuttle, former Exec. Agent of the Kentucky Game and Fish Commission; Messrs. Harold Hurst and Thomas

Stocker, business men and enthusiastic sportsmen of Bardstown; and my brother R. A. Blincoe. Also, from the late Monroe Hurst of Bardstown, I received much valuable information regarding water-fowl. Mr. Hurst gave me accurate descriptions of American Merganser, Baldpate, and Pintail, but I have not included these in the list as they were not seen personally, and in the preparation of this list I have adhered strictly to the rule of including only species for which I could personally vouch. Such action, from a scientific standpoint, is necessary to avoid error, and while I have every confidence in Mr. Hurst's record of these three Ducks in Nelson County, it is with regret that I am forced to omit them from the list.

Gavia immer. LOON.—Not recorded by Beckham. A specimen taken at Nazareth Academy, near Bardstown, and preserved in the museum there. Reported by hunters but in most cases these reports were not trustworthy.

Larus argentatus. HERRING GULL.—Not recorded by Beckham. One specimen shot by a hunter, January 21, 1916, along the Beech Fork River, and brought to me for mounting.

Phalacrocorax auritus. DOUBLE-CRESTED CORMORANT.—Not recorded by Beckham. One record; an immature bird shot from a flock of seven on September 30, 1916, by a local hunter. I am unable to state to which geographic race this specimen is referable.

Lophodytes cucullatus. HOODED MERGANSER.—Not recorded by Beckham. One record; a mounted specimen, taken by a local hunter, the date unknown.

Anas platyrhynchos. MALLARD.—“Transient; common.” (Beck.) Numerous February 24, 1918, and frequently seen on other occasions during the migrations. Duck hunters report it as common.

Anas rubripes tristis. BLACK DUCK.—Not recorded by Beckham. Frequently taken by Duck hunters. A specimen taken by the late Monroe Hurst of Bardstown, November 20, 1917.

Aix sponsa. WOOD DUCK.*—“An uncommon summer resident.” (B.) In July, 1920, I saw two Ducks believed to have been of this species in a rather secluded place along the Beech Fork River several miles southwest of Bardstown. I saw a pair that were taken in October, 1917, and it was reported in April, 1918.

Branta canadensis canadensis. CANADA GOOSE.—“Rather common in the air; but very few are seen on terra firma in these parts.” (B.) A flock of eight Geese seen on January 31, 1921, were believed to have been of this species. A flock seen at close range in the month of February a few years previous to 1912.

Botaurus lentiginosus. AMERICAN BITTERN. —“Transient; rather

uncommon." (B.) I have three records, all of specimens taken; March 27, 1916; April 13, 1916; and November 22, 1917.

Ardea herodias herodias. GREAT BLUE HERON.—"Rather uncommon." (B.) Frequently common along the Beech Fork in summer. I could get no information as to this bird nesting, and never saw any in the breeding plumage. April 8–September.

Butorides virescens virescens. GREEN HERON.**—"A common summer resident." (B.) Very common. April 25–September 23.

Porzana carolina. SORA RAIL.—"Transient; rather common in October." (B.) I have but one record; an immature bird captured alive during the last week of August, 1913, and brought to me several days after it was caught.

Fulica americana. COOT.—"Transient, rather uncommon." (B.) From observation and reports it is of frequent occurrence as a migrant. Specimens: April 5, 1916; April 10, 1916; September 23, 1916. In October, 1916, one was captured under the floor of a deserted cabin on a hillside. In the spring of 1919 one was caught in the hen house at my home during my absence; the identity of this specimen being ascertained by my brother, R. A. Blincoe.

Ribicola minor. WOODCOCK.—"Transient, so far as I know, but a few probably breed here. Not very common." (B.) I saw a single bird on July 18, and 21, 1921, on the river bank ten miles south-west of Bardstown. Specimens brought to me; November 15, 1915; and November 18, 1919. Reported as seen September 18, 1916.

Gallinago delicata. WILSON'S SNIPE.—"Transient. Abundant in March and the first part of April." (B.) Generally quite common in spring, and fairly so in the fall. February 18–April 13. November 10–December 28. No January records.

Tringa solitaria solitaria. SOLITARY SANDPIPER.—"Transient. Quite common in spring." (B.) One seen September 19, 1919, and a single bird seen on several occasions between April 24, and May 7, 1920, are all that were positively identified.

Actitis macularia. SPOTTED SANDPIPER.—"Transient." (B.) Common in May, July and August. It is my opinion that it breeds rarely, as it is rarely seen throughout the summer along the Beech Fork. Beckham remarks that it arrives "April 5 to 10," but I never saw it until a month later. May 14–September 21.

