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BULLETIN

OF THE

Ohio Agricultural Experiment Station.

TECHNICAL SERIES.—VOLUME I, NUMBER 4.

Wooster, Ohio, July, 1896.

ARTICLE XXIV:

A PRELIMINARY LIST

OF THE

Birds of Wayne County, Ohio.

BY

HARRY C. OBERHOLSER.

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All correspondence should be addressed to EXPERIMENT STATION, Wooster, Ohio.

COLUMBUS:

THE WESTBOTE COMPANY, STATE PRINTERS.

1896

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BY THE DIRECTOR.

The Technical Series of the bulletins of this Station was begun as a channel for the publication and preservation of papers, the incidental product of the investigations of the Station, but which, by reason of their technical character, are of interest chiefly to those engaged in scientific research.

While the papers thus far published in this series are all more or less fragmentary and many relate to other lines of work, the leading object in view has been the collection of material which may some day be worked into a systematic biological survey of the State, this to serve as the basis of a more accurate knowledge than is now possessed for the prosecution of the more distinctively economic work.

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TECHNICAL SERIES, VOL. I, NO. 1, OCTOBER, 1889.

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Article II.—Studies in pond life. (Illustrated)..... *C. M. Weed.*
Article III.—A partial bibliography of insects affecting clover..... *C. M. Weed.*

TECHNICAL SERIES, VOL. I, NO. 2, MAY, 1890.

- Article IV.—Flowering plants on the grounds of the Ohio State University. *Moses Craig.*
Article V.—Fourth contribution to the life history of little known plant lice. *C. M. Weed.*
Article VI.—Descriptive catalogue of the shells of Franklin county, Ohio. (Illustrated) *H. A. Surface.*

TECHNICAL SERIES, VOL. I, NO. 3, APRIL, 1893.

- Article VII.—Methods of oviposition in the Tipulidæ. (Illustrated)..... *F. M. Webster.*
Article VIII.—A Dipterous gall-maker and its associates. (Illustrated).. *F. M. Webster.*
Article IX.—Description of a new species of gall-making Diptera. (Illustrated.) *John Marten*
Article X.—Description of a species of Chlorops reared from galls on *Muhlenbergia mexicana*..... *S. W. Williston.*
Article XI.—Notes on some species of Ohio Hymenoptera and Diptera heretofore undescribed. (Illustrated) *F. M. Webster*

- Article XII.—Descriptions of new parasitic Hymenoptera bred by F. M. Webster. (Illustrated) Wm. H. Ashmead.
- Article XIII.—A Tachinid reared from cells of a mud-dauber wasp
..... C. H. Tyler Townsend.
- Article XIV.—Additions to the preliminary list of the Uredineæ of Ohio
..... Freda Detmers.
- Article XV.—Bibliography of Ohio botany W. A. Kellerman.
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- Article XVIII.—The Ohio Erysipheæ. (Illustrated)..... Aug. D. Selby.
- Article XIX.—Corrections and additions to Moses Craig's catalogue of the uncultivated
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BULLETIN

OF THE

OHIO AGRICULTURAL EXPERIMENT STATION.

VOL. I, No. 4.

TECHNICAL SERIES.

JULY, 1896.

Article XXIV.—A Preliminary List of the Birds of Wayne County, Ohio.

BY HARRY C. OBERHOLSER.

INTRODUCTION.

THE present catalogue is the outgrowth of a request made some time since by Prof. F. M. Webster, Entomologist of the Ohio Agricultural Experiment Station, who desired the writer to prepare a report on the avifauna of Wayne County, the new location of the Station. Although this task was undertaken with no little hesitation, it has been the aim of the author to offer a list as complete as possible, with such annotations as seem to be of interest in this connection.

That the number of species is far from exhaustive is of course unnecessary to state. No one more than the writer regrets this evident incompleteness, which is principally due to the comparatively short period covered by the writer's observations, and to the fact that the only opportunities for such investigations were the leisure hours of an active business life. That the present paper may serve as a basis for future observations is the chief excuse for its existence. With this purpose in view much care has been exercised to avoid the inclusion of any but perfectly

reliable records. All but four species¹ have been personally identified by the writer, either in the field or from specimens in local collections; and these four exceptions have been admitted only upon what has been considered satisfactory evidence of their occurrence. Species of doubtful or of probable occurrence, while excluded from the list proper, have been separately enumerated as a guide to future observations.

The notes from which this paper has mainly been compiled were taken by the writer between February 8, 1890, and April 9, 1894; during which time almost all of the County, excepting the extreme northeastern and southwestern portions, was visited. The data here utilized were, however, obtained chiefly in the vicinity of Wooster, within a radius of about six miles of the city. This information has been supplemented by the examination of a number of collections of mounted birds from different parts of the County; evidence of the occurrence of a number of species not otherwise noted having been thus secured. Statements in regard to the abundance of species have in most cases been carefully estimated from comparisons of the actual number of individuals recorded, and may therefore be regarded as approximately correct. The annotations are drawn almost entirely from notes relating to Wayne County, and unless it is otherwise specifically stated, are intended to reflect the status of the species in question merely with respect to the region under consideration.

The nomenclature, and the classification, which at the suggestion of Prof. Webster has been given entire, are of course those of the Check List of the American Ornithologists' Union, including the recent emendations. The illustrations, which are also the result of a suggestion by Prof. Webster, have been here reproduced through the courtesy of Messrs. Estes and Lauriat, of Boston, Mass. The writer desires furthermore to express to Prof. F. M. Webster his sincere appreciation of much indispensable assistance in the preparation of this report. Thanks are also due to Mr. Joseph Housekeeper, of Wooster, for information in regard to some of the water birds; to Mr. Ellsworth Freeman, of Orrville, as well as to the other gentlemen who have kindly permitted the writer to examine birds in their possession, and whose names appear in the following pages.

Wayne County is situated in the northeastern portion of Ohio, about thirty-five miles from Lake Erie and about fifty-five miles west of the State line of Pennsylvania. The forty-first parallel of north latitude forms its northern boundary. It is in shape nearly square, being twenty-five miles from east to west, and about twenty-three miles in north and south extent, with an area of 535 square miles. The towns mentioned in the ensuing pages are situated as follows: Wooster lies about three or four

¹ These are: *Meleagris gallopavo*, *Pandion haliaetus carolinensis*, *Ceophloeus pileatus* and *Acanthis linaria*.

miles southwest of the geographical center of the County, and nearly a mile from the present course of Killbuck Creek; Orrville is about eleven miles northeast of Wooster, and six miles from the eastern boundary; West Salem is located in the extreme northwest corner of the County, while Shreve lies close to the southern line, and five or six miles from its western limit.

The County itself lies upon the southern slope of the watershed which separates the streams flowing into Lake Erie from those tributary to the Ohio River; its northern boundary being close to the top of the dividing ridge, the summit level of which is found in the vicinity of Akron, in Summit County. The altitude of the highest point of land within Wayne County is 1,042 feet, this being in the extreme northeastern township. In some of the surrounding counties the highest elevations range from 300 to 400 feet higher; while the maximum in the State is attained in Logan County, where the altitude is 1,540 feet above sea level.

The geological formation of Wayne County is, with some minor modifications, essentially that of northeastern Ohio. Consequently there are absent all the series between the coal measures of the Carboniferous and the superincumbent Quaternary deposits; the Mesozoic and Tertiary being unrepresented. By reason of its position on the eastern slope of the axis of the anticlinal, Wayne County marks one of the western limits of the Ohio coal deposits. The coal measures are confined principally to the eastern half of the County, and where present rest either directly upon the sub carboniferous Waverly group, or upon the superincumbent sand conglomerate formation. Coal in paying quantities and of good quality is extensively mined in several of the eastern townships.

The Quaternary deposits consist largely of drift, and their clays, sands, gravels and boulders, overlying the rock strata to a depth of ten to eighty feet, constitute the major portion of the surface of the County. The rocks of the Carboniferous formation, both those of the Waverly group and those of the coal measures, consisting of sandstones, shales and limestones, are, however, exposed in numerous places throughout the County, and in suitable locations are to some extent quarried. Glacial action is evident over almost the entire area; and there are a number of buried stream channels, as well as the remains of the beds of several ancient lakes, more particular mention of which will be made in another connection.

The surface of the country is generally rolling, interspersed in some portions with elevations of considerable height, occasional deep valleys, and expanses of level lowland prairie.

The streams are numerous, though not of large size. The most important is the Killbuck, which rises in the northern part of the County, flows in a southerly direction entirely across the western portion, passing within a mile of Wooster, and in the continuance of its course beyond the limits of the County, finally discharges its waters into the Muskingum. The next in size is the Chippewa, which, however, flows through only the two northeastern townships, becoming in its extralimital course tributary to the Tuscarawas River. Newman's Creek, another tributary of the Tuscarawas, rises in the eastern portion of the County, and flows out in a northeasterly direction, draining the region known as Newman's Swamp. In the extreme western portion the Muddy Fork of the Mohican makes a wide circuit into the two central townships; while the southeastern portion of the County is drained by Sugar Creek and Salt Creek. Apple Creek is the main tributary of the Killbuck, and joins the latter near Wooster, its own branches flowing from the east and northeast. All these streams are fed by numerous smaller ones, some of which are, however, almost entirely dry during protracted absence of rain. The majority of the main streams are crooked creeks, with generally very sluggish currents and very low banks. The elevations and hills, which in many places slope back from the larger streams, apparently indicate by their evidences of erosion that the flowing water has cut down through them to the channels now occupied.

The few lakes are situated in the northeastern and southwestern parts of the County, the largest being Fox Lake, which lies only a short distance from the line of Stark County. Its water is clear and very deep, and it appears to be a favorite resort for both water birds and shore birds. All the other lakes are much smaller. Near the southwestern corner of the County, but just outside its boundaries, is situated a group of four or five lakes, two of which, Long Lake and Odell's Lake, are of considerable size. The northern extremity of the latter is said to be within the County. The character of these lakes is much the same as of those previously mentioned, the shores being partially or wholly marshy and covered in places with a thick growth of cat-tail flags (*Typha latifolia*) or yellow water lilies (*Nymphaea advena*); such vegetation forming the favorite summer home of the Least Bittern (*Ardetta exilis*). In suitable places in these lakes the white water lily (*Castalia odorata*) is found in abundance.

Bordering most of the streams of Wayne County are level low lands, which along the larger water courses are sometimes several miles in width. During seasons of heavy rainfall these bottom lands are overflowed, and when this occurs during the fall or early spring, Ducks and other water birds are much more than usually abundant. Many portions of these lands have been drained and are now under cultivation. There are here

also many damp, grassy meadows, some of them of wide extent, which are in spring and fall the feeding grounds of numerous Meadowlarks (*Sturnella magna*) and Killdeers (*Egialites vocifera*). Even at the present time large areas of forest still exist on some of these bottom-lands, though of course much has been cleared, and in many places there remains only a fringe of trees along the streams. The principal trees here are red maple (*Acer rubrum*) and elm (*Ulmus Americana*); together with which occur sycamore (*Platanus occidentalis*), black walnut (*Juglans nigra*), beech (*Fagus atropunicea*), white oak (*Quercus alba*), pin oak (*Quercus palustris*), sugar maple (*Acer Saccharum*), swamp hickory (*Hicoria minima*), slippery elm (*Ulmus pubescens*), and ash (*Fraxinus* sp.?). These bottom woods are, during the breeding season, frequented by such birds as the Red-shouldered Hawk (*Buteo lineatus*), Barred Owl (*Syrinum nebulosum*) and Crow (*Corvus americanus*). In the many dead tree trunks several species of Woodpeckers find homes, and the decaying stumps serve a like purpose for the benefit of the Chickadees (*Parus atricapillus*). Here also in the winter are found in greatest abundance all of the resident Woodpeckers; while the Brown Creeper (*Certhia familiaris americana*) and Winter Wren (*Troglodytes hiemalis*) seem to find in such localities the most congenial surroundings.

Throughout the lowlands of the Killbuck Valley in the southern half of the County are frequent swamps, some of them of considerable extent. They are always, except in the most extreme drought, overspread with water, and are either covered with cat tail flags (*Typha latifolia*) and tall rank grass, or overgrown with dense thickets and low trees; in either case well-nigh inaccessible under ordinary circumstances. Here, as well as in the undergrowth along the streams, flourish alders, willows of several species, and other similar bushes; while the waste lands often surrounding them produce a luxuriant harvest of beggar-ticks (*Bidens frondosa*) and spanish needles (*Bidens bipinnata*).

These isolated bogs are the remains of what in the early part of the present century was an almost uninterrupted swamp, extending south from Wooster to beyond the limits of the County, and which, together with all the lowlands in the valley, was covered with water for many years after the advent of man to this region. This is evidently what was once the bed of a pre-glacial lake, the former existence of which is attested by the present topography of the locality.

In this ancient lake were islands whose identity is still preserved, their soil being of a conspicuously different consistency from that of the surrounding lake bed, over which has been spread thick deposits of sand, and of the vegetable mould which now constitutes the rich soil of these bottom-lands. In this respect these islands are scarcely different from the

high ground bordering the valley, and were originally well wooded with trees similar to those growing on the uplands. There are wide stretches of this lake bed, now designated as "prairies", which were formerly open water, but by their emergence became covered with a thick growth of vegetation, consisting of bushes, flags, rushes and rank grass. The portions of these prairies that remain at present uncleared are the favorite haunts of Rails and Snipes.

Newman's Swamp, extending east from Orrville six miles to the border of the County, is situated in the bed of another pre-glacial lake, and was in many respects the same as the swamp in the valley of the Killbuck, only if anything wilder and more impenetrable. This has now, however, to a great extent been cleared and put under cultivation. Areas of swamp and prairie, of an origin similar to those described, exist in still other localities, notably in the northeast about Fox Lake, and in the extreme southwestern portion of the County.

In places along the large streams are drift deposits, forming often extensive terraces skirting the bluffs which border the valleys—the city of Wooster itself being located upon ground of this character. Upon these terraces existed forests of deciduous trees, probably similar to those now growing upon the uplands. The uplands themselves are at length seen to be practically plateaux overlooking the lowlands in the valleys. Erosion is plainly visible in the numerous ravines and gullies which have been cut out where the brooks flow down to join the main streams.

These ravines are usually wooded, at least in part, containing in many places the only trees spared by the ruthless axe. Here are found such trees and shrubs as the following: buckeye (*Æsculus glabra*), wild cherry (*Prunus serotina*), elm (*Ulmus Americana*), red maple (*Acer rubrum*), black walnut (*Juglans nigra*), butternut (*Juglans cinerea*), tulip tree (*Liriodendron Tulipifera*), beech (*Fagus atropunicea*), oaks (*Quercus alba*, *rubra* et *valutina*), sassafras (*Sassafras Sassafras*), dogwood (*Cornus florida*), ironwood (*Ostrya Virginiana*), elder (*Sambucus Canadensis*), black haw (*Viburnum prunifolium*), and at least two species of thorn (*Crataegus*). In these ravines flourish the trilliums (*Trillium erectum* et *grandiflorum*), while in suitable places along the banks grow the dainty hepatica (*Hepatica Hepatica*) and the fragrant arbutus (*Epigæa repens*), although the latter is extremely local in its distribution. These shady retreats furnish congenial summer homes for such avian species as the Wood Thrush (*Turdus mustelinus*), Rose-breasted Grosbeak (*Habia ludoviciana*), Scarlet Tanager (*Piranga erythromelas*), Brown Thrasher (*Harporhynchus rufus*), and Catbird (*Galeoscoptes carolinensis*).

The uplands are interspersed with frequent woodland tracts, the major portion of the country, however, being under cultivation. The

numerous apple orchards and grass fields leave nothing to be desired by those birds which are accustomed to make such places their summer abodes. The forest areas consist often of heavy timber, many of the trees being from three to five feet in basal diameter, but from some of the woodland the larger trees have been removed, leaving only the smaller growth. The underbrush in these upland woods is rarely dense, and is often practically wanting. The trees are almost exclusively deciduous, the only conifers of consequence being the hemlock (*Tsuga Canadensis*), which occurs in a few localities on high banks along streams; and the red cedar (*Juniperus Virginiana*), scattered individuals of which are found in some parts of the County. The characteristic deciduous trees are: white oak (*Quercus alba*), red oak (*Quercus rubra*), black oak (*Quercus velutina*), pin oak (*Quercus palustris*), shell-bark hickory (*Hicoria ovata*), pig-nut hickory (*Hicoria glabra*), sugar maple (*Acer saccharum*), beech (*Fagus atropunicea*), basswood (*Tilia Americana*), chestnut (*Castanea dentata*), tulip tree (*Liriodendron Tulipifera*), with an occasional cucumber tree (*Magnolia acuminata*.)

With respect to climate this region presents few peculiarities. The temperature ranges from 20 degrees below to 99 degrees above zero Fahrenheit, though both these extremes are exceptional. Heavy frosts are not generally prevalent before October, and the severe cold weather usually occurs during the latter part of December and in January. The influence of winter, however, often extends far into the spring, and frosts in May are not infrequent. The fall of snow is not heavy; the greatest rainfall, as a rule, occurring in the spring months. This is usually succeeded either in the summer or early fall by a season of drought, which is sometimes of considerable duration. Severe thunder-showers are not uncommon, being most frequent during June and the first part of July. The average annual precipitation at Wpooster, for the seven years previous to 1894, was 40.11 inches; the average annual temperature for the same period being 49.3 degrees Fahrenheit.

Faunally considered this locality is almost purely Carolinian, with a very slight infusion of forms of somewhat more northern affinities—as *Habia ludoviciana*, *Piranga erythromelas* and *Parus atricopillus*, which are all common during the breeding season. With these occur such characteristic Carolinian species as *Empidonax virescens*, *Icterus spurius*, *Spizella pusilla*, *Cardinalis cardinalis*, *Stelgidopteryx serripennis*, *Helminthophila pinus*, *Seiurus motacilla*, *Icteria virens* and *Thryothorus ludovicianus*.

During both seasons of migration, but more particularly in the spring, species, as well as to a less extent individuals, are remarkably numerous, following in their movements what appears to be a natural highway along the courses of the streams, which it will be noticed form the headwaters

of the Muskingum River. The valley of the Killbuck seems to be especially suitable, for during a favorable season the woodlands along this stream fairly teem with bird life. A certain locality, situated along the Killbuck and distant some four miles northwest from Wooster, apparently presents unusual attractions to the birds, besides being both an entomological and a botanical paradise. This appears to be accounted for by the great diversity of topographical conditions existing within a comparatively small area; since here are upland fields, thickets, forests, and wooded ravines closely adjacent to the swamps, marshes, meadows, damp woodlands and thickets of the Killbuck's valley.

To illustrate its attractiveness to the lover of birds, as well as to indicate what may be seen here during the spring season of migration, the following list is appended; consisting of eighty-four species observed on May 15, 1892, between the hours of 7:30 A. M. and 9:00 P. M., a large proportion having been noted in the vicinity of the locality just mentioned:

<i>Ardetta exilis</i> ,	<i>Empidonax flaviventris</i> ,
<i>Ardea virescens</i> ,	<i>Empidonax traillii</i> ,
<i>Gallinago delicata</i> ,	<i>Empidonax minimus</i> ,
<i>Totanus solitarius</i> ,	<i>Cyanocitta cristata</i> ,
<i>Actitis macularia</i> ,	<i>Corvus americanus</i> ,
<i>Ægialitis vocifera</i> ,	<i>Dolichonyx oryzivorus</i> ,
<i>Colinus virginianus</i> ,	<i>Molothrus ater</i> ,
<i>Bonasa umbellus</i> ,	<i>Agelaius phœniceus</i> ,
<i>Zenaidura macroura</i> ,	<i>Sturnella magna</i> ,
<i>Accipiter cooperii</i> ,	<i>Icterus galbula</i> ,
<i>Buteo borealis</i> ,	<i>Quiscalus quiscula æneus</i> ,
<i>Buteo lineatus</i> ,	<i>Spinus tristis</i> ,
<i>Falco sparverius</i> ,	<i>Pooecetes gramineus</i> ,
<i>Syrnium nebulosum</i> ,	<i>Zonotrichia leucophrys</i> ,
<i>Megascops asio</i> ,	<i>Zonotrichia albicollis</i> ,
<i>Coccyzus americanus</i> ,	<i>Spicella socialis</i> ,
<i>Coccyzus erythrophthalmus</i> ,	<i>Melospiza fasciata</i> ,
<i>Ceryle alcyon</i> ,	<i>Pipilo erythrophthalmus</i> ,
<i>Dryobates villosus</i> ,	<i>Cardinalis cardinalis</i> ,
<i>Dryobates pubescens</i> ,	<i>Habia ludoviciana</i> ,
<i>Sphyrapicus varius</i> ,	<i>Passerina cyanea</i> ,
<i>Melanerpes erythrocephalus</i>	<i>Piranga erythromelas</i> ,
<i>Colaptes auratus</i> ,	<i>Progne subis</i> ,
<i>Anthus vociferus</i> ,	<i>Chilidon erythrogastra</i> ,
<i>Chordeiles virginianus</i> ,	<i>Tachycineta bicolor</i> ,
<i>Chæura pelagica</i> ,	<i>Stelgidopteryx serripennis</i> ,
<i>Trochilus colubris</i> ,	<i>Vireo olivaceus</i> ,
<i>Tyrannus tyrannus</i> ,	<i>Vireo gilvus</i> ,
<i>Myiarchus crinitus</i> ,	<i>Vireo flavifrons</i> ,
<i>Sayornis phœbe</i> ,	<i>Mniotilta varia</i> ,
<i>Contopus virens</i> ,	<i>Helminthophila pinus</i> ,

<i>Deudroica æstiva</i> ,	<i>Thryothorus ludovicianus</i> ,
<i>Dendroica cærulescens</i> ,	<i>Troglodytes hiemalis</i> ,
<i>Dendroica maculosa</i> ,	<i>Sitta carolinensis</i> ,
<i>Dendroica pennsylvanica</i> ,	<i>Parus bicolor</i> ,
<i>Dendroica virens</i> ,	<i>Parus atricapillus</i> ,
<i>Seiurus aurocapillus</i> ,	<i>Regulus calendula</i> ,
<i>Seiurus motacilla</i> ,	<i>Polioptila cærulea</i> ,
<i>Geothlypis trichas</i> ,	<i>Turdus mustelinus</i> ,
<i>Setophaga ruticilla</i> ,	<i>Turdus fuscescens</i> ,
<i>Galeoscoptes carolinensis</i> ,	<i>Merula migratoria</i> ,
<i>Harporhynchus rufus</i> ,	<i>Sialia sialis</i> .

The number of species actually ascertained to occur in the County is 183. Of this number thirty are permanent residents, as follows; those less common during the winter being designated by an asterisk:

<i>Colinus virginianus</i> ,	<i>Dryobates pubescens</i> ,
<i>Bonasa umbellus</i> ,	<i>Melanerpes carolinus</i> ,
<i>Zenaidura macroura</i> ,*	<i>Colaptes auratus</i> ,*
<i>Circus hudsonius</i> ,*	<i>Otocoris alpestris praticola</i> ,
<i>Accipiter velox</i> ,	<i>Cyanocitta cristata</i> ,
<i>Accipiter cooperii</i> ,	<i>Sturnella magna</i> ,*
<i>Buteo borealis</i> ,*	<i>Spinus tristis</i> ,
<i>Buteo lineatus</i> ,*	<i>Passer domesticus</i> ,
<i>Falco sparverius</i> ,*	<i>Melospiza fasciata</i> ,*
<i>Asio wilsonianus</i> ,	<i>Cardinalis cardinalis</i> ,
<i>Syrnium nebulosum</i> ,	<i>Ampelis cedrorum</i> ,*
<i>Nyctala acadica</i> ,	<i>Thryothorus ludovicianus</i> ,
<i>Megascops asia</i> ,	<i>Sitta carolinensis</i> ,
<i>Bubo virginianus</i> ,	<i>Parus bicolor</i> ,
<i>Dryobates villosus</i> ,	<i>Parus atricapillus</i> ,

The following sixty-one are summer residents, those distinguished by an asterisk being sometimes also winter residents:

<i>Aix sponsa</i> ,	<i>Chætura pelagica</i> ,
<i>Botaurus lentiginosus</i> ,	<i>Trochilus colubris</i> ,
<i>Ardetta exilis</i> ,	<i>Tyrannus tyrannus</i> ,
<i>Ardea herodias</i> ,	<i>Myiarchus crinitus</i> ,
<i>Ardea virescens</i> ,	<i>Sayornis phœbe</i> ,
<i>Rallus elegans</i> ,	<i>Contopus virens</i> ,
<i>Philohela minor</i> ,	<i>Empidonax virescens</i> ,
<i>Actitis macularia</i> ,	<i>Empidonax traillii</i> ,
<i>Ægialitis vocifera</i> ,	<i>Corvus americanus</i> ,*
<i>Coccyzus americanus</i> ,	<i>Dolichonyx oryzivorus</i> ,
<i>Ceryle alcyon</i> ,*	<i>Molothrus ater</i> ,
<i>Melanerpes erythrocephalus</i> ,*	<i>Agelaius phœniceus</i> ,
<i>Antrastomus vociferus</i> ,	<i>Icterus spurius</i> ,
<i>Chordeiles virginianus</i> ,	<i>Icterus galbula</i> ,

<i>Quiscalus quiscula æneus</i> ,*	<i>Vireo flavifrons</i> ,
<i>Poocætes gramineus</i> ,	<i>Mniotilta varia</i> ,
<i>Ammodramus savannarum passerinus</i> ,	<i>Helminthophila pinus</i> ,
<i>Spizella socialis</i> ,	<i>Dendroica æstiva</i> ,
<i>Spizella pusilla</i> ,	<i>Seiurus aurocapillus</i> ,
<i>Pipilo erythrophthalmus</i> ,	<i>Seiurus motacilla</i> ,
<i>Habia ludoviciana</i> ,	<i>Geothlypis trichas</i> ,
<i>Passerina cyanea</i> ,	<i>Icteria virens</i> ,
<i>Spiza americana</i> ,	<i>Galeoscoptes carolinensis</i> ,
<i>Piranga erythromelas</i> ,	<i>Harporhynchus rufus</i> ,
<i>Progne subis</i> ,	<i>Troglodytes ædon</i> ,
<i>Petrochelidon lunifrons</i> ,	<i>Cistothorus palustris</i> ,
<i>Chelidon erythrogastra</i> ,	<i>Poliophtila cærulea</i> ,
<i>Stelgidopteryx serripennis</i> ,	<i>Turdus mustelinus</i> ,
<i>Lanius ludovicianus excubitorides</i> ,	<i>Merula migratoria</i> ,*
<i>Vireo olivaceus</i> ,	<i>Sialia sialis</i> .*
<i>Vireo gilvus</i> ,	

Six additional species which belong more properly with the transient visitors have been identified as occasional summer residents:

<i>Anas boschas</i> ,	<i>Tachycineta bicolor</i> ,
<i>Totanus flavipes</i> ,	<i>Dendroica pennsylvanica</i> ,
<i>Sphyrapicus varius</i> ,	<i>Setophaga ruticilla</i> .

The transient visitors number fifty-seven, and are as follows:

<i>Colymbus auritus</i> ,	<i>Fulica americana</i> ,
<i>Podilymbus podiceps</i> ,	<i>Gallinago delicata</i> ,
<i>Urinator imber</i> ,	<i>Tringa maculata</i> ,
<i>Larus philadelphia</i> ,	<i>Totanus melanoleucus</i> ,
<i>Merganser americanus</i> ,	<i>Totanus solitarius</i> ,
<i>Lophodytes cucullatus</i> ,	<i>Bartramia longicauda</i> ,
<i>Anas obscura</i> ,	<i>Coccyzus erythrophthalmus</i> ,
<i>Anas americana</i> ,	<i>Empidonax flaviventris</i> ,
<i>Anas carolinensis</i> ,	<i>Empidonax minimus</i> ,
<i>Anas discors</i> ,	<i>Scolecophagus carolinus</i> ,
<i>Spatula clypeata</i> ,	<i>Carpodacus purpureus</i> ,
<i>Dafla acuta</i> ,	<i>Ammodramus sandwichensis savanna</i> ,
<i>Aythya americana</i> ,	<i>Zonotrichia leucophrys</i> ,
<i>Aythya valisneria</i> ,	<i>Zonotrichia albicollis</i> ,
<i>Aythya affinis</i> ,	<i>Melospiza georgiana</i> ,
<i>Glaucionetta clangula americana</i> ,	<i>Passerella iliaca</i> ,
<i>Charitonetta albeola</i> ,	<i>Helminthophila peregrina</i> ,
<i>Erismatur rubida</i> ,	<i>Dendroica tigrina</i> ,
<i>Branta canadensis</i> ,	<i>Dendroica cærulescens</i> ,
<i>Rallus virginianus</i> ,	<i>Dendroica coronata</i> ,
<i>Porzana carolina</i> ,	<i>Dendroica maculosa</i> ,
<i>Gallinula galeata</i> ,	<i>Dendroica cærulea</i> ,

<i>Dendroica castanea</i> ,	<i>Sitta canadensis</i> ,
<i>Dendroica striata</i> ,	<i>Regulus calendula</i> ,
<i>Dendroica blackburniæ</i> ,	<i>Turdus fuscescens</i> ,
<i>Dendroica virens</i> ,	<i>Turdus alicia</i> ,
<i>Geothlypis agilis</i> ,	<i>Turdus ustulatus swainsonii</i> ,
<i>Geothlypis philadelphia</i> ,	<i>Turdus aonalaschkæ pallasii</i> .
<i>Sylvania pusilla</i> ,	

Nine species may be catalogued as winter visitors :

<i>Archibuteo lagopus sancti-johannis</i> ,	<i>Lanius borealis</i> ,
<i>Asio accipitrinus</i> ,	<i>Troglodytes hiemalis</i> ,
<i>Plectrophenax nivalis</i> ,	<i>Certhia familiaris americana</i> ,
<i>Spizella monticola</i> ,	<i>Regulus satrapa</i> .
<i>Junco hyemalis</i> ,	

Eighteen species are of only casual or accidental occurrence, as follows :

<i>Larus argentatus smithsonianus</i> ,	<i>Aquila chrysaëtos</i> ,
<i>Pelecanus erythrorhynchos</i> ,	<i>Haliaeetus leucocephalus</i> ,
<i>Merganser serrator</i> ,	<i>Falco peregrinus anatum</i> ,
<i>Clangula hyemalis</i> ,	<i>Falco columbarius</i> ,
<i>Olor columbianus</i> ,	<i>Pandion haliaëtus carolinensis</i> ,
<i>Ardea egretta</i> ,	<i>Strix pratincta</i> ,
<i>Cathartes aura</i> ,	<i>Nyctea nyctea</i> ,
<i>Ectopistes migratorius</i> ,	<i>Otocoris alpestris</i> ,
<i>Buteo latissimus</i> ,	<i>Acanthis linaria</i> .

Two species which were undoubtedly once permanent residents of the County are now probably extinct, viz. :

<i>Meleagris gallopavo</i> ,	<i>Ceophloeus pileatus</i> .
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A census of the birds of the County according to families gives the following result :

Podicipidæ, 2 species,	Falconidæ, 13 species,
Urinatoridæ, 1 species,	Strigidæ, 1 species,
Laridæ, 2 species,	Bubonidæ, 7 species,
Pelecanidæ, 1 species,	Cuculidæ, 2 species,
Anatidæ, 20 species,	Alcedinidæ, 1 species,
Ardeidæ, 5 species,	Picidæ, 7 species,
Rallidæ, 5 species,	Caprimulgidæ, 2 species,
Scolopacidæ, 8 species,	Micropodidæ, 1 species,
Charadriidæ, 1 species,	Trochilidæ, 1 species,
Tetraonidæ, 2 species,	Tyrannidæ, 8 species,
Phasianidæ, 1 species,	Alaudidæ, 2 species,
Columbidæ, 2 species,	Corvidæ, 2 species,
Cathartidæ, 1 species,	Icteridæ, 8 species,

Fringillidæ, 22 species,
 Tanagridæ, 1 species,
 Hirundinidæ, 5 species,
 Ampelidæ, 1 species,
 Laniidæ, 2 species,
 Vireonidæ, 3 species,

Mniotiltidæ, 22 species,
 Troglodytidæ, 6 species,
 Certhiidæ, 1 species,
 Paridæ, 4 species,
 Sylviidæ, 3 species,
 Turdidæ, 7 species.

Total number of families, 38; of species, 183.

THE BIRDS OF WAYNE COUNTY.

ORDER PYGOPODES. DIVING BIRDS.

SUBORDER PODICIPEDES. GREBES.

FAMILY PODICIPIDÆ. GREBES.

GENUS **COLYMBUS**. LINNÆUS.

SUBGENUS **DYTES**. KAUP.

1. **Colymbus auritus** (LINN.).

Horned Grebe.

A more or less regular transient on the streams and ponds of the County. It is tolerably common in the fall, but it is not so frequently observed in the spring.

GENUS **PODILYMBUS** LESSON.

2. **Podilymbus podiceps** (LINN.).

Pied-billed Grebe; Dabchick; Hell Diver.

A common transient both in fall and spring, apparently occurring most numerous in April, September and October. A specimen in the writer's collection was taken on the Wooster Reservoir, September 30, 1892. Possibly a rare summer resident of the most secluded swamps and marshes, but there is no record of its breeding within the limits of the County.

SUBORDER CEPHI. LOONS AND AUKS.

FAMILY URINATORIDÆ. LOONS.

GENUS **URINATOR**. CUVIER.

3. **Urinator imber** (GUNN.).

Loon; Great Northern Diver.

Transient visitor; rare. Apparently most liable to be encountered after a severe spring storm, when occasionally one or two alight on Killbuck Creek. It is found sometimes also on the lakes and ponds, and even along the smaller streams. Seldom if ever have more than two been seen at one time. An adult in the collection of Mr. C. E. Bixler was taken in the central park of the County, May 2, 1883.

ORDER LONGIPENNES. LONG-WINGED SWIMMERS.

FAMILY LARIDÆ. GULLS AND TERNS.

SUBFAMILY LARINÆ. GULLS.

GENUS **LARUS**. LINNÆUS.4. **Larus argentatus smithsonianus** (COUES.).

American Herring Gull.

Very rare transient visitor. Appearing irregularly on ponds and the larger streams, generally singly or in pairs. A fine adult specimen in the collection of Mr. John Blandford, of Wooster, was shot near the town, from a flock of four, in the spring of 1873.

5. **Larus philadelphia** (ORD).

Bonaparte's Gull.

A rare and irregular transient visitor; noted most frequently in the spring. Individuals sometimes linger for several days along Killbuck Creek, or in the vicinity of the lakes and larger ponds. In the spring of 1879, four were seen and one shot on a mill pond near Wooster.

ORDER STEGANOPODES. TOTIPALMATE SWIMMERS.

FAMILY PELECANIDÆ. PELICANS.

GENUS **PELECANUS**. LINNÆUS.

SUBGENUS CYRTOPELICANUS. REICHENBACH.

6. **Pelecanus erythrorhynchos** (GMEL.).

American White Pelican.

Only a single specimen is known to have been taken. This is an adult in breeding plumage, and was shot in the summer of 1886, along Killbuck Creek in the southern portion of the County. No others were seen at the time. This bird was preserved and mounted for Dr. J. C. McMurray, of Shreve, from whom the above particulars of its capture were obtained. Dr. J. M. Wheaton mentions¹ but one specimen in breeding plumage as having been taken in the State.

¹ Geological survey of Ohio IV, 1882, p. 42.

ORDER ANSERES. LAMELLIROSTRAL SWIMMERS.

FAMILY ANATIDÆ. DUCKS, GEESE AND SWANS.

SUBFAMILY MERGINÆ. MERGANSERS.

GENUS **MERGANSER.** BRISSON.7. **Merganser americanus** (CASS.).**American Merganser ; Goosander.**

A rare transient visitor. A female in the collection of Mr. Joseph Housekeeper, of Wooster, was killed by him along Killbuck Creek, March 22, 1893.

RED-BREASTED MERGANSER, NATURAL SIZE.

8. **Merganser serrator** (LINN.).**Red-breasted Merganser.**

This is in this locality apparently the rarest of the three species of Mergansers. The writer's only record for the County is that of an adult female obtained at the Wooster reservoir, November 15, 1890.

GENUS **LOPHODYTES.** REICHENBACH.9. **Lophodytes cucullatus** (LINN.).**Hooded Merganser.**

Transient visitor ; of more frequent occurrence than either of the two preceding, though not very common. It is observed principally in the spring ; males appearing to be oftener taken than females.

SUBFAMILY ANATINÆ. RIVER DUCKS.

GENUS **ANAS**. LINNÆUS.SUBGENUS **ANAS**.10. **Anas boschas** (LINN.).**Mallard.**

An abundant spring and fall transient. As is the case with several of the other Ducks that are found chiefly on the larger streams and bodies of water, this species is much more numerous during a very rainy season, the bottom-lands along the Killbuck being then extensively overflowed. The floods are more frequent in spring than in the fall; consequently the Ducks are at the former season decidedly more abundant. During a favorable autumn the Mallard is nearly as numerous as in spring, but if the fall be very dry, few or none are to be found. It occurs in spring chiefly in flocks, which in former years sometimes aggregated several thousand individuals; but at the present time flocks of over 150 are unusual. This diminution in numbers is due to the straightening of the course of Killbuck Creek, causing the water to recede from the flooded lands with comparative rapidity.

Mr. Housekeeper informs me that several years ago a nest of this species was found three miles south of Wooster, in an extensive marsh along the Killbuck. This is the only known instance of its breeding in the County.

11. **Anas obscura** (GMEL.).**Black Duck; Dusky Duck.**

A common transient both in spring and fall; often in flocks associated with Mallards.

SUBGENUS **MARECA**. STEPHENS.12. **Anas americana** (GMEL.).**Badpate; American Widgeon.**

A common transient visitor in spring, but rare in the fall. It is found principally along Killbuck Creek, not infrequently in large flocks, and often with Mallards and Black Ducks.

SUBGENUS **NETTION**. KAUP.13. **Anas carolinensis** (GMEL.).**Green-winged Teal.**

Transient visitor; tolerably common in the spring, but rare in autumn. It occurs in small flocks, alone or with other Ducks. It was formerly more common, and was found in much larger flocks.

SUBGENUS **QUERQUEDULA**. STEPHENS.**14. *Anas discors* (LINN.).****Blue-winged Teal.**

A tolerably common spring transient; not so often observed in the fall. It is seen in small flocks, frequently with other Ducks.

GENUS **SPATULA**. BOIE.**15. *Spatula clypeata* (LINN.).****Shoveller.**

A rare and irregular transient visitor. It is said to have been several times taken at Fox Lake. An adult male in full spring plumage, which was shot in the southern part of the County along Killbuck Creek, during the spring of 1886, is now in the collection of Mr. George Faber, of Wooster.

GENUS **DAFILA**. STEPHENS.**16. *Dafila acuta* (LINN.).****Pintail.**

An abundant transient in March and April; not nearly so numerous in the fall. It prefers the larger streams, especially Killbuck Creek, and when the adjacent lowlands are widely overflowed sometimes congregates there in flocks of 100 to 150 individuals. This species and the Mallard are of all the Ducks the most abundant.

GENUS **AIX**. BOIE.

WOOD DUCK, MUCH REDUCED.

17. *Aix sponsa* (LINN.).**Wood Duck; Summer Duck.**

Summer resident; tolerably common in some portions of the County, but in others, though formerly of regular occurrence, is now quite rare. It arrives usually during the latter part of March, or early in April, and may be found breeding in cer-

tain localities nearly every year. Its favorite haunts are the woods and swamps in the valley of the Killbuck, where in autumn, after a suitable season, flocks of twenty or thirty are sometimes to be seen. It remains until October or November.

SUBFAMILY FULIGULINÆ. SEA DUCKS.

GENUS **AYTHYA**. BOIE.

SUBGENUS **AYTHYA**.

18. **Aythya americana** (EYT.)

Redhead.

Now a rare transient visitor, although common many years ago, appearing regularly in spring in flocks along Killbuck Creek.

SUBGENUS **ARISTONETTA**. BAIRD.¹

19. **Aythya vallisneria** (WILS.)

Canvas-back.

Transient visitor; rare. It is seen singly or in pairs, sometimes with other species of Ducks, and chiefly on Killbuck Creek.

SUBGENUS **FULIGULA**. STEPHENS.

20. **Aythya affinis** (EYT.).

Lesser Scaup Duck; Raft Duck.

A common spring and fall transient, though never seen in large flocks. One of the first Ducks to appear in the spring, and among the latest to depart in autumn. It associates at times with Mallards, Pintails and Baldpates.

GENUS **GLAUCIONETTA**. STEJNEGER.

21. **Glaucionetta clangula americana** (BONAP.).

American Golden-eye.

A tolerably common though irregular spring transient; not observed in the fall. Apparently of most frequent occurrence in March, when it is often found on the smaller streams and ponds. An adult male in the collection of Mr. John Blandford was shot near Wooster, from a flock of four, in the spring of 1877. Another specimen, a female, in the writer's collection, was taken in the same vicinity on March 29, 1893.

¹ This subgenus was unintentionally omitted from the A. O. U. Check List. (Cf RIDGWAY, Manual of North American Birds, p. 102.)

GENUS **CHARITONETTA.** STEJNEGER.22. **Charitonetta albeola** (LINN.).

Buffle-head ; Butter-ball.

A common transient visitor in March and April; much less frequently observed in the fall. It occurs singly and in small flocks, usually not accompanied by other species. Contrary to the experience of Dr. Wheaton,¹ it here apparently prefers the lakes and ponds to running water; this being possibly due to the comparatively small size of the streams.

Mr. C. E. Bixler has a female of this species now mounted, which was picked up, evidently much exhausted, on one of the main streets of Wooster, April 26, 1885.

GENUS **CLANGULA.** LEACH.23. **Clangula hyemalis** (LINN.).

Old Squaw.

A winter visitor only, and apparently quite rare. The single known Wayne County record is that of an adult male which was killed during the winter of 1886-7, in the extreme southwestern portion of the County, on Odell's Lake, by men who were there at work cutting ice. This specimen is in the collection of Dr. J. C. McMurray, who furnished the above particulars of its capture.

GENUS **ERISMATURA.** BONAPARTE.24. **Erismatura rubida** (WILS.).

Ruddy Duck.

A tolerably common transient on streams and ponds. Observed principally in the spring.

SUBFAMILY ANSERINÆ. GEESE.

GENUS **BRANTA.** SCOPOLI.25. **Branta canadensis** (LINN.).

Canada Goose.

A common spring and fall transient, observed chiefly in March and November. The flocks not infrequently alight within the County, probably for the purpose of feeding. A farmer in Clinton township found, on the morning of March 21, 1894, about fifty of these birds in his yard among his domestic geese. A Canada Goose now in the collection of Mr. George Faber is said to have been found one morning, in an alley of Wooster, alive but in an exhausted condition.

¹ Geological survey of Ohio IV, 1882, p. 534.

SUBFAMILY CYGNINÆ. SWANS.

GENUS **OLOR.** WAGLER.26. *Olor columbianus* (ORD).

Whistling Swan.

A rare transient visitor. A fine adult specimen, now mounted and in the possession of Dr. J. H. Todd of Wooster, was shot from a flock of thirteen, at the northern end of Odell's Lake, November 12, 1892.

ORDER HERODIONES. HERONS, STORKS, IBISES, ETC.

SUBORDER HERODII. HERONS, EGRETS, BITTERNS, ETC.

FAMILY ARDEIDÆ. HERONS, BITTERNS, ETC.

SUBFAMILY BOTAURINÆ. BITTERNS.

GENUS **BOTAURUS.** HERMANN.27. *Botaurus lentiginosus* (MONTAG.).

American Bittern.

A rare summer resident; sometimes tolerably common during the spring. It is apparently restricted to the more extensive swamps and marshes on the bottom lands, and to the vicinity of the larger bodies of water.

GENUS **ARDETTA.** GRAY.28. *Ardetta exilis* (GMEL.).

Least Bittern.

A tolerably common summer resident; somewhat more numerous and more generally distributed during the spring migration. In the latter season it is occasionally observed along streams or ditches on the bottom-lands. In summer it is apparently confined to the ponds and lakes and to the secluded swamps. It was found to be not uncommon at Round and Long Lakes, in Holmes County, just south of the Wayne County line, on July 27, 1893. It undoubtedly breeds, though no nests have come to the notice of the writer.

Several years ago a Least Bittern was found dead on one of the streets of Wooster, the bird having been killed by flying against the telegraph wires.

SUBFAMILY ARDEINÆ. HERONS AND EGRETS.

GENUS **ARDEA.** LINN.SUBGENUS **ARDEA.**

GREAT BLUE HERON MUCH REDUCED.

29. Ardea herodias (LINN.).**Great Blue Heron.**

A tolerably common summer resident; found in all suitable localities throughout the County. It is said to breed regularly in the vicinity of Orrville, though much less abundantly than in former years. At the present time the few pairs that at last report were annually rearing their young in the deep woods about three miles from the town are the only survivors of a once extensive heronry. This is probably owing

to the encroachments of cultivation, and it is quite possible that none now resort to the locality. No information in regard to other nesting places is at present available. Adults appear to be much less numerous than immature birds.

SUBGENUS **HERODIAS**. BOIE.

30. *Ardea egretta* (GMEL.).

American Egret.

A rare and irregular visitor. It occurs singly or in small flocks along streams and about the lakes and ponds, in spring, summer and early autumn. It appears to be more frequently reported in spring than at any other season. Dr. J. M. Wheaton says of this species,¹ "I have no record of its occurrence in spring or in the breeding season." Dr. B. H. Warren also mentions² this bird as a straggler in late summer and autumn only.

SUBGENUS **BUTORIDES**. BLYTH.

31. *Ardea virescens* (LINN.).

Green Heron.

A common summer resident from April 23, to October 1. It nests in orchards or in low trees along the streams, but rarely, if ever, in colonies. When molested it will ordinarily build a second and even a third nest, often not far from the site of the first. Five eggs is the usual complement here and full sets have been obtained from May 18 to June 12.

A peculiar trait in the half fledged young, and one which seems not to have been mentioned except by Audubon,³ is the manner in which, upon the close approach of anyone to the nest, some or all of the brood leave it, walk cautiously out nearly to the extremity of the supporting branch, and there remain squawking loudly at every move made in their direction. At these times the parent birds are very frequently not seen, apparently considering their offspring capable of taking care of themselves.