Oxyechus vociferus. KILLDEER.**—"A permanent resident." (B.) Commonly breeding but more numerous in the migrations, and often scarce or absent in mid-winter.

Colinus virginianus virginianus. BOBWHITE.**—"A common permanent resident." (B.) Common, but not as numerous in 1920 as ten years previously.

Bonasa umbellus umbellus. RUFFED GROUSE.*—"Permanent resident." (B.) Specimens identified that were taken by hunters in November, 1915, and 1916. Frequently reported from the Knobs in

western and southern portions of the county. Probably a rare breeder in those sections. Local name, "Pheasant."

Zenaidura macroura carolinensis. MOURNING DOVE.**—"A common permanent resident." (B.) Sometimes quite scarce in winter.

Cathartes aura septentrionalis. TURKEY VULTURE.**—"A common permanent resident." (B.) Usually absent in mid-winter. Not as abundant in 1920 as ten years previously, though still common.

Coragyps urubu. BLACK VULTURE.***—"An uncommon summer resident." (B.) I saw it in every month; often occurring in winter when the common species was absent. Generally not nearly as numerous as the last. An unusual flight appeared in March 1921. ('Auk' Vol. XXXIX, page 416, July, 1922.)

Circus hudsonius. MARSH HAWK.—Not recorded by Beckham. Fairly common migrant and winter resident. October 13–April 18.

Accipiter velox. SHARP-SHINNED HAWK.**—"A common permanent resident." (B.) A regular breeder. Most numerous in the fall.

Accipiter cooperi. COOPER'S HAWK.**—"Sometimes rather common." (B.) Resident and breeding, but seemingly not as abundant as the last.

Accipiter atricapillus atricapillus. AMERICAN GOSHAWK.—Not recorded by Beckham. One record; a specimen taken December 1, 1917.

Buteo borealis borealis. RED-TAILED HAWK.***—Not recorded by Beckham. Permanent resident; breeds. More common in fall and winter.

Buteo lineatus lineatus. RED-SHOULDERED HAWK.*—"Permanent resident. Probably the most common Hawk found here." (B.) Occurs rather sparingly throughout the year, certainly not the most common Hawk. Never saw a nest, but the ovaries of a female shot March 6, 1915, indicated breeding.

Haliaeetus leucocephalus leucocephalus. BALD EAGLE.—Beckham includes this species on the strength of a newspaper report of an Eagle being killed near Boston in the county. About the year 1908, I saw an immature Bald Eagle that was captured alive near Nazareth Academy, two miles north of Bardstown. Several reports of Eagles lacking authenticity were brought to notice since 1912. In November, 1921, after I had left Kentucky, a mature Bald Eagle was captured near Bardstown. This specimen was viewed by my brother, R. A. Blincoe, who later gave me a description of it.

Cerchneis sparveria sparveria. SPARROW HAWK.**—"A common permanent resident." (B.) More noticeable in winter.

Pandion haliaetus carolinensis. OSPREY.—Beckham records a specimen shot in April, 1882. I have two records of specimens taken; May 25, 1917, and October 18, 1919.

Tyto pratincola. BARN OWL.—Beckham includes this species on the strength of a single bird that was shot in Bullet County which lies adjacent to Nelson. I shot one in August 1914, saw one March 30, 1920, and two were sent to me for mounting during the summer of 1920.

Asio wilsonianus. LONG-EARED OWL.—Not recorded by Beckham. shot one January 16, 1914, and saw another March 7, 1917.

Asio flammeus. SHORT-EARED OWL.—Beckham records a single bird shot in November, 1881. I have two records: Dr. R. S. Tuttle, of Bardstown, shot one November 15, 1915, and the other was brought to me about a week later by a farm hand.

Strix varia varia. BARRED OWL.—Not recorded by Beckham. I have two records of specimens captured; March 7, 1915, and November 22, 1919.

Otus asio asio. SCREECH OWL.**—"A common permanent resident." (B.) The only really common Owl in the Bardstown region.

Bubo virginianus virginianus. GREAT HORNED OWL.*—"A rather common summer resident." (B.) My observations indicated that it was rare. Only one record; one captured in June, 1920, sent to me for mounting. Probably of frequent occurrence in the Knobs.

Nyctea nyctea. SNOWY OWL.—Beckham records one specimen. I saw a live nearly white specimen that was caught near Bardstown about 1905. Alexander Wilson, in his 'American Ornithology,' records a specimen taken at Bardstown (then "Bairdstown") in 1810.

Coccyzus americana americana. YELLOW-BILLED CUCKOO.**—"A common summer resident." (B.) Generally distributed but usually most abundant near streams. April 29–October 6.