The measurements of five nests are as follows:⁴

No.	Height	Depth.	Inside top diameter.	Inside middle diameter.	Outside top diameter.	Outside middle diameter.	Outside bottom diameter.	Width of rim.
1.....	8.00	3.00	9.00 x 7.00	.....	18.00 x 12.00	.....	9.00 x 6.00	5.00 x 1.50
2.....	6.00	2.50	6.00 x 5.00	.....	15.00 x 12.00	.....	8.00 x 6.00	.....
3.....	5.00	3.00	8.00 x 6.50	6.00 x 4.50	13.00 x 12.00	15.00 x 12.00	7.00 x 5.50	3.00 x 1.00
4.....	6.00	2.00	.....	.....	21.00 x 15.00	.....	.....	.....
5.....	5.00	2.50	6.00 x 5.00	.....	15.00 x 15.00	.....	.....	.....
Average..	6.00	2.60	7.25 x 5.88	.....	16.40 x 13.20	.....	8.00 x 5.83	4.00 x 1.25

¹ Geological Survey of Ohio IV, 1882, p. 501.

² Report on Birds of Pennsylvania, 1890, p. 59.

³ Ornithological Biography IV, 1838, p. 275.

⁴ All nest measurements are given in inches and hundredths; and the double dimensions which appear under single headings indicated maximum and minimum respectively.

ORDER PALUDICOLÆ. CRANES, RAILS, ETC.

SUBORDER RALLI. RAILS, GALLINULES, COOTS, ETC.

FAMILY RALLIDÆ. RAILS, GALLINULES AND COOTS.

SUBFAMILY RALLINÆ. RAILS.

GENUS **RALLUS**. LINNÆUS.**32. Rallus elegans** (AUD.).**King Rail.**

A rare summer resident from March to September; slightly more common in the spring than at other seasons. It is to be found principally in its breeding places in the extensive swamps and marshes.

A young bird in downy black plumage was captured in the latter part of June, 1888, on a road which passes through a swampy district about two and one-half miles south of Wooster. When first discovered, the parent bird (which was also secured), manifested much anxiety for the safety of its offspring, running again and again around the young one as though hoping thus to preserve it from harm. Both are now in the collection of Mr. J. Housekeeper.

33. Rallus virginianus (LINN.).**Virginia Rail.**

An abundant spring transient, chiefly in April; much less numerous in the fall. At these seasons it may be found in nearly all the large swamps and marshes of the County. Not ascertained to occur as a summer resident, perhaps from lack of opportunity for thorough investigation during that season, in localities suitable for the nesting of the species since it without much doubt breeds at least sparingly somewhere in this region.

GENUS **PORZANA.** VIEILLOT.SUBGENUS **PORZANA.**

SORA, MUCH REDUCED.

34. **Porzana carolina** (LINN.).**Sora; Carolina Rail.**

An abundant transient in March and April; less common during its fall migration, which covers the latter part of August and the months of September and October. It has not been observed in summer, although it perhaps occurs. It is more numerous than either of the two preceding species, and frequents of course similar localities.

SUBFAMILY **GALLINULINÆ.** GALLINULES.GENUS **GALLINULA.** BRISSON.35. **Gallinula galeata** (LICHT.).**Florida Gallinule.**

Rare; seen chiefly on the lakes and ponds, singly or in pairs. An adult female was captured alive in a barnyard eight miles north of Wooster, April 19, 1890, and was brought to town in a cage; but it lived only three days. It is now preserved in the writer's collection.

SUBFAMILY FULICINÆ. COOTS.

GENUS **FULICA**. LINNÆUS.36. **Fulica americana** (GMEL.).

American Coot.

A common spring transient, often in flocks; not so numerous in the fall. It has been observed, though rarely, on some of the lakes as late as June, from which it would appear to be possibly a summer resident.

On April 9, 1887, Mr. C. E. Bixler found, in Wooster, a Coot that had evidently been killed by striking against the side of the low building near which it was discovered.

ORDER LIMICOLÆ. SHORE BIRDS.

FAMILY SCOLOPACIDÆ. SNIPES, SANDPIPERS, ETC.

GENUS **PHILOHELA**. GRAY.37. **Philohela minor** (GMEL.).

American Woodcock.

Summer resident; tolerably common. It is generally distributed throughout the County, but is now in certain localities becoming rare. It appears in March; and migrates southward usually during the month of October, though occasionally a few may be found in favorable places as late as November.

It begins to breed soon after its arrival. On May 24, 1891, a brood of three young about a week old were surprised in a little open place among thickets along a mill-race. While the parent bird endeavored to attract attention to herself, the young birds proceeded to quickly secrete themselves. They all started away in different directions holding their wings in a perpendicular position, and uttering at the same time a peculiar peeping note. One caught and held in the hand for a few moments still continued its peeping, and when placed again upon the ground immediately sought safety in concealment among the undergrowth.

GENUS **GALLINAGO**. LEACH.38. **Gallinago delicata** (ORD).

Wilson's Snipe.

A common spring and fall transient; more numerous in the former season. It arrives generally about the middle of March (rather earlier than later), and is present in greatest numbers during the first three weeks of April; though somewhat irregular both in numbers and distribution. Individuals have sometimes been seen as late as May 15. Its favorite haunts are the marshes and damp meadows of the bottom lands.

GENUS **TRINGA**. LINNÆUS.SUBGENUS **ACTODROMAS**. KAUP.**39. Tringa maculata** (VIEILL.).**Pectoral Sandpiper.**

Transient visitor; observed only in the vicinity of Orrville, where it is common during April, in the marshy meadows bordering the uncleared portions of Newman's Swamp. It is found usually in flocks of not more than twenty individuals; and is ordinarily quite tame and unsuspicious. It has not been noted in the fall. In Mr. Freeman's collection are several specimens of this species, and to him the writer is indebted for the above facts in regard to its occurrence.

GENUS **TOTANUS**. BECHSTEIN.SUBGENUS **GLOTTIS**. KOCH.

GREATER YELLOW-LEGS, NATURAL SIZE.

40. Totanus melanoleucus (GMEL.).**Greater Yellow-legs.**

A rare transient visitor; occurring more frequently in the fall than in the spring. A specimen was taken at the Wooster Reservoir, October 14. 1890.

41. Totanus flavipes (GMEL.).**Yellow-legs.**

Transient visitor; rare; probably an occasional summer resident. One was shot by Mr. E. N. Freeman, near Orrville, in the summer of 1889.

SUBGENUS **HELODROMAS**. KAUP.**42. Totanus solitarius** (WILS.).**Solitary Sandpiper.**

A transient visitor; tolerably common in spring from the latter part of April to about the middle of May. The earliest date of its appearance is April 23 (1893) and none have been met with later than May 31. It generally occurs singly or in pairs,

but sometimes in companies of four or five, and frequents the vicinity of ditches, sluggish streams and stagnant pools. It has not been observed in the fall.

GENUS. **BARTRAMIA.** LESSON.

43. **Bartramia longicauda** (BECHST.).

Bartramian Sandpiper; Upland Plover.

A rare transient visitor; seen chiefly on the lowlands in the vicinity of water. One shot in the spring of 1891, at Newman's Swamp, is in the collection of Dr. E. B. Yager, of Orrville.

GENUS **ACTITIS.** ILLIGER.

44. **Actitis macularia** (LINN.).

Spotted Sandpiper.

Common summer resident from about the middle of April to the latter part of September. Extreme dates are April 13 and September 23. It frequents the lakes, ponds and streams of running water, breeding in the grass fields and the grain fieldst adjoining, or at most not far away. It is ordinarily to be found singly or in pairs, but sometimes in flocks of five to ten individuals.

FAMILY **CHARADRIIDÆ.** PLOVERS.

GENUS **ÆGIALITIS.** BOIE.

SUBGENUS **OXYECHUS.** REICHENBACH.

45. **Ægialitis vocifera** (LINN.).

Killdeer.

An abundant summer resident; noted from February 28 to November 30, though usually few remain later than November 1. It prefers as feeding grounds, especially in spring, the moist and even marshy meadows, although it may regularly be found in the upland fields. It frequently collects in small flocks before the breeding season but occurs in much larger companies during the latter part of the summer and in autumn. At Wooster, on July 11, 1892, a Killdeer apparently flying over the city at considerable altitude, was heard calling at 11:30 P. M.

The stomachs of two Killdeers examined contained red-legged grasshoppers (*Melanoplus femur-rubrum*), and scarabæid beetles (*Aphodius servil*), with remains of unidentifiable *Staphilinidæ* and *Curculionidæ*.¹

A killdeer shot November 10, 1892, along the margin of a small stream near Wooster is remarkable for the condition of one of its feet. The right tarsus of this specimen is very much shriveled below an enlargement of the bone near the ankle joint, this enlargement having the appearance of an old shot wound. By reason of this the tarsus and middle toe are together seven-eighths of an inch shorter than in the other foot. This apparently rendered the limb useless, for the bird, though able to

¹ Insect determinations are by Prof. F. M. Webster.

fly perfectly well, walked with much evident difficulty. The left tibia of another specimen, taken October 12, 1892, was found to be very crooked, and at a point near its proximal extremity so much enlarged as to indicate either a former fracture or similar severe injury. It had, however, completely healed, and the bone to all appearances was as strong as it had ever been.

ORDER GALLINÆ GALLINACEOUS BIRDS.

SUBORDER PHASIANI. PHEASANTS, GROUSE, PARTRIDGES, QUAILS, ETC.

FAMILY TETRAONIDÆ. GROUSE, PARTRIDGES, ETC.

SUBFAMILY PERDICINÆ. PARTRIDGES.

GENUS COLINUS. LESSON.

46. *Colinus virginianus* (LINN.).

Bob-white; "Quail."

A permanent resident; some years abundant much less numerous during others. In severe winters whole covies are sometimes found dead, having succumbed to cold and the scarcity of proper food. It is, moreover, not an infrequent circumstance to discover individuals that have been killed by flying against wires of the telegraph lines.

Except during part of the breeding season this species moves chiefly in flocks, frequenting preferably thickets, fence rows, patches of high weeds and similar places. It breeds generally in the fields, though occasionally in thickets on the edge of woodland; constructing sometimes a domed nest. The breeding season begins in May, and some years continues until September; a young bird just from the nest having been taken by Mr. C. E. Bixler on September 5, 1887. Two or three broods are probably reared.

SUBFAMILY TETRAONINÆ. GROUSE.

GENUS BONASA. STEPHENS.

47. *Bonasa umbellus* (LINN.).

Ruffed Grouse; Pheasant.

A permanent resident; tolerably common in some portions of the County, but rare in others. It was formerly abundant throughout all of this region, but during recent years has steadily diminished in numbers, coincident with the removal of the forests. It affects chiefly the more extensive woodlands, apparently preferring those portions with thick undergrowth, though it is at times seen even in small tracts of timber which afford little or no concealment. The males may be heard drumming from April to October.

On June 9, 1891, a family of fourteen downy young was surprised in thick woods. The parent bird, without manifesting the usual solicitude for the safety of its young, flew away into the forest, being neither again seen nor heard; thus for the time being apparently deserting her brood. The young, which were all huddled close together, immediately began to separate, and though closely watched, they were in less than one minute all effectually hidden.

FAMILY PHASIANIDÆ. PHEASANTS, ETC.

SUBFAMILY MELEAGRINÆ. TURKEYS.

GENUS **MELEAGRIS** LINNÆUS.

48. **Meleagris gallopavo** (LINN.).

Wild Turkey.

Formerly a resident, breeding in suitable situations throughout the County. It was common until about 1865, since which time until 1878 it gradually became of less frequent occurrence. The last authentic date of its appearance in Wayne County seems to be December 31, 1878. On that day a scattered company of six was seen by Mr. Joseph Housekeeper, in the swampy thickets on the bottom-lands four miles south of Wooster; the birds having been first discovered by their tracks in the snow. From the condition of the ground it was evident that they had been in the vicinity for several days. They were followed by other hunters also, but were exceedingly wary, and only a single bird of the flock was finally secured.

ORDER COLUMBÆ. PIGEONS.

FAMILY COLUMBIDÆ. PIGEONS.

GENUS **ECTOPISTES** SWAINSON.

PASSENGER PIGEON, MUCH REDUCED.

49. *Ectopistes migratorius* (LINN.).

Passenger Pigeon.

This species is said to have been an abundant summer resident thirty years ago, at that time there having been a large roost in Newman's Swamp. By the clearing of large portions of the swamp the Pigeons were driven away, but until about 1873 single pairs were to be found breeding in the vicinity of Orrville. During the past twenty years the species has been of only casual occurrence, the most recent dates of capture being September 19, 1888, and August 30, 1892; both of single birds.

GENUS *ZENAIIDURA* BONAPARTE.50. *Zenaidura macroura* (LINN.).

Mourning Dove.

An abundant summer resident; remaining in part over winter according to the severity of the weather, being probably even in severe seasons to be found in sufficiently sheltered localities. It moves more or less in at least small flocks at all times of the year, but in fall and winter seldom to any extent otherwise. Four Mourning Doves were observed April 23, 1893, feeding in a meadow among a flock of domestic pigeons. The same four individuals were subsequently seen upon the ground in the midst of a flock of Red-winged Blackbirds.

This species begins nest-building early in April, and the breeding season continues at its height until June. The nest is placed almost anywhere; in trees or bushes, on stumps, rail fences, but only occasionally on the ground. Of fifty nests examined, only two were more than fifteen feet from the ground, while three-fourths of the whole number were not at a greater altitude than ten feet. An old Robin's nest is occasionally utilized as a foundation; and a Mourning Dove's nest was noted May 22, 1892, built upon the abandoned domicile of a Brown Thrasher.

The measurements of eight nests are as follows:

No.	Height	Depth.	Inside top diameter	Outside top diameter.	Outside middle diameter.	Outside bottom diameter.	Width of rim.
1	3.50	1.00	3.00 x 3.00	6.00 x 5.00	.....	.....	1.00 x 0.75
2	3.00	1.00	3.00 x 2.50	6.00 x 5.00	3.50 x 3.50	5.00 x 5.00	2.00 x 0.75
3	2.50	0.75	2.75 x 2.50	6.00 x 5.00	.....	.....	2.00 x 0.75
4	4.00	1.00	3.00 x 3.00	7.00 x 6.00	.....	.....	.....
5	5.00	1.00	3.60 x 3.00	7.00 x 5.75	5.00 x 5.00	2.00 x 2.00	3.00 x 0.25
6	2.00	1.00	2.75 x 2.25	6.00 x 5.00	.....	.....	.....
7	3.50	2.00	3.50 x 3.00	9.00 x 6.00	6.00 x 4.25	5.00 x 3.00	.....
8	3.50	1.25	3.50 x 3.00	7.00 x 6.50	7.00 x 4.50	8.00 x 4.50	.....
Average ..	3.33	1.3	3.14 x 2.78	6.5 x 5.53	5.38 x 4.31	5.00 x 3.63	2.00 x 0.63

Two eggs constitute of course the usual complement, but three eggs have twice been found: April 27, 1890, and May 14, 1893. If the nest contain eggs or young the parent bird often in her actions betrays great solicitude for the safety of her household, fluttering along on or near the ground for a considerable distance in the endeavor to attract to herself the attention of the real or supposed intruder.

ORDER RAPTORES. BIRDS OF PREY.

SUBORDER SARCORHAMPHI. AMERICAN VULTURES.

FAMILY CATHARTIDÆ. AMERICAN VULTURES.

GENUS **CATHARTES** ILLIGER.51. **Cathartes aura** (LINN.).

Turkey Vulture.

A rare summer visitor, although apparently common in Holmes County, only a short distance farther south. It is seen in Wayne County generally singly or in pairs; and on several different occasions individuals have been taken, some of which are now preserved as mounted specimens.

SUBORDER FALCONES. VULTURES, FALCONS, HAWKS, ETC.

FAMILY FALCONIDÆ. VULTURES, FALCONS, HAWKS, ETC.

SUBFAMILY ACCIPITRINÆ. KITES, BUZZARDS, HAWKS, ETC.

GENUS **CIRCUS** LACÉPÈDE.52. **Circus hudsonius** (LINN.).

Marsh Hawk.

Resident; common in spring and fall, but less frequently observed at other seasons. It is found on upland as well as on the bottoms, though apparently preferring the latter as its hunting grounds. A nest of this species was discovered by Mr. E. N. Freeman, near Orrville, in the spring of 1891. It was on the ground in a meadow, and was a very slight affair. It contained six eggs.

GENUS **ACCIPITER** BRISSON.SUBGENUS **ACCIPITER**.53. **Accipiter velox** (WILS.).

Sharp-shinned Hawk.

A tolerably common resident; apparently of most frequent occurrence on the bottom-lands. It ventures occasionally into the towns, particularly in winter. On January 9, 1893, one made its appearance about the court-house at Wooster, in pursuit of the numerous House Sparrows that find a refuge in the nooks and corners of the building. On February 1, another Sharp-shinned Hawk, or possibly the same individual, was seen at the same place. Although no nests of this species have been found it undoubtedly breeds in the County.

COOPER'S HAWK, ABOUT ONE-THIRD NATURAL SIZE.

54. *Accipiter cooperii* (BONAP.).

Cooper's Hawk.

A common resident; oftener observed in spring than at any other season. In the winter it retreats to the most sheltered portions of the woods, preferably to the vicinity of evergreens, where such are available, and seldom during the severe season venturing far abroad.

Although this species has not actually been found breeding in the County, young unable to fly have been captured by Mr. Freeman.

On March 18, 1891, there was discovered on the ground in a sheltered situation among evergreens, an immature female Cooper's Hawk, which was from some cause other than a wound so weak that it was unable to fly or even to make more than the most feeble efforts to escape.

GENUS **BUTEO** CUVIER.**55. Buteo borealis (GMEL.).****Red-tailed Hawk.**

A common summer resident; much less numerous in winter. It breeds chiefly on the uplands, in heavy timber, though not infrequently near the edge of the woods in the vicinity of a human habitation or a well travelled road. The tree chosen appears to be generally a white oak (*Quercus alba*); though nests have been found in the pin oak (*Quercus palustris*); chestnut (*Castanea dentata*) and beech (*Fagus atropunicea*). The distance of the nest from the ground varies from sixty to ninety feet, but is generally between seventy and eighty-five feet. Old nests are frequently reoccupied, but not usually in successive seasons.

The measurements of the nest of this species given by Major Chas. E. Bendire¹ are apparently too small, unless these Ohio nests are exceptionally large. This discrepancy is especially noticeable in the depth of the inner cavity, as may be seen by reference to the dimensions of the following seven nests, measured *in situ*:

No.	Height	Depth.	Inside top diameter.	Inside middle diameter.	Outside top diameter.	Outside middle diameter.	Outside bottom diameter.
1	15.00	7.50	15.00 x 14.00	8.00 x 8.00	36.00 x 36.00	26.00 x 26.00	14.00 x 14.00
2	18.00	6.00	13.00 x 13.00	.....	33.00 x 27.00	.....	.....
3	26.00	5.00	9.00 x 9.00	6.00 x 6.00	43.00 x 24.00	33.00 x 24.00	30.00 x 18.00
4	18.00	4.50	12.00 x 12.00	9.00 x 9.00	36.00 x 17.00	30.00 x 12.00	14.00 x 8.00
5	18.00	4.00	10.00 x 9.00	7.00 x 6.00	42.00 x 21.00	30.00 x 15.00	9.00 x 6.00
6	15.00	6.00	12.00 x 12.00	.....	36.00 x 24.00	.....	.....
7	36.00	7.00	10.00 x 8.00	6.00 x 6.00	48.00 x 30.00	42.00 x 30.00	18.00 x 12.00
Average	20.86	5.71	11.57 x 11.00	7.20 x 7.00	39.14 x 25.57	32.20 x 21.40	17.00 x 11.60

The eggs are usually deposited during the latter half of March, but sometimes as late as the middle of April. Two or three eggs constitute a complement, the former number being somewhat the more common.

On April 21, 1891, in response to a vigorous rap upon a tall oak, a female Red-tail left her nest with such apparent haste and carelessness that she pushed out of the nest one of the young birds, which came crashing down through the branches to the ground, being of course killed by the fall. This young bird was only two or three days old, but its stomach was packed with remains of meadow mice (*Microtus pennsylvanicus*). In this locality, there being an abundance of other food, the Red-tailed Hawk seldom lays tribute upon the poultry yards.

56. Buteo lineatus (GMEL.).**Red-shouldered Hawk.**

An abundant resident, but much less often seen during the winter than at any other season. It is in this region more numerous than any other Hawk, and for comparison with the Sparrow and Red-tailed Hawks, which rank next in abundance,

¹ Life Histories of North American Birds I, 1892, p. 210.

the total number of each observed in 1892 may be taken as a fair criterion. These figures are: Red-shouldered Hawk, 87; Sparrow Hawk, 37; Red-tailed Hawk, 27.

The Red-shouldered Hawk prefers the wooded bottom-lands; and while there is scarcely a tract of lowland woods of any considerable size which is not inhabited by one or even two pairs of *Buteo lineatus*, yet during the spring and summer it remains so closely within its haunts, that were these places not visited, the species might very readily be considered much less abundant than is really the case. In parts of the County where no bottom-lands exist, the Red-shouldered Hawk is apparently less numerous, though by no means rare.

The eggs, according to the writer's experience, are in this locality somewhat more commonly four than three in number. They are deposited generally between the fifth and the twentieth of April, the variation in different seasons being apparently not dependent upon the mildness or severity of the weather. Young in the nest have been observed as early as May 5. Eggs unmarked, or nearly so, occasionally occur, although these are somewhat the exception. Eggs in different stages of incubation are not infrequently found in the same nest.

This species, like the Red-tailed Hawk, manifests little inclination to defend its nest against a human intruder, but usually contents itself with retreating into the woods, or at most soaring about high overhead. In fact the writer has record of but a single instance where on the part of the parent bird any fierceness was exhibited. On this occasion, the female, after being driven from the nest only when the latter was nearly reached in climbing, persisted in making repeated and most vicious swoops at the disturber of her peace, until forced to desist by the approach below of someone with a gun. This nest contained one young bird just hatched, together with three eggs in which incubation was nearly completed. Under ordinary circumstances the female leaves the nest while the tree is being approached, but sometimes, especially if incubation be advanced, she is with considerable difficulty dislodged.

Of the nest of the Red-shouldered Hawk, the dimensions given by Major Chas. E. Bendire¹ are, as in the case of the preceding species, somewhat too small, unless these Ohio nests are to be considered exceptional. The measurements of ten nests are as follows:

No.	Height	Depth	Inside top diameter.	Inside middle diameter.	Outside top diameter.	Outside middle diameter.	Outside bottom diameter.	Width of rim.
1.....	18.00	4.00	8.00 x 7.00	6.50 x 6.00	30.00 x 24.00	33.00 x 24.00	24.00 x 21.00	.....
2.....	28.00	8.00	10.00 x 7.00	7.00 x 5.00	24.00 x 18.00	30.00 x 18.00	18.00 x 12.00	.....
3.....	18.00	4.00	11.00 x 10.00	.....	33.00 x 27.00	27.00 x 18.00	26.00 x 12.00	.....
4.....	21.00	5.00	8.50 x 7.00	6.75 x 6.00	26.00 x 18.00	24.00 x 12.00	18.00 x 5.00	.....
5.....	22.00	4.00	7.50 x 7.50	6.00 x 5.50	24.00 x 22.00	31.00 x 28.00	24.00 x 12.00	.....
6.....	12.00	3.00	6.50 x 6.50	5.50 x 5.00	30.00 x 18.00	30.00 x 18.00	30.00 x 18.00	15.00 x 8.50
7.....	18.00	3.00	7.50 x 6.50	6.50 x 5.50	29.00 x 22.00	29.00 x 22.00	15.00 x 12.00	12.00 x 5.50
8.....	27.00	6.00	6.50 x 5.50	6.50 x 5.50	28.00 x 26.00	36.00 x 24.00	.....	.....
9.....	18.00	5.00	14.00 x 11.00	.....	33.00 x 24.00	33.00 x 24.00	18.00 x 12.00	.....
10.....	21.00	6.00	9.00 x 8.00	7.00 x 6.50	30.00 x 19.00	33.00 x 14.00	27.00 x 7.00	.....
Average...	20.30	4.30	8.85 x 7.60	6.47 x 5.63	28.70 x 21.80	30.60 x 20.20	22.22 x 12.33	.....

From a comparison of the above measurements with those of the nest of *Buteo borealis* it will be seen that while the nest of the latter is considerably greater in diameter, it is very little higher than the nest of *B. lineatus*, but has nevertheless a

¹ Life Histories of North American Birds I, 1892, p. 223.

somewhat deeper inner cavity. According to the writer's observation, the nest of *B. borealis* is, moreover, on the average much better finished inside, very frequently being lined with a quantity of grapevine bark closely matted together; while on the other hand some nests of *Buteo lineatus* are merely loose collections of sticks and twigs, with very little lining, and so nearly flat that the eggs seem in danger of being thrown from the nest.

The elm (*Ulmus Americana*) seems to be most frequently chosen as a site for the nest, but the following trees have been observed also thus utilized, viz.: maples (*Acer rubrum et Saccharum*), beech (*Fagus atropunicea*), walnut (*Juglans nigra*), oak (*Quercus alba*) and ash (*Fraxinus sp.*).

In this locality the same nest appears to be seldom occupied two years in succession, even though the birds be not disturbed. Wherever the nest of a Red-shouldered Hawk is found, a nest of the Crow is reasonably certain to be situated in the immediate vicinity, a circumstance not observed in connection with any other species of Raptores, and which, considering the apparent animosity existing between the two species in question, is perhaps not easily explained.

In a nest from which eggs were taken April 24, 1892, there was noticed a small quantity of the claws and shells of crustaceans, probably the remains of a recent meal.

Two young Red-shouldered Hawks taken from the nest when about four weeks old, were, after a confinement of two months and a half, killed to serve as specimens. The stomach of one of these birds was found to be distended to its utmost capacity by a compact mass of excelsior packing, with which the floor of the cage had been covered. This indigestible material had evidently been taken into the stomach by having adhered to the food eaten, but how the bird would have disposed of the mass might be interesting to have determined.

57. *Buteo latissimus* (WILS.).

Broad-winged Hawk.

Rare; probably a summer resident. Only two records are at present available: that of an adult shot on the grounds of the State Agricultural Experiment Station at Wooster, July 4, 1893; and one seen about six miles north of this place on July 9 of the same year.

GENUS *ARCHIBUTEO* BREHM

58. *Archibuteo lagopus sancti-johannis* (GMEI.).

American Rough-legged Hawk.

A rare winter visitor. It has been observed usually during the months of March and April, and seldom anywhere excepting on the bottom-lands. It has not been noted later than April.

GENUS *AQUILA* BRISSON.

59. *Aquila chrysaetos* (LINN.).

Golden Eagle.

A rare and irregular winter visitor. The most recent, and so far as the writer is aware, the only authentic date of its capture within the borders of the County, is

November 10, 1891. This bird, an immature male in fine plumage, was killed in a wooded ravine near the southern boundary of the County by a farmer resident in the vicinity.¹

GENUS **HALIÆTUS** SAVIGNY.

BALD EAGLE, GREATLY REDUCED.

60. **Haliæetus leucocephalus** (LINN.).

Bald Eagle.

Undoubtedly in former years of more frequent occurrence, but at the present time it is only an occasional visitor. A specimen in the collection of Mr. House-keeper was taken not far from Wooster, about the year 1886. The large Hawks, and sometimes even the Turkey Vulture, are here not seldom mistaken for the present species; and an investigation of most of the tales of "eagles" seen, has proven them to be similar misidentifications.

SUBFAMILY **FALCONINÆ**. FALCONS.

GENUS **FALCO** LINNÆUS

SUBGENUS **RHYNCHODON** NITZSCH.

61. **Falco peregrinus anatum** (BONAP.).

Duck Hawk.

Very rare; a single specimen in the collection of Mr. E. N. Freeman is the only one known to have been taken in the County. This bird, a very fine adult, was secured early in the autumn of 1885, along a creek in the vicinity of Orrville. When first

¹ Auk IX, 1892, p. 200.

observed it was engaged in pursuing Mourning Doves, which were there quite numerous; its method being to remain quietly perched on a limb until one came within range, then giving chase, sometimes for a long distance. The Doves, however, being swift of flight, almost invariably succeeded in finally eluding their pursuer, for if too closely pressed, they would, while in full flight, suddenly close their wings and drop as if shot into the dense underbrush, whither of course the Hawk would not follow.

SUBGENUS *ÆSALON* KAUP.62. *Falco columbarius* (LINN.).

Pigeon Hawk.

Apparently rare; added to the list on the strength of a single mounted specimen in the collection of Prof. S. S. Milligan, of Wooster. In regard to this specimen there are unfortunately no data available, beyond the mere fact of its having been shot in the vicinity of the town. A Hawk seen October 16, 1891, on the bottom-lands along the Killbuck, was probably of this species, though its identity was not positively determined.

SUBGENUS *TINNUNCULUS* VIEILLOT.63. *Falco sparverius* (LINN.).

American Sparrow Hawk.

Abundant; with the exception of *Buteo lineatus* the most numerous Hawk. It is resident, excepting perhaps in very severe winters, but is always more frequent in spring and summer than at other seasons, the migrant portion returning north during the latter part of February or early in March.

Nidification takes place in April, and the young are hatched usually about the third week in May. The situation chosen for the nest is either a natural cavity or an old Woodpecker's excavation, usually from thirty-five to sixty-five feet from the ground. It is commonly in the dead top of a living tree, though sometimes in a tree wholly dead and even tottering from decay.

A Sparrow Hawk was captured November 9, 1893, in the building of the Wooster High School, where it had apparently flown for shelter. A bird of this species was observed on April 3, 1894, to pick up and fly away with a snake fully eighteen inches in length, and so heavy as to be with evident difficulty carried.

SUBFAMILY PANDIONINÆ. OSPREYS.

GENUS *PANDION* SAVIGNY.64. *Pandion haliaëtus carolinensis* (GMEL.).

American Osprey; Fish Hawk.

A rare summer visitor; perhaps in former years more common. It has occasionally been seen singly or in pairs, fishing on the larger bodies of water, but is not at the present time of regular occurrence.

SUBORDER STRIGES. OWLS.

FAMILY STRIGIDÆ. BARN OWLS.

GENUS **STRIX** LINNÆUS.65. *Strix pratincola* (BONAP.).

American Barn Owl.

Rare; observed only in winter. A specimen in the collection of the writer was shot by a farmer near Wooster, February 2, 1892. Another specimen now in the possession of Mr. George Faber, and obtained during the same winter, about two miles from where the other bird was killed, is much paler, the ground color of the plumage being almost white. These two are the only individuals known to have been taken in the County.

Although there are more or less numerous instances of the occurrence of this species in Michigan, Indiana, northern Pennsylvania, southern Ontario and southern Ohio, the only other published records for the last named State north of Columbus seem to be as follows: (1) Prof. A. J. Cook,¹ on the authority of Mr. E. L. Moseley, speaks of the Barn Owl as "common at Sandusky;" (2) Mr. A. Hall² mentions one taken at East Rockport near Cleveland; and (3) Mr. Carl Tuttle³ records the capture of a single specimen in Erie County.

FAMILY BUBONIDÆ. HORNED OWLS, ETC.

GENUS **ASIO** BRISSON.66. *Asio wilsonianus* (LESS.).

American Long-eared Owl.

A rare summer resident; tolerably common in fall and winter, though not generally so numerous as the next species. The only record of summer capture is a single specimen taken near Orrville in 1887, by Mr. Ellsworth N. Freeman, under circumstances which would suggest its having nested in the vicinity.

67. *Asio accipitrinus* (PALL.).

Short-eared Owl; Meadow Owl.

A common winter visitor; occurring singly, in pairs, or in small flocks. While it is perhaps a rare summer resident, the writer has no record of its presence during that season. The extensive meadows and swamps on the lowlands form its favorite hunting grounds, though it is found also on the uplands. On account of its low soaring flight when flushed by day it is an easy mark for hunters and the gun of the small boy, many being thus killed every winter. Stomachs of specimens examined contained only meadow mice (*Microtus pennsylvanicus*).

¹ Birds of Michigan, Edition I 1823, p. 67.

² Forest and Stream XXVI, 1885, p. 446.

³ Auk XII, 1895, p. 191.

GENUS **SYRNIUM** SAVIGNY.68. **Syrnium nebulosum** (FORST.).**Barred Owl.**

A common resident; frequents chiefly the wooded swamps and lowlands, in which localities it breeds.

On May 9, 1893, the writer obtained from a nest in the hollow top of the trunk of a huge beech, two young of this species, which were apparently about three and a half weeks old. From some unknown cause, one of them died a few days later, but the other was kept in confinement for more than a year. It was allowed the freedom of a small poultry house, the glass sides of which seemed to be to it a continual enigma. Nearly always when its abode was entered it would fly against the glass, only of course to fall to the ground. Its favorite perch was an old wire cage upon which were several boards so placed that they slanted upwards to about five feet above the ground, and on the highest part of this the Owl spent most of its time. Though not at all vicious, it nevertheless resented any familiarity, and vigorously protested against being touched. Its food consisted principally of raw beef, of which it consumed about six ounces per day. It was, however, quite fastidious as to diet and would touch no spoiled meat unless absolutely obliged by hunger. A Pied-billed Grebe in the incipient stages of decomposition, though offered to the Owl after a three days' fast, was reluctantly tasted, and only a portion of the neck eaten. Boiled meat was evidently not relished, being persistently refused.

GENUS **NYCTALA** BREHM.69. **Nyctala acadica** (GMEL.).**Saw-whet Owl.**

A rare resident; rather more frequently met with during the winter than at other seasons. Mr. E. N. Freeman states that it is sometimes not uncommon in winter in the vicinity of Orrville; and its nocturnal habits may to some extent account for its apparent rarity in other parts of the County. The capture of a summer specimen by the same gentleman indicates the probability of its nidification here, but actual proof of the same has not been obtained.

GENUS **MEGASCOPS** KAUP.70. **Megascops asio** (LINN.).**Screech Owl.**

Resident; the most common of the Owls. Almost every large tract of woodland shelters at least one pair, and the species may also be frequently found about the farm-houses, as well as on the outskirts of the towns.

Just at dusk on August 25, 1890, in a tract of bottom woodland, the writer wounded a Screech Owl with a charge of dust shot. It fell, but caught with its feet a limb and there clung until dislodged by a stick, when with wings spread it sailed down and took refuge in a partially decayed stump. Although seen to enter the stump, a close search of fully fifteen minutes was necessary to discover its hiding place. So closely had it pressed itself into a cavity in the wood that remaining motionless, and aided by its peculiar coloration, it was overlooked at least half a dozen times, though in plain sight all the while.

The stomach of a specimen examined contained remains of the white-footed mouse (*Peromyscus leucopus*), and of an unidentifiable Sparrow.

Of twenty-eight specimens from the County, fourteen are gray, thirteen are in the red phase, and one is in the rarer intermediate plumage. This last specimen has the general color of the upper parts mummy brown, the principal color markings below being reddish brown.

GENUS *BUBO* DUMÉRIL.

GREAT HORNED OWL, MUCH REDUCED.

71. *Bubo virginianus* (GMEL.).

Great Horned Owl.

A tolerably common resident; apparently most numerous during the fall and winter, being found in nearly all wooded districts of the County. It is here generally regarded as injurious, and is consequently killed whenever occasion offers. It is not infrequently captured alive, and is perhaps thus taken oftener than any other Owl.

GENUS **NYCTEA** STEPHENS.

SNOWY OWL, GREATLY REDUCED.

72. *Nyctea Nyctea* (LINN.).

Snowy Owl.

A rare and irregular winter visitor. One caught near Wooster a number of years ago was for several months maintained in confinement, its chief diet consisting of raw liver. A fine adult specimen now in the possession of Mr. J. Blandford, was secured in the northern part of the County, in January, 1878. There are records of two others taken during the same winter, one of which was shot at night from the top of a chimney in Wooster. This specimen is now in the museum of Wooster University.

ORDER COCCYGES. CUCKOOS, ETC.

SUBORDER CUCULI. CUCKOOS, ETC.

FAMILY CUCULIDÆ. CUCKOOS, ANIS, ETC.

SUBFAMILY COCCYGINÆ. AMERICAN CUCKOOS.

GENUS **COCCYZUS** VIFILLOT.

YELLOW-BILLED CUCKOO, ONE-HALF NATURAL SIZE.

73. **Coccyzus americanus** (LINN.).**Yellow-billed Cuckoo.**

A common summer resident. It appears in May, the tenth of this month being the earliest date; and though ordinarily not much observed after the middle of September, has been noted as late as October 19, (1892).

It frequents principally the woods, thickets and orchards, breeding usually in one of the two last named localities. Three or four eggs constitute in this vicinity the normal complement. The breeding season continues commonly from the first of June to the middle of July, but the following exceptional dates have been noted. A nest containing four perfectly fresh eggs was discovered on August 17, 1890; and on September 13 of the same year, another nest containing two unincubated eggs was found not over forty feet from the one taken a month before.

Four nests measure respectively as follows:

No.	Height.	Depth	Inside top diameter.	Inside middle diameter.	Outside top diameter.	Outside middle diameter.	Outside bottom diameter.	Width of rim.
1.....	4.00	1.75	3.50 x 3.25	3.10 x 3.00	6.50 x 6.00	5.50 x 5.50	5.00 x 3.00	2.00 x 0.50
2.....	5.50	1.50	3.50 x 3.00	2.75 x 2.50	8.00 x 6.00	7.50 x 5.50	3.50 x 3.50	3.00 x 0.50
3.....	3.00	1.50	3.25 x 3.25	3.00 x 2.50	8.00 x 5.00	6.50 x 4.00	5.00 x 2.75	2.50 x 0.38
4.....	3.50	1.00	3.50 x 3.50	.....	8.00 x 8.00	.....	.....	.....
Average..	4.00	1.44	3.44 x 3.25	2.92 x 2.00	7.63 x 6.25	6.50 x 5.00	4.50 x 3.08	2.50 x 0.46

On June 10, 1891, a Yellow-billed Cuckoo was found dead upon the front porch of a house on the outskirts of Wooster. Appearances indicated that the bird had been killed by flying against the door, as examination revealed the absence of any wound, and dissection showed it to be apparently in healthy condition.

The peculiar notes of this species are occasionally heard at night.

74 *Coccyzus erythrophthalmus* (WILS.).

Black-billed Cuckoo.

A transient visitor; sometimes tolerably common in the spring, but apparently rare in autumn. From the fact that this species is so common a summer resident in parts of the State, it may seem strange that it should not be so listed in this locality, but the most careful search has failed to reveal its presence, except from May 9 to 22, and on September 27, 1891. Future investigations may perhaps show it to be present during the breeding season.

SUBORDER ALCYONES. KINGFISHERS.

FAMILY ALCEDINIDÆ. KINGFISHERS.

GENUS *CERYLE* BOIE.

SUBGENUS *STREPTOCERYLE* BONAPARTE.

75. *Ceryle alcyon* (LINN.).

Belted Kingfisher.

A common summer resident; occurring along all the larger streams. It arrives from the south in March; remaining until by the freezing of the watercourses in the

fall it is unable to obtain its food. During open winters a few usually remain throughout the entire season. It is ordinarily not seen far from water, and for nesting purposes it selects the bank of a stream. The eggs are deposited usually before the middle of May, and are, when the complement is complete, six or seven in number. Occupied nests have been observed from May 17 to June 15; that on the former date containing eggs one-fourth incubated, that on the latter five fully feathered young. The young in this nest were ranged in a row across the chamber at the inner extremity of the burrow, and were crowded close together, all facing the entrance, thus from without presenting quite an odd appearance. The burrow is usually three or four feet in length, sometimes straight, but generally diverted horizontally at a greater or less angle.

The measurements of four nests result as follows:

No.	Total length of burrow.	Diameter of burrow.	Length of chamber.	Width of chamber.	Height of chamber.
1.....	48.00	4.00 x 3.00	13.00	12.00	5.00
2.....	56.00	3.50 x 3.00	10.00	8.75	6.00
3.....	41.00	4.00 x 3.50	6.75	12.00	7.00
4.....	57.00	3.25 x 3.00	9.00	11.00	6.00
Average.....	50.50	3.69 x 3.13	9.69	10.94	6.00

In all the nests that have been examined, the eggs were deposited in the enlargement at the extremity of the passage, upon a quantity of fish bones, fish scales, and sometimes remains of crustaceans. The Kingfisher's habit of constructing its nest of twigs, grass, feathers, etc., mentioned by Wilson, Gentry and some other writers, seems to be the exception rather than the rule, or at least to a considerable degree a local occurrence.

Madame *Ceryle* is, when sitting, difficult to dislodge from her nest, and snaps viciously at anything that comes within her reach. A lighted match fastened to the end of a stick and thrust into the nest is invariably picked at until extinguished. She usually remains while the digging out of the nest is in progress, attempting to escape only as the chamber containing the eggs is neared, sometimes even then refusing to leave until removed by force.

ORDER PICI. WOODPECKERS, WRYNECKS, ETC.

FAMILY PICIDÆ. WOODPECKERS.

GENUS *DRYOBATES* BOIE.

76 *Dryobates villosus* (LINN.).

Hairy Woodpecker.

A common resident; more numerous in fall and winter than at other seasons. There is in this locality apparently a remarkable predominance of females, since out of a series of fourteen specimens, taken principally during fall and winter, only three are

males; and this ratio seems to be fairly constant so far as observation of living birds can determine. The favorite haunts of this species are, in fall and winter, the woods of the bottom-lands, but where such places are not available it frequents fully as numerous the upland forests; being of regular occurrence throughout the County. It is not uncommonly found along fencerows in the open country, in thickets, or even orchards, but is scarcely ever to be seen in the towns, except during the late fall and winter months. Both this and the following species have at times been noticed to repeatedly perch on limbs crosswise, after the manner of Sparrows or other passerine birds.

The Hairy Woodpecker breeds generally in the most secluded portions of the forests. A nest found May 3, 1891, in moist woodland along Killbuck Creek, was in the solid living wood of a swamp hickory, (*Hickoria minima*). It contained young about two-thirds fledged.

DOWNY WOODPECKER, NATURAL SIZE.

77. *Dryobates pubescens* (LINN.).

Downy Woodpecker; "Sapsucker."

An abundant resident, though apparently less common in spring and summer than at other seasons. It occurs everywhere, but seems to affect most numerous, especially in winter, the woods of the bottom-lands. At that season it is frequently found associated with the following species: *Certhia familiaris americana*, *Sitta carolinensis*, *Parus bicolor*, *Parus atricapillus*, *Regulus satrapa*, and *Dryobates villosus*.

Like the last species, the Downy Woodpecker is not often seen in the towns, except during the fall and winter months. It breeds usually in May, exhibiting as to locality a decided preference for the woods on the bottoms, where such lands exist, although it sometimes nests in orchards.

Most authors mention the complement of eggs deposited by the Downy Woodpecker as from four to six; of a larger number the only record that the present writer has been able to discover being by Worthington,¹ who secured one set of seven eggs. A set also of seven was collected by the writer near Wooster, May 22, 1891. The nest was situated in a tract of woods on the swampy lowlands along Killbuck Creek. It was excavated twenty-four feet from the ground in the outer (or under) side of the remaining stub of a dead limb. It was much narrowed towards the bottom,

¹Ornithologist and Oölogist VI, 1881, p. 43.

apparently to avoid breaking into an abandoned Woodpecker's excavation from which even then it was separated by only a very thin partition. Its dimensions are given herewith:

Depth from entrance.	Diameter of entrance.	Diameter at top.	Diameter at entrance.	Diameter at bottom.
6.00	1.25	3.00 x 2.50	3.50 x 3.25	3.50 x 2.00

The eggs from this nest exhibit a remarkable difference in size, as will be seen from the following measurements (in inches), viz.: .81 x .65, .80 x .63, .77 x .63, .77 x .62, .71 x .59, .67 x .53, .55 x .49. They were all in varying stages of incubation; the four largest being approximately one-half incubated; the fifth in size, about one-fourth; and the two smallest nearly fresh. This variation in the incubation of eggs in the same nest has been, in the case of *Dryobates pubescens*, observed by the writer in also another instance, but so far at least as may be inferred from the accounts of the nesting of the species published by other observers, it does not seem to be a common occurrence. Both sexes assist in the duties of incubation.

Specimens of the Downy Woodpecker, as well as of some other birds from this locality, are frequently found to have the plumage of the under parts much soiled from contact with the bark of the trees.

GENUS **SPHRYAPICUS** BAIRD.

YELLOW-BELLIED SAPSUCKER, NATURAL SIZE.

78. **Sphryapicus varius** (LINN.).

Yellow-bellied Sapsucker.

A common spring transient, but apparently rare in autumn. It is not usually observed in winter, but a specimen was taken by Mr. W. E. Henderson, near Wooster, January 1, 1890. It appears generally between the second and eighth of April, and commonly disappears before the middle of May. It has been noticed in fall only twice: September 27, 1891, and October, 2, 1892. It seems in this locality to prefer the bottom woodlands, where it is sometimes seen in company with other Woodpeckers.

On July 12, 1891, the writer discovered in a wooded ravine near Wooster, four immature birds of this species, which had without reasonable doubt been reared in the immediate vicinity. An adult was also on the same date seen in a neighboring orchard. This is apparently the first definite record of the breeding of the species in Ohio, although Wheaton mentions¹ having observed in May a pair of these birds at work upon a nest which was subsequently deserted.

In spring the drumming of the Yellow-bellied Sapsucker may usually be easily recognized by the following peculiarities. Four or five taps given in quick succession are followed by a short pause, this being soon succeeded by two short quick taps; then another pause, and two more taps in somewhat less rapid succession than the first; followed by yet another pause, and two additional taps still a little slower. This is sometimes slightly varied with regard to the number of taps; and occasionally also the latter part consists only of single quick taps with an increasing interval toward the last. The two most common forms may be crudely represented as follows:

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GENUS **CEOPHLÆUS** CABANIS.

79. **Ceophlæus pileatus** (LINN.).

Pileated Woodpecker.

This was formerly a common species in the heavily timbered lands throughout most of the County, but with the clearing of the extensive forests it gradually disappeared, having been very rare for the past twenty-five or thirty years. Mr. Joseph Housekeeper informs me that the last specimen taken in the County, so far as he is aware, was shot about 1883.

GENUS **MELANERPES** SWAINSON.

SUBGENUS **MELANERPES.**

80. **Melanerpes erythrocephalus** (LINN.).

Red-headed Woodpecker.

An abundant summer resident from the last of March until October; a few sometimes remain during mild winters. It frequents forests, orchards and fields, nesting in almost any suitable situation. The dead top of any large tree, or any apple tree with a large dead limb, is pretty sure to sooner or later contain the nest of a Red-headed Woodpecker. The first mentioned situation is often tenanted by both this species and the Flicker, the nests being sometimes in the same limb, and within a few feet of each other. But in even this close proximity the birds live in apparently perfect harmony.

The breeding season continues usually from about the middle of May until the first of July, being at its height during the last week in May and the first week of June. The number of eggs is usually four or five, not often six. They are sometimes found to be in varying stages of incubation. The nests which have been observed ranged from twelve to seventy feet from the ground.

¹Geological Survey of Ohio IV, 1882, p. 399.