Ceryle alcyon alcyon. BELTED KINGFISHER.*—"Rather common. Not observed in winter, but a few are doubtlessly to be found here at that season." (B.) I saw it in every month except January. Probably breeds but I have no direct evidence that it does so.

Dryobates villosus villosus. HAIRY WOODPECKER.**—"Permanent resident, not very common." (B.) I found it common as a resident, more noticeable in winter. The least abundant of the strictly resident Woodpeckers.

Dryobates pubescens medianus. DOWNY WOODPECKER.**—"A common permanent resident." (B.) One of the most generally distributed birds of the region.

Sphyrapicus varius varius. YELLOW-BELLIED SAPSUCKER.—"Winter resident." (B.) Found wintering only once, the winter of 1912–13. Usually a common migrant. March 21–April 27; September 21–October 17.

Phloeotomus pileatus pileatus. PILEATED WOODPECKER.—"An uncommon permanent resident in heavily wooded portions of the county." (B.) Probably this statement applies to this bird at the present time. On February 8, 1920, I saw one within a mile and a half of town in a piece of woodland along the Beech Fork River. Mr. J. R. Pemberton, formerly located at Louisville, Ky., but now of Tulsa, Okla., wrote me that he saw this species during the breeding seasons of 1917 and 1918 in Larue County which adjoins Nelson to the south-west.

Melanerpes erthythrocephalus. RED-HEADED WOODPECKER.**—"A permanent resident." (B.) Though common as a summer resident it was found to winter only once, the winter of 1912–13. April 16–October 2.

Centurus carolinus. RED-BELLIED WOODPECKER.**—"A common permanent resident." (B.) Mainly a woodland bird though frequently seen about farm houses and in town.

Colaptes auratus luteus. FLICKER.**—"An abundant permanent resident." Most abundant in the migrations.

Antrostomus carolinensis. CHUCK-WILL'S-WIDOW.—Not recorded by Beckham. I am indebted to Mr. Thos. J. Stocker of Bardstown for a specimen of this bird taken June 27, 1915, the first I had ever seen. One seen May 6, 1917. These are my only records.

Antrostomus vociferus vociferus. WHIP-POOR-WILL.**—"An uncommon summer resident. I have never heard it in the vicinity of Bardstown." (B.) Very common in all favorable localities. It was commonly heard calling; even in Bardstown the call was frequently heard.

Chordeiles virginianus virginianus. NIGHTHAWK.—"Summer resident." (B.) Rather rare in summer; common in August and September. I have no evidence of its breeding.

Chaetura pelegica. CHIMNEY SWIFT.**—"An abundant summer resident." (B.) April 1–October 15.

Archilochus colubris. RUBY-THROATED HUMMINGBIRD.**—"A common summer resident." (B.) April 23–September 25.

Tyrannus tyrannus. KINGBIRD.**—"An abundant summer resident." (B.) Common but never as abundant as the three following species.

Myiarchus crinitus. CRESTED FLYCATCHER.**—"An abundant summer resident." (B.) April 16–August 15.

Sayornis phoebe. PHOEBE.**—"A common summer resident." (B.) Beckham states that he saw it in every month. My only winter record is of a bird seen February 6, 1917. February 23–October 29.

Myiochanes virens. WOOD PEWEE.**—"An abundant summer resident." (B.) April 30–October 4.

Empidonax flaviventris. YELLOW-BELLIED FLYCATCHER.—"Transient. Rather uncommon." (B.) A specimen collected September 4, 1920, is my only positive record.

Empidonax virescens. ACADIAN FLYCATCHER.**—"A common summer resident." (B.) Restricted to the vicinity of streams. May 5–August 19.

Otocoris alpestris praticola. PRAIRIE HORNED LARK.—"A common winter resident." (B.) Though most common as a winter bird, a few remain all through the summer and apparently breed. There are very few published records of the occurrence of this bird in Kentucky during summer, nevertheless, I believe that it will eventually be found breeding in many localities in north-central Kentucky.

Cyanocitta cristata cristata. BLUE JAY.**—"A permanent resident." (B.) Entirely absent from the Bardstown region in the winter of 1920–21, from November 27, to March 19.

Corvus brachyrhynchos brachyrhynchos. CROW.**—"An abund-

ant permanent resident." (B.) Holding its numbers well. Migratory flocks of thousands frequently seen in winter and early spring.

Dolichonyx oryzivorus. BOBOLINK.—Not recorded by Beckham. Common migrant. Very abundant in May 1917. April 22–May 27; August 18–September 28.

Molothrus ater ater. COWBIRD.**—"A common summer resident." (B.) Frequently seen in winter, sometimes occurring regularly in large flocks at that season. Eggs found in nests of Bachman's Sparrow and Indigo Bunting.

Agelaius phoeniceus phoeniceus. RED-WINGED BLACKBIRD.**—"A common summer resident." (B.) Generally distributed during the migrations but quite restricted during the breeding season. February 28,–October 29.

Sturnella magna magna. MEADOWLARK.**—"Resident all the year." (B.) At times scarce in winter.

Icterus spurius. ORCHARD ORIOLE.**—"A common summer resident." (B.) More generally distributed than the next species. April 19–August 23.

Icterus galbula. BALTIMORE ORIOLE.**—"A common summer resident." (B.) Not as abundant as the last. April 14–August 18.

Euphagus carolinus. RUSTY BLACKBIRD.—"Common during the migrations." (B.) Possibly common, but I identified it only on three occasions: December 10 and 12, 1917; and March 12, 1920.

Quiscalus quiscula aeneus. BRONZED GRACKLE.**—"A summer resident." (B.) A characteristic summer bird about Bardstown. Stragglers very rarely seen in winter. February 12–November 22.

Carpodacus purpureus purpureus. PURPLE FINCH.—"A common transient. A few probably winter here." (B.) Found wintering only once, the winter 1919–20. Frequently common as a migrant. October 22–May 2.

Astragalinus tristis tristis. GOLDFINCH.**—"Abundant permanent resident." (B.) At times extremely numerous in spring.

Spinus pinus pinus. SISKIN.—Beckham remarks that he saw two small flocks in November, 1882. I observed a flock of about fifteen individuals October 21, 1912.

Passer domesticus. ENGLISH SPARROW.**—Very abundant. According to Beckham it first appeared at Bardstown about the year 1879.

Poocetes gramineus gramineus. VESPER SPARROW.*—"A common summer resident." (B.) Always quite common as a migrant but I never saw it during the breeding season. March 8–April 20; September 12–November 18.

Passerculus sandwichensis savanna. SAVANNAH SPARROW.—"Transient; abundant." (B.) Common as a spring migrant. March 3–April 12.

Ammodramus savannarum australis. GRASSHOPPER SPARROW.**—"A common summer resident." (B.) Very abundant in favorable localities. March 26–November 7.

Chondestes grammacus grammacus. LARK SPARROW.**—"An abundant summer resident." (B.) Always common as a summer bird, much more abundant during some years than during others. April 11-August 17.

Zonotrichia leucophrys leucophrys. WHITE-CROWNED SPARROW. "Transient. Common in May." (B.) Previous to 1920 my observations corresponded with this statement. In the fall of 1920 it appeared October 7, and wintered. Previously I saw it only once in the fall, October 8, 1912. Always common in spring. April 23-May 16.

Zonotrichia albicollis. WHITE-THROATED SPARROW.—"Transient. Very common." (B.) Stragglers rarely seen in winter. March 3-May 14; September 28-December 8.

Spizilla monticola monticola. TREE SPARROW.—"A common winter resident." (B.) Rather common during the winter of 1911-12, after which it was not seen again until the severe winter of 1917-18. I was absent during the winter of 1918-19, but it was common the two following winters. December 22-March 21.

Spizella passerina passerina. CHIPPING SPARROW.**—"An excessively abundant summer resident." (B.) Common, but not as abundant as the next species. Never saw it in winter. March 14-October 26.

Spizella pusilla pusilla. FIELD SPARROW.**—"An abundant summer resident." (B.) Most abundant of the breeding Sparrows; frequently seen in winter.

Junco hyemalis hyemalis. SLATE-COLORED JUNCO.—"An abundant winter resident." (B.) October 8-April 25.

Peucaea aestivalis bachmani. BACHMAN'S SPARROW.***—"Rare. One specimen; shot April 28, 1877." (B.) Fairly common summer resident. March 18-September 1.

Melospiza melodia melodia. SONG SPARROW.**—In his first list¹ Beckham stated that this species was "an abundant resident," but in his later paper corrects this statement remarking that it was "quite scarce in summer." Though very abundant as a migrant and winter resident only a few pairs could be found in summer and these nested near some stream.

Melospiza lincolni lincolni. LINCOLN'S SPARROW.—"Transient. Not uncommon in May." (B.) On May 16, 1921, Mr. Albert F. Ganier showed me one of these birds in a brushy place near Bardstown. Likely fairly common as a migrant.

Melospiza georgiana. SWAMP SPARROW.—"Transient. Rather uncommon." (B.) Seen frequently in the spring but only once in fall. April 11-May 18; October 10, 1920.

Passerella iliaca iliaca. FOX SPARROW.—"Abundant during March and November, and common during some winters." (B.) Never saw it

¹A List of the 'Birds of Bardstown, Nelson Co., Kentucky'. Jour. Ann. Soc. Nat. Hist., VI, 1883.

during mid-winter, and have only one fall record. February 21–March 21. November 22, 1917.