The measurements obtained from four nests are herewith given:

No.	Total depth.	Diameter of entrance.	Diameter at entrance.	Diameter at middle.	Diameter at bottom.
1	10.00	2.25 x 2.13	4.00 x 2.25	4.00 x 4.00	4.63 x 3.50
2	10.50	1.75 x 1.63	4.00 x 2.60	4.00 x 4.00	4.50 x 4.00
3	11.00	2.00 x 1.38	3.50 x 3.00	5.00 x 3.50	4.00 x 2.50
4	11.50	2.25 x 1.50	3.75 x 3.50	5.00 x 4.00	4.50 x 3.38
Average	10.75	2.06 x 1.66	3.81 x 2.69	4.50 x 3.88	4.41 x 3.35

The parent bird is under ordinary circumstances easily dislodged from the nest, but occasionally is quite obstinate in this particular. The Red-headed Woodpecker sometimes attacks other birds which approach too closely its nesting place. On one occasion three of these Woodpeckers were observed to utterly rout a Red-tailed Hawk.

SUBGENUS CENTURUS SWAINSON.

RED-BELLIED WOODPECKER, REDUCED.

81. *Melanerpes carolinus* (LINN.).

Red-bellied Woodpecker.

A tolerably common resident, but most regularly observed during fall and winter; frequenting then more open woodland than during the breeding season. It is

usually very wild and wary, especially when in the upland woods, remaining chiefly in the tops of the trees. It is not often found in company with other species.

The only nest that has fallen under the writer's observation was discovered April 2, 1893, in the midst of a large forest. The excavation was near the top of a sugar maple (*Acer Saccharum*), in a dead portion of the trunk, and bore evidence of recent operation, as the ground at the foot of the tree was plentifully strewn with chips. The male was at first seen passing in and out of the opening, but upon his discovery of the presence of spectators, he retreated into the nest, and no amount of noise or pounding on the tree could induce him to again venture farther than the entrance.

GENUS **COLAPTES** SWAINSON.

82. **Colaptes auratus** (LINN.).

Flicker.

A permanent resident, but less abundant in winter than at other seasons. Most of those that remain through the cold weather retire to the swamps and woods along the streams, where natural cavities and old Woodpecker's excavations furnish suitable abodes. At other times the species is to be found almost anywhere, though apparently only casually in the towns.

Nesting sites are chosen with apparent indifference, though not usually above thirty feet from the ground. Mating takes place about the middle of April, and the six or seven eggs are deposited usually between the tenth of May and the first of June. The female occasionally, but not commonly, incubates so closely that it is necessary to use force to remove her from the nest.

The measurements obtained from four nests are as follows:

No.	Total depth.	Diameter of entrance.	Diameter at entrance.	Diameter at middle.	Diameter at bottom.
1.....	14.00	3.00 x 2.50	.....	.....	.....
2.....	13.00	2.75 x 2.38	.....	.....	.....
3.....	18.00	2.00 x 2.03	.....	.....	.....
4.....	7.00	4.00 x 4.00	6.00 x 5.00	5.00	5.00 x 4.00
Average....	13.00	2.94 x 2.72	.....	.....	.....

ORDER MACROCHIRES. GOATSUCKERS, SWIFTS, ETC.

SUBORDER CAPRIMULGI. GOATSUCKERS, ETC.

FAMILY CAPRIMULGIDÆ. GOATSUCKERS, ETC.

GENUS **ANTROSTOMUS** GOULD.

83. **Antrostomus vociferus** (WILS.).

Whip-poor-will.

A tolerably common summer resident from May until September. It frequents almost exclusively the dry upland woods, being seldom found on the lowlands.

On May 29, 1892, an individual of this species was heard singing under bright sunlight at 3:30 P. M. Other than on this occasion it has not been heard during daylight later than 4 A. M.

GENUS **CHORDEILES** SWAINSON.

84. *Chordeiles virginianus* (GMEL.).

Nighthawk; Bull-bat.

A common summer resident from May 7 to September 14. It is more numerous during migrations, especially in the fall, though there have been here observed no large flights such as elsewhere frequently occur. It may occasionally be seen at dusk on spring evenings, in the streets and yards of the town, whither it appears to have ventured in pursuit of food. It is often abroad in bright sunlight, usually in the afternoon, but is seldom seen in company with other birds.

A single egg of this species was found on June 20, 1893, in a strawberry patch on the outskirts of Wooster. This nest having been disturbed, a clutch of two eggs was later discovered in the same situation. Although these are the only actual records obtained, the Nighthawk undoubtedly breeds regularly in this locality.

SUBORDER CYPSELI. SWIFTS.

FAMILY MICROPODIDÆ. SWIFTS.

SUBFAMILY CHÆTURINÆ. SPINE-TAILED SWIFTS.

GENUS **CHÆTURA** STEPHENS.

85. *Chætura pelagica* (LINN.).

Chimney Swift.

An abundant summer resident; especially numerous in the towns. The earliest date of its spring arrival is March 28 (1890), the latest April 21 (1892), but it usually appears about the middle of April. The dates of its disappearance in fall range between October 1 and October 7.

From the last part of April until the twentieth of May, each year, the Swifts congregate in Wooster almost daily, to roost in a chimney of the court-house. One hundred and fifty to two hundred are usually seen at first, the number being gradually augmented until about May 10, after which time it generally soon begins to decrease. Sometimes as many as 1,000 birds have been seen in the vicinity of the court-house, but this number has probably never been exceeded. While their usual time of congregating is between six and seven o'clock in the afternoon, they have not infrequently been observed entering the chimney during the middle of the afternoon. Less commonly are they to be seen in numbers about the chimney during the forepart of the day, but on a few occasions they have been observed entering even as early as half-past seven or eight A. M. The darkening of the sky by an approaching thunder-shower, especially if in the afternoon, generally causes them to assemble and enter their roosting place; and frequently they do not emerge after the storm has passed.

They always resort to a particular large six-flued chimney, one of the flues of which is very often in use. They do not, however, seem to be in the least annoyed by the smoke which issues from this part of the chimney, but drop unconcernedly into

the unused portions. For a short time in the spring they sometimes have recourse to the large chimney of a church, but as their numbers increase this is promptly abandoned for the presumably more commodious one of the court-house close at hand. Occasionally during the summer (from June to September), the Swifts to the number of one or two hundred may be seen to enter the court-house chimney, but this does not appear to be a common or regular occurrence.

The breeding season is in June; and four or five eggs constitute the usual complement. The female when frightened from the nest, instead of leaving entirely, very frequently retreats down the chimney, being with considerable difficulty induced to reappear.

SUBORDER TROCHILI. HUMMINGBIRDS.

FAMILY TROCHILIDÆ. HUMMINGBIRDS.

GENUS *TROCHILUS* LINNÆUS.

SUBGENUS *TROCHILUS*.

86. *Trochilus colubris* LINN.

Ruby-throated Hummingbird.

An abundant summer resident. It appears in spring with considerable regularity between the first and the tenth of May, and remains until September, not, however, being common after the first of this month. It is very partial to the flowers of the buckeye (*Æsculus glabra*), and while this tree is in bloom, during the early part of May, assembles often in numbers wherever these favorite flowers are to be found.

In this locality the Hummingbird nests chiefly in June and the early part of July, though eggs have been taken by Mr. Henderson as late as July 24. An apple orchard is apparently the preferred situation. If the first nest be disturbed a second is often if not always constructed.

As of possible interest in connection with the statements of Mr. Bradford Torrey¹ in regard to the absence of the male from the nest during the period of incubation and of rearing the young, it may be stated that on two occasions the writer has observed the male at the nest: On June 26, 1892, when a male was seen with the female about a nest which contained eggs; and on July 4, 1892, when the male alone was noted at another nest which was occupied by two young birds apparently but two or three days old.

Early in the morning on June 1, 1892, a Hummingbird was noticed fluttering up and down against the plate glass of a large show window on one of the main business streets of Wooster, and apparently attempting to enter the window as if unaware of the impenetrable nature of the glass.

¹ The Footpath Way, 1893, pp. 135 *et seq.*

ORDER PASSERES. PERCHING BIRDS.

SUBORDER CLAMATORES. SONGLESS PERCHING BIRDS.

FAMILY TYRANNIDÆ. TYRANT FLYCATCHERS.

GENUS **TYRANNUS** CUVIER.87. **Tyrannus tyrannus** (LINN.).

Kingbird.

An abundant summer resident. Its earliest recorded spring arrival is April 19 (1891), but its average date is about two weeks later. Few are to be seen after the first of September, though individuals have been observed to linger until October 3.

In this locality this species is apparently late in nesting, for with one exception a complement of eggs has not been noted before June 20, but fresh eggs have been taken in July. A set of three secured on July 7, 1891, contained eggs varying from fresh to three-eighths incubated. A large proportion of the nests found have been in apple orchards.

The measurements of two nests are as follows:

No.	Height.	Depth.	Inside top diameter.	Inside middle diameter.	Outside top diameter.	Outside middle diameter.	Outside bottom diameter.	Width of rim.
1.....	3.25	1.75	3.00 x 2.75	2.75 x 2.50	4.50 x 4.00	5.50 x 4.25	4.00 x 4.00	0.88 x 0.50
2.....	3.00	2.00	3.00 x 2.75	2.90 x 2.60	5.75 x 4.50	5.75 x 4.50	4.50 x 3.75	1.25 x 0.60

The Kingbird is one of the earliest birds to be astir in the morning, the notebook of the writer showing that this species was, on March 27, 1890, first heard at 3:30 A. M.

That the Kingbird possesses remarkably acute vision may be inferred from the following circumstance. On June 5, 1892, while the writer was strolling along the railroad track, which is here situated near the stream of the Killbuck, a Kingbird was seen to start from a telegraph pole and fly swiftly in a direct line to capture an insect so small as to be invisible to the human eyes only twenty-five feet away, yet by actual measurement the distance from which this bird had espied its victim was one hundred and fifty feet.

This species was observed feeding upon berries of the dogwood (*Cornus florida*), on July 31, 1892.

GENUS **MYIARCHUS** CABANIS.88. **Myiarchus crinitus** (LINN.).

Crested Flycatcher.

A tolerably common summer resident; much more numerous in the spring. It arrives usually between the first and the tenth of May, but the earliest date is April 24 (1892). Though not common after the first of September, it has been observed as late as October 2. While it is found during the spring chiefly in the woodlands, it appears to resort principally to orchards for the purpose of breeding.

GENUS **SAYORNIS** BONAPARTE.**89. Sayornis phoebe (LATH.).****Phoebe.**

An abundant summer resident. The earliest date of its spring arrival is March 17 (1894); the latest, March 30, (1890). It remains until some time in October, the date on which it has been latest observed being October 19 (1892).

Nidification is begun in April, and incomplected nests have been noted as early as April 9 (1893). A second brood is commonly reared in June. The supporting timbers of bridges are the favorite nesting sites, and most of the nests found have been thus situated. A ledge of rocks or an old stone quarry is, however, by no means an uncommon location.

Four nests present the following measurements:

No.	Height.	Depth.	Inside top diameter.	Inside middle diameter.	Outsidetop diameter.	Outside middle diameter.	Outside bottom diameter.	Width of rim.
1.....	3.50	2.00	2.75 x 2.38	1.25 x 1.13	5.00 x 4.00	5.50 x 4.25	5.00 x 4.00	2.25 x 0.25
2.....	6.00	1.56	3.50 x 2.75	2.33 x 2.25	4.50 x 3.75	5.00 x 3.00	2.00 x 2.00	1.50 x 0.50
3.....	3.00	2.00	2.75 x 2.38	2.38 x 2.25	4.25 x 3.50	5.25 x 4.25	4.25 x 3.00	1.00 x 0.25
4.....	4.50	1.75	2.50 x 2.00	2.28 x 1.83	5.00 x 4.50	5.75 x 5.25	7.00 x 4.75	1.75 x 0.25
Average	4.25	1.83	2.88 x 2.38	2.10 x 1.88	4.69 x 3.94	5.38 x 4.19	4.56 x 3.44	1.63 x 0.31

GENUS **CONTOPUS** CABANIS.SUBGENUS **CONTOPUS.****90. Contopus virens (LINN.).****Wood Pewee.**

A summer resident; abundant. Its dates of spring arrival range from May 7 to May 14, and it remains until September, not having been noted, however, later than the twenty-first of this month. Although early in spring frequenting especially the woodlands, it is to be found breeding chiefly in the numerous apple orchards. In fact, it is, under ordinary circumstances, rather the exception to find an apple orchard of any considerable size which does not possess its pair of these birds. So far as the writer's observations extend, only one pair occupy any single orchard.

The nest is rarely more than fifteen feet from the ground, and is often much less. The number of eggs is usually three, but occasionally only two. The height of the breeding season seems to be about the twenty-fifth of June,—eggs having been taken from June 14 to July 5.

The dimensions of five nests are as follows:

No.	Height.	Depth.	Inside top diameter.	Inside middle diameter.	Outside top diameter.	Outside middle diameter.	Outside bottom diameter.	Width of rim.
1.....	1.75	1.25	2.00 x 1.75	1.85 x 1.75	3.00 x 2.50	3.25 x 3.00	3.00 x 2.50	0.65 x 0.35
2.....	1.50	1.50	2.00 x 1.85	2.15 x 2.00	3.15 x 2.60	3.35 x 3.00	3.15 x 2.75	0.80 x 0.35
3.....	1.05	0.85	1.85 x 1.65	1.80 x 1.60	3.50 x 2.25	3.50 x 2.35	3.50 x 2.10	1.00 x 0.35
4.....	1.40	0.90	2.00 x 1.75	2.25 x 1.80	2.85 x 2.50	3.25 x 3.00	3.25 x 3.00	0.60 x 0.20
5.....	1.60	1.10	2.00 x 1.75	1.90 x 1.70	3.10 x 2.40	3.25 x 2.60	3.25 x 2.50	0.75 x 0.30
Average..	1.46	1.12	1.97 x 1.75	1.99 x 1.77	3.12 x 2.45	3.32 x 2.79	3.23 x 2.57	0.76 x 0.31

GENUS **EMPIDONAX** CABANIS.

91. **Empidonax flaviventris** BAIRD.

Yellow-bellied Flycatcher.

A rare spring and fall transient visitor. It has been observed only in May and September, in thickets and the undergrowth of woodland.

The stomach of a specimen taken September 18, 1892, contained the remains of two or three striped squash-beetles (*Diabrotica vittata*) and a dung-beetle (*Atænius stercorator*).

92. **Empidonax virescens** (VIEILL.).

Green-crested Flycatcher.

A summer resident; common for a while in the spring, but during the breeding season less numerous, and inhabiting then only certain localities. The earliest date of its spring arrival is April 30 (1891), but it has in other years not been noted before the middle of May. It departs usually not later than the first of September.

93. **Empidonax traillii** (AUD.).

Traill's Flycatcher.

A tolerably common summer resident, but of very local distribution. It appears in spring during the first half of May, the earliest record being May 1, and remains until September.

It has been found nesting in only one locality, a mill-race in the valley of the Applecreek, a short distance southeast of Wooster. This mill-race is thickly fringed with a growth of elders (*Sambucus Canadensis*), and though situated between the railroad track and cultivated fields, seems to have a special attraction for Traill's Flycatcher, as several pairs breed here annually. Eggs have been obtained between the dates of June 10 and July 14 inclusive; those on the latter date, however, belonging probably to a pair from which eggs had previously been taken. None of the nests found were higher from the ground than six feet, most of them less than four and one-half feet; all being built in elder bushes, and by no means difficult to discover. Four eggs seem to constitute the ordinary complement, only one set (July 14, 1892) consisting of a smaller number. A nest taken June 15, 1892, contained four eggs of its owner with one of the Cowbird; the Cowbird's egg having been deposited before any of the others.

Six nests measured furnish the following results:

No.	Height	Depth.	Inside top diameter.	Inside middle diameter.	Outsidetop diameter.	Outside middle diameter.	Outside bottom diameter.	Width of rim.
1.....	2.50	1.65	2.05 x 1.85	2.15 x 2.05	3.00 x 2.60	2.75 x 2.50	2.75 x 1.75	0.50 x 0.20
2.....	2.85	1.30	2.00 x 1.75	2.00 x 1.90	3.10 x 2.85	3.25 x 3.00	2.75 x 2.25	0.60 x 0.45
3.....	2.75	1.65	2.10 x 1.75	2.30 x 1.70	2.85 x 2.50	3.25 x 2.50	2.10 x 1.85	0.75 x 0.25
4.....	2.60	1.50	2.25 x 1.75	2.25 x 2.00	2.85 x 2.60	3.00 x 2.75	2.50 x 1.75	0.50 x 0.20
5.....	2.75	1.85	2.10 x 1.85	2.10 x 1.85	3.00 x 2.65	2.75 x 2.00	2.50 x 1.25	0.60 x 0.35
6.....	3.25	1.40	2.50 x 1.75	2.40 x 2.00	3.25 x 2.35	4.00 x 3.25	2.00 x 1.50	0.60 x 0.20
Average..	2.70	1.43	2.17 x 1.78	2.20 x 1.92	3.01 x 2.59	3.17 x 2.67	2.43 x 1.72	0.63 x 0.28

94. *Empidonax minimus* BAIRD.

Least Flycatcher.

A tolerably common spring transient from May 1 to 24, but has not been observed in the fall. During its passage through the County it is found almost exclusively in woodland.

Contrary to the statement of Dr. Wheaton,¹ the characteristic note of this species is here frequently heard during the migration.

SUBORDER OSCINES. SONG BIRDS.

FAMILY ALAUDIDÆ. LARKS.

GENUS *OTOCORIS* BONAPARTE.

HORNED LARK, MUCH REDUCED.

95. *Otocoris alpestris* (LINN.).

Horned Lark.

Winter visitor; rare. A single specimen in the writer's collection is the only record. This was taken December 28, 1892, from a flock of about twenty-five individuals, three others of which, also secured, proved to be fairly typical *pratricula*.

¹Geological Survey of Ohio IV, 1882, p. 379.

From the rarity of *Otocoris alpestris* in Indiana and in western Pennsylvania, its uncommon occurrence in Ohio, except perhaps in the extreme northern portion, may be reasonably inferred. This supposition is borne out by the facts at present available, for the specimen mentioned above is apparently the fourth published record of its unequivocal appearance in the State; all other mention of this form referring without much doubt to *Otocoris alpestris praticola*. The previous records are by Dr. J. Dwight Jr.,¹ who mentions specimens from Cleveland and Circleville, Ohio; and by Mr. Lynds Jones,² who found the species at Oberlin during the winter of 1895-6.

96. *Otocoris alpestris praticola* HENSH.

Prairie Horned Lark.

A permanent resident; common during the winter months, but less numerous in summer. It occurs throughout the former season principally in flocks, frequenting chiefly the upland fields or public roads, sometimes associated with the Snowflake (*Plectrophenax nivalis*). A flock of 140 Horned Larks was seen on the lowland meadows along Killbuck Creek, April 23, 1893.

A nest of this subspecies, built as usual upon the ground, and containing two eggs together with two callow young, was observed by W. E. Henderson, near Wooster, in June 1893. A young bird in first plumage was shot by the writer from a flock of five, on June 26, 1891.

This form of the Horned Lark has for some years been considered a summer resident throughout the northern portion of Ohio, but definite data from this state are few, although it has been with comparative frequency reported breeding in contiguous portions of Pennsylvania.³ Aside from the map of its breeding range published by Dr. J. Dwight Jr.,⁴ the only previous records of its breeding in Ohio appear to be as follows:

DAVIE, Nests and Eggs of North American Birds, 1889, page 254;—young taken in May in northwestern Ohio.

WHEATON, Geological Survey of Ohio IV, 1882, page 589;—said by Mr. Chubb to breed near Cleveland.

VICKERS, Oölogist XII, 1895, page 108;—a nest containing three young found April 17, 1895, near Ellsworth, Mahoning County, Ohio.

A male in breeding plumage taken June 26, 1891, and a female in fall dress collected October 30, 1890, are paler than typical specimens and very closely resemble corresponding plumages of *Otocoris alpestris arenicola* from Montana.

¹ Auk VII, 1890, p. 142.

² Bulletin of Wilson Ornithological Chapter, No. 7, March 30, 1896.

³ WARREN, Report on Birds of Pennsylvania, 1890, p. 198.

⁴ Auk. VII, 1890, map facing p. 158.

FAMILY **CORVIDÆ**. CROWS, JAYS, MAGPIES, ETC.SUBFAMILY **GARRULINÆ**. MAGPIES AND JAYS.GENUS **CYANOCITTA** STRICKLAND.97. **Cyanocitta cristata** (LINN.).

Blue Jay.

An abundant resident, but especially numerous during fall and early spring.

Nesting is begun sometimes by April 10, but the height of the breeding season is in May. In the matter of nesting sites a preference seems to be shown for the thorn bushes (*Crataegus*), though various other situations are also chosen. The nest is usually placed not over fifteen feet from the ground, though in one instance the distance was forty-two feet. The eggs are four or five in number, and are sometimes in varying stages of incubation.

A set of five eggs, taken in this locality on May 1, 1890, seems sufficiently different from the usual type of coloration to merit a description. The ground color is a rich cream buff, with small markings of vandyke brown, tawny olive, broccoli brown, clay color, wood brown, drab, dull lavender and ecru drab; these markings occurring most numerous at the larger ends of the eggs. These eggs measure respectively: 1.16 x .78, 1.08 x .79, 1.11 x .79, 1.16 x .79, 1.11 x .77.

All the nests (nine in number) which have been examined by the writer have revealed the employment of more or less mud in their construction. Many of them were cupped and plastered with this material to as great an extent as is characteristic of the nest of the Robin. If this use of mud by the Blue Jay is of general occurrence, it would seem somewhat strange that more mention has not been made of the fact in the literature of the subject. The only notice of such a habit, so far as the present writer has been able to ascertain, is to be found in Baird, Brewer and Ridgway's History of North American Land Birds, Volume II, page 275; and in Thos. G. Gentry's Life Histories of the Birds of Eastern Pennsylvania, Volume II, page 21. The same sentence occurs in both these works, and is as follows:—

"In Texas according to Dr. Lincecum the nest is built of mud, which is rarely if ever utilized in more northern localities."

The measurements of eight nests are herewith given:

No.	Height.	Depth	Inside top diameter.	Inside middle diameter.	Outsidetop diameter.	Outside middle diameter.	Outside bottom diameter.	Width of rim.
1.....	6.50	1.88	4.00 x 3.25	3.25 x 3.12	7.50 x 5.75	8.00 x 6.50	8.00 x 1.25	3.00 x 0.63
2.....	3.00	1.75	4.25 x 3.50	3.75 x 3.00	6.50 x 4.50	7.00 x 5.00	7.00 x 3.50	2.00 x 0.50
3.....	5.00	1.75	3.75 x 3.75	3.75 x 3.38	6.50 x 5.00	6.50 x 6.00	6.00 x 4.00	2.00 x 0.75
4.....	4.50	2.10	3.50 x 3.00	3.90 x 3.15	6.25 x 4.75	8.00 x 5.25	5.50 x 4.00	2.00 x 0.50
5.....	5.00	2.50	4.00 x 3.50	3.38 x 3.38	5.50 x 4.75	10.50 x 7.00	7.00 x 6.00	1.75 x 0.13
6.....	4.00	2.00	4.25 x 4.00	3.25 x 3.25	6.50 x 5.50	7.50 x 7.00	5.50 x 5.00	1.25 x 0.50
7.....	4.50	2.25	4.00 x 3.50	3.50 x 3.25	7.00 x 6.00	9.00 x 5.00	5.00 x 3.50	1.75 x 0.63
8.....	3.50	2.00	4.00 x 3.63	3.63 x 3.50	5.75 x 5.50	6.00 x 5.50	6.00 x 5.00	1.38 x 0.63
Average	4.50	2.03	3.97 x 3.52	3.55 x 3.25	6.44 x 5.22	7.81 x 5.91	6.25 x 4.03	1.89 x 0.53

Three Blue Jays were on July 27, 1890, observed chasing a Red-tailed Hawk in regular Kingbird fashion, much to the evident discomfort of the Hawk, and apparently to the equally great delight of the Jays. Notwithstanding its well attested propensity for annoying other birds, the Blue Jay is itself occasionally the injured party, even at the hands of its inferiors, for it has been seen put to flight by the combined efforts of a Baltimore Oriole and a Warbling Vireo.