Pipilo erythrophthalmus erythrophthalmus. TOWHEE.***—"A common permanent resident." (B.) Sometimes scarce or absent during mid-winter.

Cardinalis cardinalis cardinalis. CARDINAL.**—"An abundant permanent resident." (B.) A characteristic bird of the region.

Hedymeles ludovicianus. ROSE-BREADED GROSBEAK.—Beckham observed it only twice, in May, 1882. I saw it only once, April 27, 1920, a single male.

Passerina cyanea. INDIGO BUNTING.**—"An abundant summer resident." (B.) Well distributed and one of the most abundant summer birds. April 26–October 5.

Spiza americana. DICKCISSEL.**—"A very common summer resident." (B.) Very irregular in its occurrence, some years common, in others none are seen. May 1–July 13.

Piranga erythromelas. SCARLET TANAGER.—"Transient. Abundant in May and September." (B.) Common in May but I never identified it in fall. May 2–May 24.

Piranga rubra rubra. SUMMER TANAGER.**—"A common summer resident." (B.) April 16–October 5.

Progne subis subis. PURPLE MARTIN.**—"A common summer resident." (B.) March 23–September 6.

Petrochelidon lunifrons lunifrons. CLIFF SWALLOW.*—"A rather common summer resident." (B.) I observed it only twice, oddly on the same date both times; May 18, 1916, and May 18, 1921.

Hirundo erythrogaster. BARN SWALLOW.**—"An abundant summer resident." Hardly abundant, but common. April 12–September 20.

Stelgidopteryx serripennis. ROUGH-WINGED SWALLOW.*—"A common summer resident." (B.) My observations indicated that it was only a migrant. April 28–May 16.

Bombycilla cedrorum. CEDAR WAXWING.—"An irregular, but at times very abundant, permanent resident." (B.) Usually scarce in mid-summer. Beckham did not find it breeding and I found nothing to indicate that it did.

Lanius ludovicianus migrans. MIGRANT SHRIKE.—Not included in Beckham's list. My observations seem to indicate that it was only a migrant and winter resident, but the regularity with which it appears each year during July suggests the probability that it breeds somewhere near the territory covered by my observations. July 16–April 5.

Vireosylva olivacea. RED-EYED VIREO.**—"An abundant summer resident." (B.) One of the most common woodland birds. April 21–September 30.

Vireosylva gilva gilva. WARBLING VIREO.**—"A common summer resident." (B.) Regularly occurring as a summer resident though local in its distribution, and never very common. May 6.

Lanivireo flavifrons. YELLOW-THROATED VIREO.—“Rather common.” (B.) Beckham thought that it bred. For many years I confused its song with that of the Red-eyed Vireo and considered it as a migrant only. In 1921 it was fairly common during summer. May 22–August 19.

Lanivireo solitarius solitarius. BLUE-HEADED VIREO.—“Transient. Not common.” (B.) I observed it only once, April 25, 1917.

Vireo griseus griseus. WHITE-EYED VIREO.**—“Abundant in spring, rather common in summer.” (B.) A typical bird in all localities where thickets are numerous. April 13–October 5.

Mniotilta varia. BLACK AND WHITE WARBLER.*—“An abundant summer resident.” (B.) I found it rarely in April and May, very common in September, never seen in June and but once in July. April 12–October 8.

Helmitheros vermivorus. WORM-EATING WARBLER.—Not recorded by Beckham. I took two specimens, all that I ever observed; July 11, 1920, and April 24, 1921.

Vermivora pinus. BLUE-WINGED WARBLER.—“Common from April 10th to May 25th; a few probably remain to breed.” Found regularly in one locality, each year, during May and June. May 1–June 15.

Vermivora peregrina. TENNESSEE WARBLER.—“Transient; sometimes common in the fall.” (B.) Positively identified on September 7, 1919, only. Several questionable records.

Dendroica tigrina. CAPE MAY WARBLER.—“Rare; two specimens only; both taken in May.” (B.) One seen in the orchard trees at my home, April 25, 1917, and the following day one was collected at the same place. My only records.

Dendroica aestiva aestiva. YELLOW WARBLER.**—“A common summer resident.” (B.) Confined to the willows along streams in breeding season. April 16–July 27.

Dendroica caerulescens caerulescens. BLACK-THROATED BLUE WARBLER.—“Transient. Common.” (B.) I found it only fairly common. May 6–May 8; seen only once in the fall, September 5, 1920.

Dendroica coronata. MYRTLE WARBLER.—“An abundant winter resident.” (B.) Commonly and regularly wintering but seldom abundant. October 7–May 13.