On September 26 and 27, 1890, several Blue Jays were observed feeding extensively on the acorns of the laurel oak (*Quercus imbricaria*). The examination of stomachs from individuals taken during the fall and winter months indicates that the food of this species at these seasons consists largely of mast.

SUBFAMILY CORVINÆ. CROWS.

GENUS CORVUS LINNÆUS.

98. *Corvus americanus* AUD.

American Crow.

An abundant summer resident, perhaps remaining also during mild winters. Although it has been ascertained to sometimes pass even a severe winter in Summit County, Ohio,¹ the writer has no positive knowledge of its presence throughout the whole of this season within the region at present under consideration. One individual was heard January 1, 1892; and Mr. C. E. Bixler found one frozen to death in a brush-heap, four miles north of Wooster, on January 4, 1887; these being the only records for either December or January. The Crow appears in February, sometimes as early as the second of the month, and disappears late in October or early in November; the latest date on which it has been observed being November 6, (1892).

The breeding season begins often very early in April, probably sometimes in March. Nests with eggs are not common after the middle of May. As to location, a preference seems to be shown for the woods of the bottom-lands, where the nest is frequently placed in a swamp maple (*Acer rubrum*), ordinarily among the upper branches. The eggs are generally five, sometimes in varying stages of incubation.

The measurements of four nests are as follows:

No.	Height.	Depth.	Inside top diameter.	Inside middle diameter.	Outside top diameter.	Outside middle diameter.	Outside bottom diameter.	Width of rim.
1.....	12.00	5.50	7.75 x 7.00	7.00 x 6.50	16.00 x 12.00	16.00 x 12.00	12.00 x 6.00	5.00 x 0.75
2.....	12.00	5.00	8.00 x 7.75	6.50 x 6.00	18.00 x 13.00	22.00 x 14.00	9.00 x 9.00	7.50 x 2.50
3.....	16.00	4.00	8.50 x 6.75	6.50 x 6.00	16.00 x 16.00	16.00 x 16.00	8.00 x 6.00	6.00 x 3.00
4.....	11.00	3.50	7.25 x 6.25	5.50 x 5.50	13.00 x 6.50	16.00 x 11.00	16.00 x 8.00	3.00 x 1.00
Average..	12.75	4.50	7.88 x 6.94	6.38 x 6.00	15.75 x 11.88	17.50 x 10.75	11.25 x 7.25	5.38 x 1.81

The female may usually without difficulty be induced to leave the nest, but occasionally even the most vigorous rapping proves unavailing, in which case a stick thrown and striking near the nest almost invariably has the desired effect.

The Crow in this locality seems to have a particular animosity towards both the Red-tailed and Red-shouldered Hawks, and may often be seen annoying them; yet notwithstanding this, it is exceptional, as has been previously stated, to find a domicile of the Red-shouldered Hawk without the presence of a Crow's nest in the vicinity.

¹ Annual Report of Ohio Academy of Sciences II, 1894, p. 12.

A somewhat interesting case of rostral malformation is exhibited by a mounted Crow in the possession of Mr. R. A. Schnably, of West Salem. The mandible is perfectly normal; but the maxilla, though of usual length, is curved downward, crossing the mandible on the left side, and describing a complete semi-circle, so that its tip is below and on nearly a vertical line with the base of the bill. It would seem that such abnormality could hardly fail to seriously interfere with the bird's feeding, yet this Crow was, as Mr. Schnably informed me, very fat and apparently in perfectly healthy condition.

FAMILY ICTERIDÆ. BLACKBIRDS, ORIOLES, ETC.

SUBFAMILY ICTERINÆ. BLACKBIRDS, ORIOLES, ETC.¹

GENUS **DOLICHONYX** SWAINSON.

99. **Dolichonyx oryzivorus** (LINN.).

Bobolink.

An abundant summer resident. It appears in spring generally during the first week of May, but in 1891 was noted April 21. It retires southward ordinarily by the first of October.

About the first of July it begins to gather into flocks, which apparently seldom exceed two hundred and fifty individuals. The males continue in spring plumage until at least the middle of July. During the month of September, and sometimes in August, especially on dark cloudy nights, this species may be heard passing over the city on its southward migration.

The Bobolink breeds chiefly during the last of May and in June, the nest being usually located in a grass field, on either the uplands or the lowlands. Late nests are not infrequently destroyed by the mowing of the grass in the fields where they happen to be situated. This species seems to be, if anything, slightly on the increase in this region.

GENUS **MOLOTHRUS** SWAINSON.

100. **Molothrus ater** (BODD.).

Cowbird.

An abundant summer resident. It arrives usually between the middle of March and the first of April, the earliest date noted being March 16 (1894). It disappears in October, not having been seen after the twentieth of this month.

In spring it moves chiefly in small companies, flocks of over a hundred being the exception; but after the breeding season, in July or early in August, it begins to collect again into flocks, which thereafter often aggregate several hundred individuals. It is frequently found associated in spring and autumn with numbers of both Red-winged Blackbirds and Bronzed Grackles. It is also occasionally noted in company with Robins.

¹The two subfamilies of *Icteridæ* are not recognized in the A. O. U. Check List, but are apparently advisable divisions.

The Cowbird seems here to most frequently invade the nest of the Rose-breasted Grosbeak, and not uncommonly deposits two or three eggs in a single nest. Next to the Rose-breasted Grosbeak, the Yellow Warbler and Wood Thrush are probably the species most frequently imposed upon by this parasite.

On June 22, 1890, a nest of the Yellow Warbler was found to contain one young Warbler and two eggs about to hatch, together with one Cowbird's egg which was nearly fresh. A Song Sparrow's nest containing two young Sparrows, and a Cowbird's egg only one-eighth incubated, was observed June 5, 1892. From these instances it would seem evident that the Cowbird sometimes makes mistakes in the deposition of its eggs, placing them in nests where exists at most but small probability of their being hatched. On June 22, 1891, there was discovered a Yellow Warbler's nest containing one young Warbler and a young Cowbird, both about two-thirds fledged. The two quite filled the nest, the Cowbird by its much greater size being readily distinguished. Whether or not in this case the young Cowbird eventually appropriated the entire nest, as is said to be a common occurrence, was unfortunately not possible to determine.

GENUS **AGELAIUS** VIEILLOT.

101. *Agelaius phoeniceus* (LINN.).

Red-winged Blackbird.

An abundant summer resident. It appears in spring generally during the first week of March, but was in 1892 noted on February 25. It departs rarely before November 1, sometimes remaining until November 30.

From the time of its arrival it moves much in flocks, and is to be seen almost everywhere, resorting, however, at night in great numbers to the swamps to roost. This continues until the latter part of April, when the birds become more or less scattered for the purpose of breeding, which takes place chiefly in May and the first part of June.

During the nesting season the Red-winged Blackbird may be found in almost every swamp and marsh, though apparently more than a few pairs seldom breed together. The nest is very frequently placed in a bush or small tree, especially a willow, and is sometimes ten or fifteen feet from the ground. The eggs appear to be usually four in number.

Six nests afford the following measurements:

No.	Height	Depth.	Inside top diameter.	Inside middle diameter.	Outside top diameter.	Outside middle diameter.	Outside bottom diameter.	Width of rim.
1.....	4.25	2.50	3.12 x 2.25	3.12 x 2.50	6.00 x 4.00	5.75 x 5.00	2.50 x 2.25	2.50 x 0.25
2.....	5.50	3.00	2.50 x 2.50	3.00 x 2.50	6.00 x 5.00	4.00 x 3.75	2.50 x 1.50	.....
3.....	5.00	3.50	2.63 x 2.63	3.00 x 2.75	4.38 x 4.38	5.00 x 5.00	3.00 x 2.50	1.38 x 0.38
4.....	4.00	2.50	2.80 x 2.63	2.88 x 2.75	5.00 x 4.00	4.75 x 4.75	2.50 x 2.00	1.25 x 0.25
5.....	3.35	2.25	3.00 x 2.70	3.15 x 3.00	4.35 x 4.00	4.75 x 4.25	4.00 x 3.00	1.10 x 0.50
6.....	3.50	2.25	3.00 x 2.75	3.40 x 3.00	4.00 x 4.00	4.75 x 4.00	3.50 x 2.75	0.85 x 0.45
Average..	4.27	2.67	2.84 x 2.58	3.09 x 2.75	4.96 x 4.28	4.83 x 4.46	3.00 x 2.33	1.42 x 0.37

This species exhibits considerable courage in defense of its nest, attacking without hesitation such birds as the Red-shouldered and Sparrow Hawks, the Crow and the Kingfisher, usually with success,—often putting them to flight single-handed. An attack upon the Cliff Swallow, on account of a supposed intrusion, does not seem to be so well justified.

By the middle of June, or even earlier, the Red-winged Blackbird commonly begins to reassemble into small flocks, which gradually increase in size as the summer advances, reaching their maximum during August. These hordes, often in company with numerous Bronzed Grackles, again resort to the swamps and marshes to roost, there occupying for this purpose the cat-tails (*Typha latifolia*), as well as the bushes and trees.

GENUS **STURNELLA** VIEILLOT.

102. **Sturnella magna** (LINN.).

Meadowlark.

Resident; abundant during the spring, summer and fall, but not very common in winter. It remains throughout the last mentioned season principally on the bottom-lands and in the more sheltered fields of the uplands. It occurs to some extent in small flocks from about the first of July until April. A flock seen January 4, 1892, was accompanied by about fifty Horned Larks. The Meadowlark is comparatively seldom noted in the towns, but during March and April it is occasionally observed flying over. It nests generally in May, in suitable situations on both the uplands and the bottoms.

This species commonly begins to sing about the latter part of February, but has been heard, though rarely, as early as the first of January. It continues in song almost uninterruptedly from February until November. Mr. E. P. Bicknell mentions¹ the absence of song during September and the latter part of August, but the writer's experience has been to find the species in fairly good song often through both August and September.

GENUS **ICTERUS** BRISSON.

SUBGENUS **PENDULINUS** VIEILLOT.

103. **Icterus spurius** (LINN.).

Orchard Oriole.

A tolerably common summer resident. It is apparently more numerous some years than others, though never more than locally common. According to the notes of the writer, it arrives between May 3 and May 16.

It frequents almost exclusively orchards and the vicinity of country dwellings, in which localities it breeds. It apparently does not often venture into the towns beyond their outskirts, but one was seen singing, on July 3, 1893, near the center of the business portion of Wooster.

The exhibition of a trait that we are loth to believe characteristic of the species was observed by the writer on May 20 1890. A Warbling Vireo was busily engaged

¹ Auk II, 1895, p. 251.

in constructing its nest on one of the outer branches of a large wild cherry tree (*Prunus serotina*), which stood in a thicket along a mill-race, adjacent to apple orchards and a farm-house. A female Orchard Oriole quietly occupied a neighboring tree until the Vireo, after bringing material to its nest and satisfactorily arranging the same, should depart; when she too visited the nest and bore away in her bill such of the material as she could easily detach,—without doubt for the construction of her own nest. This theft was a number of times repeated, always in the same sly manner; but the Vireo finally discovered that something was wrong, and with the assistance of its mate, ended by driving the Oriole off the scene.

The Orchard Oriole has been heard singing as late as August 28 (1890), which date is also the latest fall record for the occurrence of the species.

SUBGENUS YPHANTES VIEILLOT.

104. *Icterus galbula* (LINN.).

Baltimore Oriole.

An abundant summer resident. Its arrival during the four years of the writer's observations has been between April 28 and May 5, inclusive. It has not been noted later than September 18 (1892), when one was heard singing in Wooster.

The nesting season is in May and the early part of June. Ordinarily full complements of fresh eggs are to be obtained within a few days of the first of June, though some nests may contain young at this time. An exception was noted in 1891, when all the nests examined between May 28 and June 4 contained either callow young or heavily incubated eggs. Four or five eggs is the usual number, though a nest occupied by only three young is occasionally noticed. With regard to the location of the nest, a preference seems to be evinced for trees in the immediate vicinity of running water, but in the absence of such, orchards or ornamental trees are with equal readiness utilized. The nest is very often placed in an elm (*Ulmus Americana*), where it is not infrequently in a practically inaccessible position at the extremity of a long drooping branch, fifty or seventy-five feet from the ground. Of other native trees, the buckeye (*Æsculus glabra*), the sycamore (*Platanus occidentalis*) and maple (*Acer rubrum*) seem to be most frequently chosen.

The measurements of six nests are as follows:

No.	Height.	Depth.	Inside top diameter.	Inside middle diameter.	Outside top diameter.	Outside middle diameter.	Outside bottom diameter.	Width of rim.
1.....	7.00	6.00	2.00 x 1.75	4.00 x 3.25	3.75 x 3.00	4.00 x 3.50	3.25 x 3.00	0.38 x 0.25
2.....	6.00	5.00	2.63 x 2.00	3.50 x 3.00	3.25 x 2.50	4.00 x 4.00	2.75 x 2.00	0.50 x 0.06
3.....	6.00	5.25	2.25 x 1.75	3.50 x 2.90	3.50 x 2.50	4.00 x 3.50	2.50 x 2.50	1.25 x 0.23
4.....	5.75	5.25	2.00 x 1.50	3.50 x 3.25	3.50 x 2.50	4.00 x 3.50	3.00 x 2.50	1.00 x 0.20
5.....	4.75	4.00	2.25 x 1.50	3.50 x 3.00	3.25 x 2.50	4.75 x 3.50	4.50 x 3.25	1.00 x 0.25
6.....	4.00	3.75	3.00 x 2.00	4.35 x 3.50	3.25 x 2.25	4.75 x 4.25	4.50 x 3.25	0.50 x 0.10
Average..	5.58	4.88	2.36 x 1.75	3.73 x 3.15	3.42 x 2.54	4.25 x 3.71	3.42 x 2.75	0.77 x 0.19

SUBFAMILY QUISCALINÆ. GRACKLES.

GENUS **SCOLECOPHAGUS** SWAINSON.**105. *Scolecophagus carolinus* (MÜLL.).****Rusty Blackbird.**

A common spring and fall transient, usually quite numerous for a short time during both these seasons. It has been in spring noted from March 25 to May 8, though usually arriving about the middle of April and disappearing by the first of May. In fall this species has been observed from October 2 (1893) to November 24 (1890).

Throughout both its migration periods it moves principally in flocks of less than 100, often in parties of from two to five individuals; a flock of 400 was, however, seen April 23, 1893. It associates frequently with Red-winged Blackbirds; also, though less commonly, with Bronzed Grackles. It affects preferably the marshes and swampy woods on the bottom-lands, but has been observed in the upland forests as well.

GENUS **QUISCALUS** VIEILLLOT.SUBGENUS **QUISCALUS**.**106. *Quiscalus quiscula æneus* (RIDGW.).****Bronzed Grackle.**

An abundant summer resident. It arrives usually about the first of March, though sometimes as early as February 25 (1890). It generally disappears before the first of November, but during the winter of 1892-3, which moreover, was not especially mild, a few birds, probably the same individuals, were seen at intervals until January 21, in fields and about dwellings on the outskirts of Wooster.

Until at least the middle of April this species may be seen often in flocks, which consist, however, of usually not more than one hundred birds; while even during the nesting season it sometimes assembles into small companies, especially in the vicinity of a breeding colony. Subsequent to the middle of June, and continuing until its departure in the fall, it again collects into flocks, which then often aggregate several hundred individuals.

The Bronzed Grackle congregates in numbers at its roosting places every night in both spring and fall, but especially during the latter season. These roosts are situated in the trees along the streets of the towns, about rural dwellings, in woodlands or in swamps. Such a roost existed in the town of Wooster, and was occupied chiefly from June to August. Frequently here the birds could be heard at night, occasionally creating among themselves, even at a late hour, a disturbance sufficient to be audible at a considerable distance.

The Bronzed Grackle breeds most abundantly in the vicinity of dwellings, and for nesting purposes seems to much prefer the evergreen trees; yet nests have also been observed in thorn bushes (*Crataegus*) on the bottom-lands. If the tree selected be a spruce, the nest is usually placed close to the trunk, at a distance from the ground varying with the size of the tree, the best concealment possible being apparently sought; but if the nest be in a pine, it is generally located either at some distance from the trunk among the thick foliage of a horizontal branch, or in an upright fork near the very top of the tree.

The construction of the nest is initiated sometimes early in April, but full complements of eggs have not been found until about the first of May. Sets of eggs have been taken from May 6 to May 24; those on the latter date being, however, from abandoned nests. The eggs appear to be usually five, not uncommonly four in number; and they are quite often in varying stages of incubation.

The nests are by no means always easy to locate among the thick foliage of the evergreens, the conduct of the parent birds being at times decidedly misleading. Where a number of pairs breed near together, careful watching is frequently necessary to properly discriminate between those birds which visit the trees for the purpose of nest-building, and those that are indifferently moving about. Close observation, managed so that the attention of the birds be not attracted, will reveal the fact that the female, on her trips to the nest with material for its construction, is commonly accompanied by the male, who perches upon the same or a neighboring tree, while his mate, alighting near the end of a limb and slowly working her way inward, finally disappears among the foliage close to the nest. Should, however, the pair imagine themselves observed, their actions are apt to be very different; for under such circumstances they will sometimes pass by the tree that contains the nest, and alight unconcernedly some distance away. If the cause of their distrust be not removed, no visit to the nest will then be made; and the female may carry her deception even to the extent of dropping from her bill the grass or straw that she holds, thereupon soon flying with her mate carelessly away. The female is very cautious in leaving the nest, and is not readily surprised in the act of incubating. A nest containing eggs not far advanced in incubation, if even once examined, is liable to be deserted by the birds.

Ten nests exhibit the following measurements:

No.	Height	Depth	Inside top diameter.	Inside middle diameter.	Outside top diameter.	Outside middle diameter.	Outside bottom diameter.	Width of rim.
1.....	7 00	3.00	4.00 x 3.75	4.00 x 3.75	9.00 x 7.00	9.00 x 4.50	3.00 x 2.00	2.50 x 1.50
2.....	4.50	3.00	4.63 x 3.23	4.00 x 3.75	7.50 x 6.00	8.00 x 6.00	6.50 x 2.50	2.00 x 0.75
3.....	5.00	2.63	3.75 x 3.75	4.00 x 3.75	8.50 x 5.75	6.50 x 5.75	4.00 x 3.50	3.00 x 0.75
4.....	4 50	2.75	4.25 x 3.50	3.75 x 3.50	7.50 x 5.00	8.00 x 6.00	6.00 x 5.00	2.00 x 1.00
5.....	4.00	2.75	4.00 x 3.50	4.00 x 3.50	7.00 x 6.00	7.50 x 6.00	5.00 x 4.00	2.25 x 1.00
6.....	4 00	2.75	4.00 x 3.25	4.00 x 3.25	8.00 x 6.50	8.50 x 6.00	5.00 x 4.00	2.50 x 1.00
7.....	3.00	2.50	4.00 x 3.25	4.00 x 3.00	7.50 x 6.00	8.00 x 5.50	6.00 x 3.00	2.25 x 0.75
8.....	4.00	2.25	4.00 x 3.25	4.00 x 3.00	7.00 x 6.00	8.00 x 5.50	5.00 x 4.00	2.50 x 0.75
9.....	4 00	3 00	4.50 x 4.50	3.75 x 3.50	8.50 x 7.00	9.50 x 7.50	6.00 x 5.00	2.50 x 1.25
10.....	4.00	3 00	4.00 x 3.50	3.50 x 3.50	7.00 x 6.50	9.00 x 7.00	6.00 x 5.00	2.00 x 1.25
Average...	4 40	2.76	4.11 x 3.56	3.90 x 3.45	7.75 x 6.18	8.20 x 5.98	5.25 x 3.80	2.35 x 1.00

During the season of reproduction this species does not hesitate to attack even Crows and large Hawks, should they venture too near its breeding ground; and the harmless Mourning Dove, which nests often in close proximity to the Grackle, sometimes, indeed, in the same tree, is also very frequently thus persecuted.

FAMILY FRINGILLIDÆ. FINCHES, SPARROWS, ETC.

GENUS **CARPODACUS** KAUP.107. **Carpodacus purpureus** (GMEL.).**Purple Finch.**

Apparently very rare, the writer's only records being as follows: Two were seen flying across the Killbuck Valley, near Wooster, September 25, 1892; and four were observed singing in a swamp in about the same locality, on October 2, 1892.

A single male in the collection of Mr. George Faber was said to have been obtained about 1890.

GENUS **ACANTHIS** BECHSTEIN.108. **Acanthis linaria** (LINN.).**Redpoll.**

A very irregular winter visitor. This species has not been observed by the writer, and the only record available is that furnished by Mr. W. E. Henderson, who with reference to its occurrence writes as follows:—

"In regard to the Redpolls, the date I have marked is February 3, 1890. They were around for a month or so, and were quite abundant. I saw large flocks of several hundred; and they used to feed near our house in a field which was grown up with ragweed. I shot a number and carefully identified them at the time. Both in flight and note they resembled the Goldfinch, but could without great difficulty be distinguished."

GENUS **SPINUS** KOCH.109. **Spinus tristis** (LINN.).**American Goldfinch; Thistle-bird.**

A permanent resident; abundant except in winter. It is more or less gregarious at all times, though perhaps strictly speaking not so during the breeding season, yet small companies of four or five birds have even then been observed. It is present in apparently decreased numbers from about the middle of June until the middle of July, after which time it becomes as abundant as usual. It is very generally distributed, but seems during the nesting season to have some preference for the outskirts of towns and the vicinity of rural dwellings.

It nests commonly in ornamental trees, often in silver maples (*Acer saccharinum*). A nest found July 27, 1893, was situated in a large thistle near a stream, and among surroundings apparently much more suited to the Indigo Bunting than to the present species. Nest-building is usually begun late in July; the eggs, commonly five in number, being deposited early in August.

This species has been observed feeding upon the seeds of the dandelion (*Taraxacum Taraxacum*), wild lettuce (*Lactuca Canadensis*), common thistle (*Carduus lanceolatus*), rag-weed (*Ambrosia artemisiæfolia*), milkweed (*Asclepias Syriaca*) and common beg-

gar-ticks (*Bidens frondosa*). The fact that it feeds upon the last named would be, if extensively the case, sufficient reason for carefully protecting the Goldfinch; since this weed, especially on the bottom-lands, is exceedingly abundant and troublesome.

In this locality the American Goldfinch usually begins singing early in April, and continues in song until October, having been heard as late as October 19 (1892). The latest date of singing mentioned by Mr. Bicknell¹ is August 30.

GENUS **PLECTROPHENAX** STEJNEGER.

110. *Plectrophenax nivalis* (LINN.).

Snowflake; Snow Bunting.

A winter visitor; apparently not present during very mild winters, though irregularly common in severe weather. It has been observed only in January and February, and not later than the twenty-fifth of the latter month. It occurs chiefly in flocks, occasionally in company with Horned Larks, and frequents both the uplands and the bottoms. A company of 125 Snowflakes was seen near Wooster, along the Pittsburg, Fort Wayne and Chicago R. R., February 25, 1893. The birds were very tame, and were apparently engaged in picking up small bits of cinders from the track.