Dendroica magnolia. MAGNOLIA WARBLER.—“Transient; abundant.” (B.) May 6–May 29; September 5–October 3.

Dendroica pensylvanica. CHESTNUT-SIDED WARBLER.—“Transient. Common.” (B.) Positively identified only twice; May 12 and 13, 1921.

Dendroica cerulea. CERULEAN WARBLER.**—“A common summer resident.” (B.) Found in only a few localities. April 24–August 19.

Dendroica castanea. BAY-BREASTED WARBLER.—“Transient. Not common.” (B.) A singing male identified on May 18, 1921, is my only record.

Dendroica striata. BLACK-POLL WARBLER.—“Transient. Rather uncommon.” (B.) One identified April 25, 1914, is my only certain record.

Dendroica fusca. BLACKBURNIAN WARBLER.—“Transient; very common in September.” (B.) May 7–May 14; September 5–October 7.

Dendroica dominica albilora. SYCAMORE WARBLER.**—“A common summer resident.” (B.) Restricted to the vicinity of streams during the breeding season. March 27–October 4.

Dendroica virens. BLACK-THROATED GREEN WARBLER.—“Transient. Very common.” (B.) The most abundant of the fall transient Warblers, but not very common in spring. Beckham saw one, July 14, 1882. April 30,–May 18; September 5–October 17.

Dendroica palmarum palmarum. PALM WARBLER.—“Transient. Quite common.” (B.) More common in the spring migration than in the fall. Beckham observed it on several occasions in the months of December and January. In the fall of 1920, I observed several individuals in a certain locality quite regularly until near the end of December. April 17–May 13; September 28–December 28.

Dendroica discolor. PRAIRIE WARBLER.***—“Common in the spring. So far as my observations have extended, this Warbler is transient here, but for reasons too lengthy to mention now, I feel quite sure that a few of them breed.” (B.) I found it a fairly common breeding bird in several localities. April 13–September 7.

Seiurus aurocapillus. OVENBIRD.—“Common in spring and fall.” (B.) I found it common in the fall only. Rarely seen in late May, suggesting the possibility of its breeding. Beckham inferred that it was likely a breeder. September 4–October 6.

Seiurus noveboracensis. WATER THRUSH.—“Transient. Rare.” (B.) I have three records: September 21, 1919; May 12, 1921; and one collected May 13, 1921. I am in doubt as to the sub-specific identity of the specimen collected.

Seiurus motacilla. LOUISIANA WATER-THRUSH.**—“An abundant summer resident.” (B.) A common bird along the Beech Fork River and in all other suitable localities. March 20–August 15.

Oporornis formosus. KENTUCKY WARBLER.**—“A common summer resident.” (B.) A characteristic summer bird in all damp thickets and woodland. April 22–September 28.

Oporornis philadelphia. MOURNING WARBLER.—“Transient; rather rare.” (B.) I observed it only twice; May 20, 1917, and May 18, 1920.

Geothlypis trichas trichas. MARYLAND YELLOW-THROAT.**—“An abundant summer resident.” (B.) The most abundant and widely distributed of the breeding Warblers of the county. April 22–October 5.

Icteria virens virens. YELLOW-BREASTED CHAT.**—“A common summer resident.” (B.) A characteristic summer bird in the more brushy sections. April 27–September 10.

Wilsonia citrina. HOODED WARBLER.—“But two specimens—April 19th and May 9th, 1877.” (B.) I saw it but once; a singing male, April 30, 1920. This bird might be expected to breed in the Bardstown region but I am convinced that it did not occur as a summer bird in the territory with which I was familiar.

Wilsonia canadensis. CANADIAN WARBLER.—“Transient. Abundant in May.” (B.) I saw it only once; a singing male observed May 18, 1921.

Setophaga ruticilla. REDSTART.*—“Summer resident. Very abundant during the migrations, but not very common in summer.” (B.) I found it common in fall, but rare in spring and summer. May 6–October 3.

Anthus rubescens. AMERICAN PIPIT.—“Transient.” (B.) Common as a migrant, and sometimes occurring as an irregular winter resident. October 26–April 20.

Mimus polyglottos polyglottos. MOCKINGBIRD.**—“A common summer resident. A few remain all the year.” (B.) Not as abundant in 1921 as ten years previously, but still common. Only a few wintered.

Dumetella carolinensis. CATBIRD.**—“A common summer resident.” (B.) More abundant than the Mockingbird or Brown Thrasher. April 19–October 10.

Toxostoma rufum. BROWN THRASHER.**—“Common summer resident.” (B.) March 6–October 13.

Thryothorus ludovicianus ludovicianus. CAROLINA WREN.**—“An abundant permanent resident.” (B.) Mainly a woodland bird, but a few were of regular occurrence in Bardstown.

Thyromanes bewicki bewicki. BEWICK'S WREN.**—“Not uncommon. Probably a permanent resident as I have seen them in mid-winter.” (B.) Very abundant in summer, entirely replacing the House Wren. Every farm had one or several pairs and very numerous in towns. A few always wintered but never sang, as did the Carolina Wren, at that season.

Troglodytes aëdon aëdon. HOUSE WREN.—Not recorded by Beckham. I saw it only twice, May 8, and 12, 1920.

Nannus hiemalis hiemalis. WINTER WREN.—“A rather common winter resident.” (B.) I found it mainly as a migrant, rarely seen in winter. October 7–April 27.

Certhia familiaris americana. BROWN CREEPER.—“A winter resident; sometimes quite common in spring.” (B.) I found it only rarely in fall and winter, but generally common in spring. October 8–April 15.

Sitta carolinensis carolinensis. WHITE-BREASTED NUTHATCH.*—“A common permanent resident.” (B.) I found it restricted entirely to the woodlands along the Beech Fork River. Though frequently seen in several localities, at no time was one seen over five or six hundred yards from the river bank. Not abundant but probably breeds.

Sitta canadensis. RED-BREASTED NUTHATCH.—“An irregular fall and winter visitant but whenever present always quite common.” I found it very irregular in spring, fall and winter. Common during the fall of 1912, and during the following winter; also abundant during the spring of 1920. Uncommon during other years, and some winters and

migrations passed without recording a single individual. October 6–May 4.

Baeolophus bicolor. TUFTED TITMOUSE.**—"An abundant permanent resident." (B.) The most common, abundant, and regularly observed of the resident woodland birds. Almost as abundant in the cleared sections, especially in winter.

Parus carolinensis carolinensis. CAROLINA CHICKADEE.**—"An abundant permanent resident." (B.) Hardly as numerous as the last, but quite common.

Regulus satrapa satrapa. GOLDEN-CROWNED KINGLET.—"Transient, but a good many winter here." (B.) I found it rather rare in winter. Extremely abundant in the spring migration of 1917, but later comparatively scarce. October 1–April 18.

Regulus calendula calendula. RUBY-CROWNED KINGLET.—"Transient. Abundant in spring and fall." (B.) I found it more abundant in spring. April 3–May 7; September 27–November 7.

Polioptila c. caerulea. BLUE-GRAY GNATCATCHER.**—"An abundant summer resident." (B.) Strictly a woodland species during the nesting season, but found in orchards, sparsely wooded pastures, etc., during migrations. March 23–September 6.

Holocichla mustelina. WOOD THRUSH.*—"A common summer resident." (B.) I found it rare, in only a few localities, in May and June. Certainly not common, at least in the territory within a few miles of town.

Holocichla aliciae aliciae. GREY-CHEEKED THRUSH.—"Transient; common during the last week of April and the first week of May." (B.) Probably a very common migrant but I experienced much difficulty in accurately separating it from the next in the field. One collected May 13, 1921.

Holocichla ustulata swainsoni. OLIVE-BACKED THRUSH.—"The most abundant of the Thrushes during the migrations, except the Robin." (B.) I found it very abundant in May. May 10–May 18.

Holocichla guttata pallasii. HERMIT THRUSH.—"Transient; common." (B.) I found it a common migrant usually appearing early in April. March 7–April 24; October 7–November 8.

Planesticus migratorius migratorius. ROBIN.**—"A permanent resident." (B.) Extremely abundant in the migrations; fairly numerous during the breeding season; generally wintering but irregular in abundance.

Sialia sialis sialis. BLUEBIRD.**—"A common permanent resident." (B.) A characteristic resident species; generally not abundant in winter.

SPECIES OF RECENT INTRODUCTION.

Phasianus torquatus. RING-NECKED PHEASANT.—About seven or eight years ago several of these birds were liberated at the country home of Congressman Ben Johnson near Bardstown, but apparently they did not succeed in establishing themselves.

Lophortyx gambeli. GAMBEL'S QUAIL.—In July, 1921, one of these birds was brought to me and, not knowing, that several pairs had been liberated early the preceding spring, near Bardstown, I was greatly surprised. Several hundred of these birds were distributed in various parts of Kentucky by the State Game and Fish Commission under the name, "Mexican Quail."

SPECIES RECORDED IN BECKHAM'S LIST FOR WHICH I HAVE NO RECORDS.

Podilymbus podiceps. PIED-BILLED GREBE.—"Transient; common on the streams and ponds in early spring." (B.) "Die-dippers" were frequently reported but I never saw one.