GENUS **POOCÆTES** BAIRD.

111. *Poocætes gramineus* (GMEL.).

Vesper Sparrow; Grass Finch.

An abundant summer resident. It arrives not later than April 5, sometimes by March 18, and has been observed to remain until November 11 (1890).

It is to be found chiefly, though not exclusively, on the uplands, moving in small loose flocks during both spring and fall.

The breeding season continues from early in May until July; eggs having been taken between the dates of May 15 and June 26, inclusive. Four eggs seem to constitute the usual complement early in the season, but later on three is apparently a much more common number. Two broods are probably reared.

Three nests measured give the following results:

No.	Height.	Depth.	Inside top diameter.	Inside middle diameter.	Outside top diameter.	Outside middle diameter.	Outside bottom diameter.	Width of rim.
1.....	2.00	1.50	2.75 x 2.65	2.90 x 2.80	5.00 x 3.65	4.75 x 4.50	4.75 x 4.00	1.75 x 0.50
2.....	2.50	2.00	2.50 x 2.25	2.38 x 2.12	4.50 x 4.25	3.75 x 3.00	2.25 x 2.25	1.00 x 0.63
3.....	2.50	1.50	2.50 x 2.25	2.38 x 2.12	3.75 x 3.50	.....	.....	.....
Average...	2.33	1.67	2.58 x 2.38	2.55 x 2.35	4.42 x 3.80	4.25 x 3.75	3.50 x 3.13	1.38 x 0.57

This species sings regularly from the time of its arrival until into August; subsequently somewhat sporadically even as late as October 18.

¹ Auk I, 1884, p. 329.

GENUS **PASSER** BRISSON.**112. *Passer domesticus* (LINN.).****European House Sparrow; English Sparrow.**

An abundant resident; very generally distributed throughout the County. It of course frequents preferably the streets of the towns, but is in very many places numerous in the farming districts, where it may be seen in the trees and shrubbery about the houses, also in orchards, hedges, and along the public roads.

Among its favorite resorts for breeding are the apple orchards its nests being built among the branches of the trees, in Woodpeckers' excavations, or in natural cavities such as the House Wren or Bluebird might select. It is in this section, as everywhere, a great nuisance; in town nesting abundantly behind sign-boards, under the eaves, and in all sorts of nooks about the buildings. Nest-construction is sometimes begun in February, especially if the season be mild. Five eggs is a common complement.

The following account of its advent into Wayne County has been furnished the writer by Dr. J. H. Todd, of Wooster, and is given in his own words:—

"In the fall of 1876 a little troop of nine English Sparrows presented themselves in my yard, at once seemed at home, and assisted the chickens in disposing of their food. I was familiar with the Sparrow in New York, but they were a novelty in Wooster, none having been seen by any one, to my knowledge, in the County before. Many people came to see them, all supposing I had brought them; but I had not, and knew no more of where they came from than any of the numerous visitors that went to the yard to see them. In the spring they left as mysteriously as they had come. The next fall six came back, and from that time on the Sparrow was a permanent resident of Wooster.

GENUS **AMMODRAMUS** SWAINSON.SUBGENUS **PASSERCULUS** BONAPARTE.**113. *Ammodramus sandwichensis savanna* (WILS.).****Savanna Sparrow.**

A transient visitor; apparently rare, though in proper localities usually to be found in the spring. Not observed in the fall. It arrives about the middle of April, the sixteenth of this month being the earliest date recorded. It has been noted only on the meadows of the bottom-lands, where it frequents thickets, fence-rows, and the grass in the open fields. It is perhaps more common than the notes of the writer indicate.

SUBGENUS **COTURNICULUS** BONAPARTE.**114. *Ammodramus savannarum passerinus* (WILS.).****Grasshopper Sparrow; Yellow-winged Sparrow.**

A common summer resident. It arrives in May, usually about the middle of the month, though in 1892 it was noted May 1. It has not been observed later than August 20 (1893), and is not conspicuous after the first of this month.

The Grasshopper Sparrow is somewhat locally distributed, occurring, according to the writer's experience, only on the uplands, and there preferring fields of grass and clover. Many places, and even considerable areas of country where favorable conditions appear to exist, have been found untenanted by this species.

Although the nest has not been discovered, young in the streaked first plumage were taken in a field near Wooster, July 18, 1892.

This species sings regularly until late in July; in 1893 it was heard on the twentieth of August.

GENUS **ZONOTRICHIA** SWAINSON.

115. **Zonotrichia leucophrys** (FORST.).

White-crowned Sparrow.

A transient visitor; tolerably common from May 1 to May 24, but apparently rare in the fall. For the latter season the writer has only one record,—October 16, 1892. It is usually not seen in flocks, and does not commonly associate with any other species. It frequents the hedges, thickets and fence-rows, in fields and along the roads, also sometimes appearing on the outskirts of the towns.

116. **Zonotrichia albicollis** (GMEL.).

White-throated Sparrow.

An abundant transient visitor. It has been observed in spring from April 10 to May 17, and in fall from September 29 to November 8. It appears to be considerably more numerous in fall, during which season it moves in loose flocks, sometimes in company with Song Sparrows or Tree Sparrows; and may be found in almost any suitable locality. On October 5, 1890, eighty White-throated Sparrows were counted in a thicket within a radius of twenty-five feet.

This species is in song during both its spring and fall migrations, and has been heard singing until October 28; though the fall songs are not as a rule so well executed as those of spring.

GENUS **SPIZELLA** BONAPARTE.

117. **Spizella monticola** (GMEL.).

Tree Sparrow.

An abundant winter resident. It appears in fall usually before November, sometimes by the first of October, and departs generally about the middle of April, but lingered in 1892 until May 1.

It occurs principally in flocks of less than fifty individuals, along fence-rows, in thickets and weed-patches, and is especially numerous in the swamps on the bottom-lands. It has been observed associated with the Junco, Field Sparrow, Vesper Sparrow and House Sparrow.

It cannot be considered in full song during any portion of its sojourn here, but nearly every spring some individuals may be heard singing. The perfect song has been noted as early as February 5 (1891). Less commonly is its song heard in the fall, having been noted on a few occasions only, from October 28 to November 13, inclusive.

118. *Spizella socialis* (WILS.).**Chipping Sparrow.**

An abundant summer resident. The first week in April is its usual time of arrival, but in 1894 it was first seen on March 21. It has not been observed later than October 16, and is sometimes apparently absent early in this month.

Nest-building is commonly begun during the first part of May, and birds have been seen carrying nest material as early as April 26 (1891). The latest date on which a nest with eggs has been observed is July 10 (1892). Where such are available the Chipping Sparrow seems to prefer for breeding purposes orchard trees or small ornamental evergreens, the nest being usually placed not more than twelve feet from the ground. Apparently two broods are ordinarily reared: four eggs, sometimes three, constitute the first complement; while three eggs, or not infrequently only two, is the number common during the latter part of the season.

Two nests measure as follows:

No.	Height.	Depth.	Inside top diameter.	Inside middle diameter.	Outside top diameter.	Outside middle diameter.	Outside bottom diameter.	Width of rim.
1	2.25	1.25	2.25 x 2.00	2.00 x 1.60	3.50 x 2.75	3.50 x 2.50	3.00 x 1.50	1.00 x 0.15
2	2.00	1.20	2.00 x 1.75	2.00 x 1.85	3.50 x 2.75	4.00 x 3.00	4.00 x 2.50	1.10 x 0.40

In autumn this species often collects into small flocks, frequenting then the fence-rows, thickets and the dryer portions of the swamps, at times associating with various species of Sparrows (including the ubiquitous *Passer domesticus*) and also occasionally with the Bluebird.

During June and July the Chipping Sparrow is often heard singing after dark, especially before midnight; and it is in spring one of the earliest singers of the morning. On May 22, 1890, it was first heard at 3:20 A. M.

119. *Spizella pusilla* (WILS.).**Field Sparrow.**

A summer resident; abundant. It appears generally during the first week in April, sometimes as early as March 25 (1894), and disappears commonly before the middle of October, the latest date on which it has been noted being October 16 (1891).

In spring and summer it is to be found chiefly in the fields on the uplands, then not in flocks; but in the fall it often in small companies frequents regularly also the thickets and weed-patches of the creek bottoms. During the latter season it associates commonly with the Chipping Sparrow, and also, though apparently less frequently, with several other species of *Fringillidæ*.

The present species breeds during May and June, along fence-rows, in thickets, on the edges of woodland, and in the vicinity of human dwellings; placing its nests usually in low bushes, often in those of the common wild blackberry (*Rubus villosus*).

The Field Sparrow sings from the time of its arrival until the latter part of July, not having been heard in song later than July 30 (1893).

GENUS **JUNCO** WAGLER.**120. Junco hyemalis (LINN.).****Slate-colored Junco; Black Snowbird.**

An abundant winter resident. It makes its appearance generally during the latter half of October, although it was in 1892 seen on October 2. It remains until late in April; latest in 1893, when it was noted on April 26.

It moves much in companies of from twenty to fifty individuals, seldom more, though a flock of eighty was encountered March 25, 1894. It is often found with other Sparrows, particularly Tree and Song Sparrows. Among its favorite haunts are the borders of the woods and the thickets on the bottom-lands, where during fall and winter the species may nearly always be found.

It usually sings to some extent during March and April, and its song has been heard even as early as February 25 (1892).

An albino specimen of this species, taken by Mr. W. E. Henderson, March 9, 1892, was, with the exception of a few isolated patches of color, entirely white.

GENUS **MELOSPIZA** BAIRD.**121. Melospiza fasciata (GMEL.).****Song Sparrow.**

A permanent resident; very abundant except in December and January. In late fall and winter it retires principally to the bottom-lands, where often in small flocks it seeks the shelter of the dense thickets. At this time it feeds more or less extensively on the seeds of the ragweed (*Ambrosia artemisiæfolia*).

Nesting is begun in April, full complements of eggs having been taken on the third of May (1891). Nests with eggs have not been noted after June 14, but the species of course breeds considerably later than this date. Most of the nests observed have been in moist situations on the bottom-lands. A low bush is not infrequently utilized as a nesting place. The nest is usually very carefully concealed, sometimes being completely roofed over by growing grass. One found May 14, 1893, was located on the slope of a railroad embankment only a few inches beyond the ends of the ties and where the sitting bird was apparently disturbed by every passing train.

The measurements of six nests are as follows:

No.	Height.	Depth.	Inside top diameter.	Inside middle diameter.	Outside top diameter.	Outside middle diameter.	Outside bottom diameter.	Width of rim.
1.....	2.75	1.75	2.50 x 2.13	2.50 x 2.25	4.50 x 3.25	4.25 x 4.00	3.50 x 2.75	1.25 x 0.38
2.....	2.50	2.00	2.83 x 2.50	2.38 x 2.25	5.00 x 4.25	4.00 x 3.25	2.75 x 2.00	1.50 x 0.25
3.....	2.50	1.75	2.50 x 2.50	2.63 x 2.25	4.50 x 3.75	.....	.....	.....
4.....	2.25	1.50	2.50 x 2.10	2.50 x 2.30	4.00 x 3.40	4.25 x 3.50	3.00 x 2.50	1.00 x 0.50
5.....	2.00	1.75	2.50 x 2.25	2.50 x 2.25	4.00 x 3.63	4.50 x 4.00	3.00 x 3.00	1.25 x 0.50
6.....	3.00	2.00	2.75 x 2.50	2.50 x 2.38	4.75 x 3.50	4.50 x 4.50	3.75 x 3.50	1.75 x 0.25
Average ...	2.50	1.79	2.66 x 2.33	2.50 x 2.28	4.46 x 3.63	4.30 x 3.85	3.20 x 2.75	1.35 x 0.38

The Song Sparrow has been heard singing in every month of the year excepting December, but the season of its best song is from about the first of March until the first of August, and from late in September to the latter part of October. The music

of this species seems to be of remarkable variability. Within a week's time the writer once identified some fifteen distinct songs, with almost endless variations; and the repertoire was apparently not then even approximately exhausted. Striking individuality was in some cases evinced, both in the quality as well as in the character of the music; the different birds being observed morning after morning at the same places along the road, singing so nearly the same songs that it became to a degree possible to recognize the several individuals by their peculiarities. Although strictly speaking a slight uncertainty might exist in regard to the fact of their being really the same birds which were heard thus day after day from particular fence posts or telegraph poles, as the case might be, yet the circumstances were such as to remove all reasonable doubt of their identity.

122. *Melospiza georgiana* (LATH.).

Swamp Sparrow.

A rare spring and fall transient, frequenting the swamps, marshes and water-courses. The writer has for this species but three records, which are as follows: October 5, 1890; May 3, 1891; and May 10, 1891; two individuals having been observed on each of these dates. It is perhaps of more frequent occurrence than is thus indicated, since it is given by Wheaton¹ as a common transient visitor.

GENUS *PASSERELLA* SWAINSON.

123. *Passerella iliaca* (MERR.).

Fox Sparrow.

A tolerably common transient visitor from March 18 to April 12, and from October 19 to October 31. It is observed chiefly in the undergrowth of wooded banks, and in thickets, particularly those on the borders of woodland. It moves often in small loose flocks; and occasionally associates with Tree Sparrows.

GENUS *PIPILO* VIEILLLOT.

124. *Pipilo erythrophthalmus* (LINN.).

Towhee; Chewink.

A common summer resident. The dates of its spring arrival range from March 18 (1894) to April 6 (1890); the male generally appearing a few days in advance of the female. It usually disappears soon after the middle of October, the latest date on which it has been observed being October 25 (1891).

This species may be found in the thickets of both the uplands and the bottoms, and also, though rather exceptionally, in the vicinity of human dwellings. Sometimes during the migrations it is seen in scattered companies of four or five individuals; but is seldom accompanied by birds of another species.

The breeding season is in May and June. The nest is occasionally found in a low bush; and not infrequently contains eggs of the Cowbird.

The Towhee may be heard in song soon after its arrival, and until the latter part of July, though it does not sing so steadily during this month. The date of latest song noted is July 27 (1893).

¹ Geological Survey of Ohio IV, 1882, p. 330.

GENUS **CARDINALIS** BONAPARTE.**125. *Cardinalis cardinalis* (LINN.).****Cardinal; "Red Bird."**

Resident throughout the year; abundant. Here almost universally known by the name of "Red Bird." It is most numerous in the thickets and the swamps on the bottom-lands, and in the many wooded ravines adjacent. It is, however, found regularly in suitable situations on the uplands, as well as in the door-yards and along the shaded streets of the towns. Although during the coldest weather evincing an apparent inclination to gather into the more sheltered locations, the species may, both winter and summer, be found in much the same situations. It is occasionally observed in company with other species, such as the Junco, Fox Sparrow, House Sparrow, and even the Robin.

Nest-building begins late in April, and eggs have been found until June 15, but the first three weeks of May seem to constitute the height of the breeding season. The nest is commonly well concealed in a bush or ornamental evergreen, and is usually less than ten, often but two or three, feet from the ground.

The measurements of three nests are as follows:

No.	Height	Depth.	Inside top diameter.	Inside middle diameter.	Outside top diameter.	Outside middle diameter.	Outside bottom diameter.	Width of rim.
1.....	5.25	2.00	2.88 x 2.75	2.50 x 2.50	6.50 x 5.00	5.25 x 4.75	4.00 x 3.50	1.50 x 0.56
2.....	4.00	2.50	3.50 x 3.00	2.75 x 2.50	6.50 x 5.50	4.50 x 4.50	3.75 x 2.25	1.75 x 0.75
3.....	3.50	1.75	2.50 x 1.38	2.25 x 1.75	6.00 x 5.00	8.00 x 5.50	5.25 x 4.75	1.50 x 0.75
Average...	4.25	2.08	2.96 x 2.38	2.50 x 2.25	6.33 x 5.17	5.92 x 4.92	4.33 x 3.50	1.58 x 0.69

The female, when flushed from the nest, leaves quietly, and ordinarily seeks to avoid subsequent observation. The well known propensity of this species to desert its breeding place upon slight provocation renders accurate observation upon the nest a matter of some difficulty. According to the writer's experience, a first visit, if due caution be exercised, will not usually result in abandonment, even should the female be in the vicinity at the time; but a second inspection is quite certain to result disastrously. A nest begun on April 28, 1891, was ascertained to contain two eggs on May 6; which data would determine the approximate period of its construction as five or six days. In all but one of the nests examined the maximum number of eggs has been two; the single exception containing three eggs, one of which was fresh, the others being five-eighths incubated (May 15, 1891). These circumstances suggest the possibility that other sets of two eggs, if allowed to remain a sufficient length of time, might have been augmented in a similar manner.

This species apparently sings little during the winter months, but begins to be heard usually about the later part of February,—the twenty-third of this month (1890) being the earliest record. The regular song period is carried well into August, after which time the singing is more or less intermittent, continuing, however, in some seasons until October 28.

The Cardinal is possessed of no mean imitative ability, of which, however, it does not seem to make frequent exhibition, and in regard to which little has apparently been written. On February 23, 1890, a male Cardinal was heard singing on one of the main streets of Wooster, but so closely did the song resemble in every respect the "purly, purly" of the Tufted Titmouse, that until the performer showed himself in plain sight and in the very act of uttering these notes, the belief that they proceeded from such a source was impossible. Similar remarks will equally apply to another Cardinal, which was very successful in reproducing the common call of the

Flicker—imitating it indeed so perfectly as to almost induce an erroneous note-book entry.

GENUS *HABIA* REICHENBACH.

126. *Habia ludoviciana* (LINN.).

Rose-breasted Grosbeak.

An abundant summer resident. Its spring arrival generally occurs during the first week of May. April 28 (1891) being the earliest record. It remains until September, having been latest noted on the twenty-fourth of this month. It is found in suitable locations both on the uplands and on the bottoms, but is apparently most numerous represented on and near the latter.

The species was unusually abundant during the breeding season of 1890. In the months of May and June of that year there were found by the writer, without special search, within four miles of Wooster, twenty-two occupied nests; nearly three times the number recorded for any other year. Certain extensive thickets lying for some distance along both sides of the track of the Pittsburg, Fort Wayne and Chicago R. R., and adjacent to large swamps, seemed to have a special attraction for the birds, since here within a radius of fifty yards were found during that season eleven nests. The next year the same thicket yielded on careful search only three or four nests.

Eggs of this species have been noted from May 17 to July 10 (1892), but the latter date must be considered somewhat exceptional, as a large majority of the nests discovered have been between the twenty-fifth of May and the twelfth of June. The number of eggs is rather more commonly three than four, while five have been but once observed.

The nest is placed usually not over twelve, yet sometimes twenty feet from the ground; and while no particular preference appears to be shown, the thorn (*Crataegus*) is as frequently as any other bush chosen as its site. The nest is seldom found in an orchard, but one discovered June 12, 1892, was so situated. It is often located in a comparatively exposed position, with apparently no attempt at concealment; and is, moreover, occasionally so loosely constructed that the eggs may be counted from below. On June 5, 1892, a set of eggs was taken from the same bush—an elder (*Sambucus Canadensis*)—from which also the year previous eggs had been collected, possibly from the same pair of birds.

A series of ten nests exhibits the following measurements:

No.	Height.	Depth.	Inside top diameter.	Inside middle diameter.	Outside top diameter.	Outside middle diameter.	Outside bottom diameter.	Width of rim.
1.....	3.50	2.25	3.00 x 3.00	2.75 x 2.75	6.00 x 4.50	5.00 x 4.50	3.00 x 2.25	1.75 x 0.13
2.....	3.25	1.50	3.25 x 2.75	2.75 x 2.25	5.50 x 4.50	4.50 x 4.50	2.00 x 2.00	2.00 x 0.13
3.....	3.25	2.00	3.25 x 3.00	2.75 x 2.75	6.00 x 5.50	6.00 x 5.25	4.00 x 3.00	2.50 x 0.75
4.....	3.50	1.75	3.38 x 3.00	2.75 x 2.63	6.50 x 4.75	7.00 x 6.00	5.00 x 2.00	2.00 x 0.38
5.....	4.50	1.50	3.00 x 3.00	2.63 x 2.63	6.50 x 5.50	7.00 x 5.00	4.50 x 4.00	2.00 x 0.88
6.....	3.50	2.00	2.83 x 2.75	2.88 x 2.63	5.00 x 4.50	5.50 x 3.50	7.00 x 3.00	1.63 x 0.63
7.....	3.50	2.00	3.25 x 2.75	2.75 x 2.63	6.00 x 4.75	6.00 x 4.50	5.00 x 2.00	2.00 x 0.50
8.....	2.75	1.88	3.13 x 3.00	2.75 x 2.63	6.00 x 5.00	6.00 x 5.00	5.50 x 3.50	2.00 x 0.50
9.....	3.25	1.75	3.25 x 2.88	2.88 x 2.75	4.75 x 4.25	7.50 x 7.00	7.50 x 7.00	1.00 x 0.25
10.....	3.25	1.75	3.25 x 3.00	3.00 x 2.75	5.50 x 4.75	4.75 x 4.00	3.50 x 3.50	1.50 x 0.31
Average ..	3.43	1.84	3.16 x 2.91	2.79 x 2.64	5.78 x 4.80	5.93 x 5.13	4.70 x 3.23	1.81 x 0.45

The male apparently to a considerable extent shares the duty of incubation, for he has quite as frequently as the female been discovered on the nest. The sitting parent is not readily disturbed, often remaining until almost touched by the hand.

The Rose-breasted Grosbeak continues in song through May and June, but does not appear to sing much after the middle of July, its song not having been heard later than July 10 (1893).

This species has been observed in the latter part of July feeding upon the seeds of the milkweed (*Asclepias Syriaca*.)

GENUS **PASSERINA** VIEILLOT.

127. *Passerina cyanea* (LINN.).

Indigo Bunting.

A summer resident; ordinarily abundant, yet apparently not every year equally numerous. The earliest date of its spring arrival is April 24 (1892), though it does not usually appear until the second week in May. It remains until October, and while not observed later than the seventh of the month, this perhaps does not represent the limit of its stay.

The species is found on both the uplands and the bottoms, although it seems to be, at least locally, more abundant on the latter, where in late summer and in the fall it assembles into small flocks, frequenting then chiefly the thickets and patches of high weeds. At this time it is often associated with other Sparrows, particularly the Field Sparrow and the Song Sparrow. For a bird so common, its nests seem in this locality to be easily overlooked, since a large amount of careful searching has resulted in the discovery of but a single nest containing eggs, this being on June 22, 1890.

The song of this species may be heard from the time of the bird's appearance in spring until late in July, but it has not been detected later than July 30 (1893). On one occasion a male was observed singing on the wing, much after the manner of the Bobolink, continuing his song until in soaring flight he reached the ground.

GENUS **SPIZA** BONAPARTE.

128. *Spiza americana* (GMEL.).

Dickcissel; Black-throated Bunting.

A rare summer resident. Arrives in May, the third of the month being the earliest date recorded. It was not observed during 1893. The writer is informed by Mr. W. E. Henderson that this species was present in much more than ordinary numbers and was common during the summer of 1894. A nest containing four fresh eggs was taken by the same gentleman on July 8 of that year.

The Dickcissel is almost exclusively a bird of the upland fields, being very rarely noted anywhere on the bottom-lands, even in the spring.

FAMILY TANAGRIDÆ. TANAGERS.

GENUS **PIRANGA** VIEILLOT.129. *Piranga erythromelas* VIEILL.

Scarlet Tanager.

A common summer resident, but usually most numerous during the spring migration. The dates of its arrival vary from May 1 to May 7, and it lingers in fall usually until late in September, being in 1890 last observed on October 3.