Nettion carolinense. GREEN-WINGED TEAL.

Querquedula discors. BLUE-WINGED TEAL.—Beckham found both Teal common migrants. Personally, I did not identify either of them, though the late Monroe Hurst of Bardstown was familiar with them, having taken specimens in the county.

Marila collaris. RING-NECKED DUCK.—Beckham took a single bird, February 16, 1883, the only time he ever met with it.

Casmerodius egretta. AMERICAN EGRET.—"Mr. J. W. Fowler, of Louisville, informs me that he shot one of these Herons in October, 1881, near Fairfield, in this county." (B.)

Egretta candidissima candidissima. SNOWY HERON.—"A hunter informs me that several years ago he shot a 'white fly-up-the-creek' near here, which is probably referable to this species." (B.) From the foregoing statement it is evident that Beckham included this species in his list without sufficient evidence of the proper identification of the specimen referred to by the hunter.

Nycticorax nycticorax naevius. BLACK-CROWNED NIGHT HERON.—"Transient in May." (B.)

Grus americana. WHOOPING CRANE.

Grus mexicana. SANDHILL CRANE.—Both included by Beckham on the authority of an old resident of the county.

Rallus virginianus. VIRGINIA RAIL.—"Transient. Rare; but one specimen—May 10th, 1882." (B.)

Coturnicops noveboracensis. YELLOW-RAIL.—"The only time I have ever met with this Rail was on October 1, 1880, when a male and female were shot in an old briary field." (B.)

Ionornis martinicus. PURPLE GALLINULE.—Beckham relates an incident concerning the capture of a "strange looking bird" at the time he was ten or twelve years of age which, later, he recognized as this species.

Meleagris gallopavo silvestris. WILD TURKEY.—"Said to still occur sparingly in the western part of the county." (B.) Doubtless extinct.

Ectopistes migratorius. PASSENGER PIGEON.—"Excessively common during some falls, but not nearly as abundant as formerly. There was an enormous flight of them here about fifteen years ago." (B.) In 1917, I was told, by an old resident of Nelson County, who had been

familiar with the Wild Pigeons, that he saw the last of them about twenty years before.

Coccyzus erythrophthalmus. BLACK-BILLED CUCKOO.—“A rather uncommon summer resident.” (B.) I have several doubtful records for this species.

Empidonax minimus. LEAST FLYCATCHER.—“Transient in April and May. Common.” (B.)

Passerherbulus henslowi henslowi. HENSLOW'S SPARROW.—Beckham took a single specimen, October 30, 1884, the only one he ever saw.

Loxia curvirostra minor. CROSSBILL.—Beckham observed this species in November, 1882, and in March, 1883, he collected several specimens.

Riparia riparia. BANK SWALLOW.—“A common summer resident.” (B.) Notwithstanding, Beckham considered it doubtful as a breeding species.

Vireosylva philadelphia. PHILADELPHIA VIREO.—“Rare. One specimen only; shot May 19th, 1877.” (B.)

Vermivora rubricapilla rubricapilla. NASHVILLE WARBLER.—“Transient; not common.” (B.)

Vermivora celata celata. ORANGE-CROWNED WARBLER.—“Transient.” (B.) This very brief remark is Beckham's full statement concerning this Warbler.

Compsothlypis americana. PARULA WARBLER.—“A common summer resident.” (B.) I never identified it at all; if it occurred as a summer resident, during my period of observation, it was quite restricted in its distribution. Beckham was in doubt as to its breeding about Bardstown.

Vermivora chrysoptera. GOLDEN-WINGED WARBLER.—“On May 11th, 1877, while sauntering through my favorite collecting ground, I saw four or five warblers skipping about the top of a small willow tree; getting two of them in line, I fired, and down came this bird and a Cape May Warbler—two species entirely new to me, and both very rare in this locality.” (B.) The only one observed by Beckham.

Dendroica vigorsi. PINE WARBLER.—“Transient.” Common in April and September.” (B.)

Oporornis agilis. CONNECTICUT WARBLER.—“I have taken it only twice in the spring—May 12th, and 13th, and once on the fall—October 11th.” (B.)

Wilsonia pusilla pusilla. WILSON'S WARBLER.—“Transient in May; not common.” (B.)

Cistothorus stellaris. SHORT-BILLED MARSH WREN.—“I have never seen but one specimen of this wren, a male, which was shot May 1st, 1882, from the top of a small blackberry vine in a rye field, while singing, if the queer stridulous noise he made can be called singing.” (B.)

Hylocichla fuscescens. WILSON'S THRUSH.—“I have only seen this bird upon two occasions in the spring, and have never recognized it at all in the fall.” (B.)

*Covington Pike,
Dayton, Ohio.*