The breeding season begins about the middle of May, completed nests having been noted on the twenty-second of this month. It is exceptional to find other than incubated eggs after the middle of June. While a woodland situation is commonly chosen, an orchard tree is not infrequently the nesting site, particularly if the orchard be in proximity to a tract of woods.

The measurements of four nests are as follows :

No.	Height.	Depth.	Inside top diameter.	Inside middle diameter.	Outsidetop diameter.	Outside middle diameter.	Outside. bottom diameter.	Width of rim.
1.....	3.00	1.75	2.75 x 2.50	2.25 x 2.25	5.50 x 4.00	6.00 x 4.50	3.50 x 2.50	2.25 x 0.50
2.....	3.00	1.75	2.25 x 2.25	2.25 x 2.25	4.25 x 3.50	5.00 x 4.00	3.75 x 3.25	1.00 x 0.35
3.....	2.00	1.25	2.50 x 2.25	2.25 x 2.10	4.25 x 3.50	5.25 x 3.75	3.75 x 2.75	1.25 x 0.50
4.....	3.50	2.00	3.00 x 2.50	3.00 x 2.45	6.00 x 4.25	5.50 x 4.50	4.00 x 3.50	1.80 x 0.50
Average	2.88	1.69	2.68 x 2.38	2.44 x 2.26	5.00 x 3.81	5.44 x 4.19	3.75 x 3.00	1.58 x 0.46

This species is a frequent nurse of the Cowbird, and often when the egg of this imposter is present only two or three eggs of the Tanager are deposited. In fact, one nest that was carefully watched from the time of its construction until incubation of the eggs was nearly half completed, contained but one egg of its owner and one of the Cowbird.

The Scarlet Tanager begins to sing soon after its arrival, and continues in song until late in July. It has not been heard subsequent to the twenty-seventh of this month.

FAMILY HIRUNDINIDÆ. SWALLOWS.

GENUS **PROGNE** BOIE.130. *Progne subis* (LINN.).

Purple Martin.

An abundant summer resident. It makes its spring appearance generally between the first and the eighth of April, though in 1892 it was seen on March 25. It usually disappears during the latter part of August or the first days of September; a solitary individual, however, was noted on September 20, 1893.

A Martin box on one of the main streets of Wooster is every spring regularly preempted by the House Sparrows before the arrival of the rightful tenants. The

Martins appear to be in this case more than a match for the Sparrows, for after a contention lasting rarely more than three or four days, always succeed in effectually expelling the intruders.

The first brood of young is hatched some time during the latter part of May, and the second about four or five weeks later. After the young of the earliest brood leave the nest—which event occurs ordinarily about the middle of June—the Martins every year congregate almost daily in the main streets of Wooster, roosting at night chiefly under the eaves of the higher buildings, wherever suitable places are available. These gatherings vary from ten to one hundred birds, reaching their maximum size in the latter part of July and the first part of August, after which time they gradually diminish. They are at first to a large extent composed of young birds and adult males. Until August the birds are observed to alight principally on the telegraph wires and the cornices of the higher buildings, but subsequently they appear to much prefer the court-house and its tall weathervaned tower. They are most active between sunset and dark, and their cackling cry may at this hour be almost incessantly heard. They grow somewhat less noisy as the season advances, but so long as they remain do not usually become entirely silent.

The Martin is one of the first birds astir in the morning, and in May its note is frequently to be heard by half-past three o'clock.

This species has been seen to pursue and to all appearances greatly annoy the Redtailed Hawk, but for just what purpose was not apparent.

GENUS **PETROCHELIDON** CABANIS

131. **Petrochelidon lunifrons** (SAY).

Cliff Swallow.

A common summer resident, but very locally distributed during the breeding season. It arrives between the middle of April and the first of May, the earliest date being April 16 (1893). It seems to practically disappear early in August, and has not been observed later than the twenty-fifth of this month (1890). It has been observed associated with no other species save the Barn Swallow.

Only one breeding colony of any considerable size has been noted; this having been tenanted continuously for a number of years.

Incubation of the first complement of eggs begins about the middle of May; of the second about five weeks later.

GENUS **CHELIDON** FORSTER.

132. **Chelidon erythrogastra** (BODD.).

Barn Swallow.

An abundant summer resident. It arrives usually about April 20, but in 1893 was first seen on April 9. It remains until late in August, not, however, having been noted after the twenty-fifth of this month.

The breeding season begins about the middle of May, and commonly continues until July, two broods being probably reared.

On June 17, 1891, there was discovered in a barn the remains of a nest that had fallen from the side of the rafter to which it had been secured; this accident having of course resulted in the death of the young birds. The parents, nothing daunted, were constructing a second nest in exactly the same location, and on July 1 the female was found sitting upon two incubated eggs.

Two nests of this species present the following measurements:

No.	Height.	Depth.	Inside top diameter.	Inside middle diameter.	Outside top diameter.	Outside middle diameter.	Outside bottom diameter.	Width of rim.
1.....	4.00	1.50	3.00 x 2.88	2.50	5.25 x 3.50	5.00 x 3.00	4.00 x 1.50	1.50 x 0.25
2....	2.00	1.50	3.00 x 2.50	2.00	4.50 x 3.00	.....	4.00 x 2.50	.....

The wires of the telegraph lines afford of course favorite places of rendezvous for this, as well as other species of Swallows, and it is no unusual occurrence to see a whole brood of young marshalled upon the wires, while the parent birds busily engage themselves providing food for the voracious appetites of their offspring. The habit these Swallows have, of at times fluttering along close to the surface of a small pond, instead of skimming swiftly over, gives them more the appearance of huge butterflies than of birds, and is an interesting performance.

The Barn Swallow is more or less gregarious even during at least a portion of the breeding season, but is most noticeably so in the months of July and August. At this time companies of fifty individuals are commonly encountered, and on July 27, 1893, a flock of 300 was observed.

In the spring of 1891 a perfect albino of this species was secured from among a number of other Barn Swallows, by Mr. E. N. Freeman, of Orrville. By reason of the inconsiderable development of the tail feathers the specimen was presumed to be a female. It was nearly pure white, the only observable diagnostic character of the plumage being the normal white tail markings, made discernible by the somewhat more dusky appearance of the remaining portions of the rectrices.

GENUS **TACHYGINETA** CABANIS.

133. **Tachycineta bicolor** (VIEILL.).

Tree Swallow.

A very rare summer resident; somewhat more common during the spring migration, but not observed in the fall. It seems to be quite irregular and very few records are available. Its earliest appearance was noted in 1893, when six were seen on April 9. On May 15, 1892, a flock of 100 and another of 85 were observed on the bottoms near Wooster, but other than this never more than six have been seen on any one date. It has only twice been noticed in summer: on June 14, 1891, and on July 17, 1892

GENUS **STELGIDOPTERYX** BAIRD.

134. **Stelgidopteryx serripennis** (AUD.).

Rough-winged Swallow.

A common summer resident. The dates of its spring arrival range from April, 8 to April 21. It was observed latest in 1890, when it was seen on August 24.

During the summer it is confined principally to the bottom-lands, where usually, but not always, it breeds in the immediate vicinity of running water. Nesting begins

late in May or early in June, and the complement of five or six, rarely seven, eggs is generally completed between the first and the fifteenth of the latter month. The nest is situated either in a convenient crevice of a stone culvert or bridge abutment, or else in an excavation in the perpendicular face of the bank of a creek. When the last location is selected, the length of the burrow ranges from twenty to sixty inches. This passage has an average diameter of three and one-half inches, but is somewhat enlarged at the nest, which is placed three to eighteen inches from its inner extremity. This latter distance does not seem to be proportionate to the length of the burrow, but varies indefinitely.

The composition of the nest includes straw, grass and weedstalks; and its lining consists of fine grass, small leaves of some species of willow, with sometimes the stalk leaves of wheat or other similar grain, but no feathers of any description. The willow leaves have been present in all the nests examined, and seem to be a characteristic feature. The nest is loosely constructed, and is sometimes quite bulky.

Five nests afford the following measurements:

No.	Height.	Depth.	Inside top diameter.	Outside top diameter.	Outside bottom diameter.	Width of rim.
1.....	2.50	1.25	2.50 x 2.25	8.50 x 4.84	7.50 x 4.00	3.00 x 0.25
2.....	2.00	0.75	2.75 x 1.75	7.00 x 3.50	.....	.....
3.....	2.50	1.25	2.50 x 2.00	6.50 x 4.50	.....	.....
4.....	2.75	1.25	2.50 x 2.25	7.00 x 4.50	10.00 x 4.50	2.00 x 0.88
5.....	3.00	1.25	2.62 x 2.50	6.00 x 5.00	.....	.....
Average.....	2.55	1.15	2.58 x 2.15	7.00 x 4.7	8.75 x 4.25	2.50 x 0.57

As will be noticed, the maximum outside bottom diameter is sometimes much greater than that at the top, but this is partially accounted for by the fact that the lower portion of the nest is often so loose that anything like accurate measurement is practically impossible. The frequent great difference between the extremes of similar outside dimensions of the same nest is of course due to the greater possibility for extending the nest longitudinally in the passage.

A nest despoiled of its contents in 1891 was the next year tenanted by possibly the same pair; but this is apparently an exceptional occurrence, since the same breeding place is rarely occupied two years in succession. The incubating female is without difficulty induced to fly out, a stick thrust into the passage generally proving immediately effective, though sometimes the bird withdraws into the burrow beyond the nest.

FAMILY AMPELIDÆ. WAXWINGS, ETC.

SUBFAMILY AMPELINÆ. WAXWINGS.

GENUS AMPELIS LINNÆUS.

135. *Ampelis cedrorum* (VIEILL.).

Cedar Waxwing.

Irregularly abundant; probably a permanent resident, though rarely observed during the winter months. It is generally seen in flocks, except during the breeding season; but is seldom associated with other species.

Nest-building is begun sometimes by the first of June, and the four or five young are usually well fledged by the middle of July. Most of the nests observed have been situated in apple orchards.

FAMILY LANIIDÆ. SHRIKES.

GENUS **LANIUS** LINNÆUS.

NORTHERN SHRIKE, REDUCED.

136. **Lanius borealis** VIEILL.

Northern Shrike ; Butcher-bird.

A tolerably common winter resident. It is probably present every year, although in apparently somewhat irregular numbers. Specimens in the writer's collection were taken on November 5 and December 26, 1892.

137. **Lanius ludovicianus excubitorides** (SWAINS.).

White-rumped Shrike.

A tolerably common summer resident from March 25 to September 21. It seems to be more frequently observed on the bottoms, though occurring also on the uplands.

Two nests taken were situated in a moist meadow along Killbuck Creek. They were respectively four, and four and one-half feet from the ground, and quite well concealed both being placed in thorn bushes (*Crataegus*). The materials consisted of twigs of the thorn bushes, weedstalks, grass and straw; with a neat lining of fine grass, gray vegetable fibres, moss and cattle-hair. One of these nests was taken June 7, 1890, and contained five eggs, which were three-eighths incubated; the other on May 29, 1892, and contained six eggs, in which incubation was one-eighth advanced.

The measurements of these two nests are as follows :

No.	Height	Depth.	Inside top diameter.	Inside middle diameter.	Outside top diameter.	Outside middle diameter.	Outside bottom diameter.	Width of rim.
1.....	4.50	2.00	3.00 x 2.75	3.00 x 2.75	5.50 x 4.50	6.00 x 4.00	4.00 x 2.00	2.00 x 0.75
2.....	6.00	3.00	3.50 x 2.75	3.25 x 3.12	7.00 x 5.50	6.00 x 5.50	5.50 x 5.00	1.75 x 0.63

Mr. W. E. Henderson mentions the discovery of a nest containing seven eggs, which seems sufficiently unusual to be worthy of record.

The breeding Shrikes of this County are intermediate between *Lanius ludovicianus* and *L. ludovicianus excubitorides*, but judging from the specimens examined, they appear on the whole to most closely approach the latter, and may, at least for the present, stand as such.

FAMILY VIREONIDÆ. VIREOS.

GENUS VIREO VIEILLOT.

SUBGENUS VIREOSYLVA BONAPARTE.

138. *Vireo olivaceus* (LINN.).

Red-eyed Vireo.

A common summer resident. Its spring arrivals, as noted, are from May 3 to 15, inclusive. The latest fall date is October 3 (1891), but the species generally disappears in September.

It affects both the uplands and the lowlands, but is for the most part confined to the woods, breeding preferably in the timbered ravines and near the borders of the forests.

The Red-eyed Vireo sings steadily from the time of its arrival until about the middle of August, and thereafter more or less intermittently usually as long as it remains, the latest song date being October 3 (1891).

139. *Vireo gilvus* (VIEILL.).

Warbling Vireo.

An abundant summer resident; somewhat more numerous at the time of the spring migration. It appears ordinarily during the first week of May, and remains until late in September. Extreme dates are April 28, 1891, and October 2, 1892.

In most situations excepting the woodlands, the present species, particularly during the breeding season, replaces to a great extent the Red-eyed Vireo. It occurs most commonly along the sparsely timbered portions of the streams, as well as in the vicinity of rural dwellings and the well shaded streets of the towns.

The nesting season is initiated during the latter part of May, and eggs may be obtained at almost any time in June. The breeding place preferred seems to be an apple orchard, and the nest when thus located is usually from four to twenty feet from the ground, but elsewhere is commonly at an altitude of between twenty-five and forty feet. Aside from orchard trees, nests have been detected in maples (*Acer rubrum*), in wild cherry trees (*Prunus serotina*) and in willows.

The measurements of three nests are as follows :

No.	Height.	Depth.	Inside top diameter.	Inside middle diameter.	Outside top diameter.	Outside middle diameter.	Outside bottom diameter.	Width of rim.
1.....	2.00	1.50	1.88 x 1.88	1.88 x 1.88	3.38 x 2.88	3.50 x 3.00	2.75 x 2.00	1.00 x 0.38
2.....	2.50	1.50	2.00 x 1.75	2.25 x 2.00	2.88 x 2.38	3.63 x 2.75	1.75 x 1.38	0.56 x 0.06
3.....	2.25	1.65	2.25 x 1.75	2.20 x 2.05	3.10 x 2.50	3.15 x 2.50	1.50 x 1.25	0.50 x 0.30
Average..	2.25	1.55	2.04 x 1.79	2.11 x 1.93	3.12 x 2.59	3.43 x 2.75	2.00 x 1.54	0.69 x 0.25

A nest discovered on June 26, 1892, in an almost inaccessible position in an apple tree, was ascertained to contain nearly fledged young. One of these had by accident become entangled in some of the external fibres of the nest, and having fallen, hung suspended by the feet. This was indeed a very unfortunate position for the fledging, and we undoubtedly earned its gratitude by affording it the relief which it had been of course unable to obtain from its anxious parents.

The Warbling Vireo sings regularly until about the first of August, and subsequently, though less frequently, until into September, the latest date of song heard being in 1892, on September 23. This species has a curious habit of most unconcernedly singing although its home be quite closely approached, and it sometimes continues its song even while its nest is in process of being removed.

SUBGENUS **LANIVIREO** BAIRD.

140. Vireo flavifrons VIEILL.

Yellow-throated Vireo.

Tolerably common as a summer resident, but most numerous in spring, arriving ordinarily between the first and the seventh of May. It has not been observed later than July 28 (1892), but it probably remains until at least the middle of August. It is confined principally to the tall timber, being found on both the uplands and the bottoms.

It may be heard in song from the time of its appearance in spring until the latter part of July. Its silence after the first of August perhaps accounts for its having escaped any subsequent notice, since it is much oftener heard than seen.

FAMILY **MNIOTILTIDÆ**. WOOD WARBLERS.

GENUS **MNIOTILTA** VIEILLLOT.

141. Mniotilta varia (LINN.).

Black and White Warbler.

A common spring transient and very rare summer resident. It makes its appearance between the first and the fifteenth of May, and during the spring migration frequents the woods on both the uplands and the bottoms, being often associated with other Warblers. In summer it has been noted principally in the wooded ravines adjoining the lowlands.

GENUS **HELMINTHOPHILA** RIDGWAY.

142. Helminthophila pinus (LINN.).

Blue-winged Warbler.

A rare summer resident; somewhat more numerous in spring, arriving between the first and the tenth of May. It is seldom seen on the uplands, but affects chiefly the thickets of the bottoms. Owing no doubt to the character of the localities frequented, it is generally heard rather than seen.

143. *Helminthophila peregrina* (WILS.).**Tennessee Warbler.**

A spring and fall transient; tolerably common, though somewhat irregular. It has been observed in spring between May 15 and May 24; in fall from September 21 to October 7. It was most numerous during the spring of 1892. It frequents thickets and woodlands generally, being found often in company with other Warblers. Its song is heard quite regularly during the spring migration.

GENUS *DENDROICA* GRAY.**SUBGENUS *PERISSOGLOSSA* BAIRD.****144. *Dendroica tigrina* (GMEL.).****Cape May Warbler.**

A transient visitor; apparently rare in spring, but tolerably common in the fall, though of rather local occurrence. In the spring it has been only once seen,—on May 6, 1892; but in the autumn it has been observed from September 25 to October 7. It appears to somewhat prefer the lowlands, and has been chiefly noted in the valley of the Killbuck, usually near the stream, in thickets and the less heavily wooded portions of the forests.

SUBGENUS *DENDROICA* GRAY.**145. *Dendroica æstiva* (GMEL.).****Yellow Warbler.**

An abundant summer resident. Its spring arrival has been usually between April 21 and April 25, and it generally remains until September, not, however, having been noted later than the seventh of this month. It is apparently more numerous on the bottoms than on the uplands.

Thickets along streams seem to furnish the most acceptable nesting sites, and in this locality a decided preference is shown for the elders (*Sambucus Canadensis*), the greater number of nests found being situated in these bushes.

The three eggs of a set (containing also one egg of the Cowbird) taken May 29, 1891, are somewhat peculiar in pattern of coloration, and exhibit considerable difference in size. The ground color is greenish white; in one of the eggs almost immaculate, with near the larger end a very few minute dots of clove brown and dull lilac and one long streak of clove brown. A second egg is similar to the one described, but is slightly more heavily marked, though much less so than is usual in eggs of the species. The other egg is thickly marked,—but still somewhat less so than average specimens—with small spots of fawn color, drab and dull lilac, these being in a broad zone about the central portion of the egg. These eggs measure respectively: .70 x .52, .71 x .52, .62 x .44.

The height of the breeding season is apparently between the middle of May and the first of June, as a large proportion of the nests found contained, or evidently had contained, unincubated eggs during this period. Incompleted nests have been noted by May 11 (1890), and eggs have been found as late as June 22 (1891).

Eight nests exhibit the following measurements:

No.	Height.	Depth.	Inside top diameter.	Inside middle diameter.	Outsidetop diameter.	Outside middle diameter.	Outside bottom diameter.	Width of rim.
1.....	3.50	1.63	2.00 x 1.70	2.00 x 1.75	2.75 x 2.44	2.75 x 2.50	1.50 x 1.50	0.50 x 0.25
2	3.50	1.63	1.88 x 1.63	1.88 x 1.88	3.50 x 2.75	3.00 x 3.00	2.50 x 2.50	1.12 x 0.63
3.....	3.63	1.38	1.63 x 1.50	2.00 x 1.75	2.75 x 2.50	2.88 x 2.63	1.63 x 1.25	0.63 x 0.25
4	3.00	1.50	1.88 x 1.75	1.95 x 1.88	2.88 x 2.50	2.75 x 2.63	2.25 x 1.00	0.50 x 0.25
5.....	2.50	1.50	2.00 x 1.88	2.60 x 1.75	3.25 x 2.25	3.38 x 3.00	2.25 x 1.75	0.56 x 0.19
6	2.00	1.20	1.85 x 1.65	2.10 x 1.95	2.90 x 2.50	3.50 x 3.00	3.00 x 2.60	0.85 x 0.35
7.....	3.25	1.25	2.00 x 1.70	2.10 x 2.05	2.65 x 2.15	3.25 x 2.50	2.75 x 1.00	0.50 x 0.20
8.....	2.15	1.50	1.85 x 1.60	2.15 x 2.00	2.85 x 2.65	2.75 x 2.75	2.50 x 2.00	0.75 x 0.35
Average	2.94	1.45	1.89 x 1.68	2.02 x 1.88	2.94 x 2.47	3.03 x 2.75	2.30 x 1.70	0.68 x 0.31

This species sings very persistently for the first few weeks after its advent in spring, and quite regularly up to about the beginning of July, continuing more or less intermittently until the last of this month. The latest song was recorded in 1891, on July 28.

146. *Dendroica cærulescens* (GMEL.).

Black-throated Blue Warbler.

A common transient visitor; much more numerous in spring than in fall. It is however, somewhat irregular in numbers, being decidedly less frequent in some seasons than in others. It appears usually during the first few days of May, and remains for two or three weeks. It lingered late in 1892, being last observed on June 1. The earliest record of its arrival is April 23 (1893).

It has been noted in the fall on but two occasions,—October 5, 1890, and September 18, 1892. On the latter date one was seen singing. The Black-throated Blue occurs with other of the Warblers in the thickets and woods of both the uplands and the bottoms.

147. *Dendroica coronata* (LINN.).

Myrtle Warbler.

An abundant transient visitor; somewhat more numerous in fall than in spring. It has been observed as early as April 16 (1893), but does not usually appear until several days later. It remains until about May 22. In autumn it has been noted from September 25 to November 6. The lowlands along the creeks seem to be favorite resorts for this species, and during the fall it may there be found often in small flocks. With the possible exception of *Dendroica striata* the Myrtle Warbler is by far the most numerous of the transient species of the family.

148. *Dendroica maculosa* (GMEL.).

Magnolia Warbler.

A transient visitor; one of the less frequent species. It is sometimes tolerably common, but has been observed only between May 11 and May 22. It is apparently

of most regular occurrence in the thickets bordering woodlands and in the undergrowth of the forests.

149. *Dendroica cærulea* (WILS.).

Cerulean Warbler.

Rare; probably occurring solely as a transient visitor. It was noted only in 1891, when on May 8 an adult male was shot and two other individuals were seen. Another was observed on May 10, and one also on May 15. These were all apparently in full song, and had not this been the case, would have passed unnoticed amid the multitudes of migrant Warblers which at this season throng the tops of the forest trees in the valley of the Killbuck.

150. *Dendroica pensylvanica* (LINN.).

Chestnut-sided Warbler.

A tolerably common transient from May 14 to May 20. It is also a very rare summer resident, but has not been observed in the fall. The only summer records are for 1893, in which year one of these birds was, on July 9, seen singing in the woodland of the Killbuck Valley, at a locality about four miles northwest of Wooster. On July 10 and 16 of the same year, a Chestnut-sided Warbler, quite probably the former individual, was again heard in the same vicinity.

The species frequents almost exclusively the woodlands, moving among the branches of the highest trees, and also, though apparently less preferably, in the low undergrowth.

151. *Dendroica castanea* (WILS.).

Bay-breasted Warbler.

A very rare transient visitor. The only dates for this species are May 22 and 24, 1892. The birds seen were in rather open woodland, in the lower portions of the trees, and were without difficulty closely approached.

Although Wheaton mentions¹ this species as occurring "in great numbers" in fall, the writer has strangely enough failed to detect it during that season. Many Black-poll Warblers have been shot in the hope of securing specimens of *D. castanea*, as the latter might of course, if not captured, readily pass for *D. striata*.

152 *Dendroica striata* (FORST.).

Black-poll Warbler.

An abundant fall transient, but seen during the spring season only in 1892, when it was common from May 21 to May 30. In the autumn it has been observed from September 18 to October 16. It may be found almost wherever there are trees or bushes, and in the streets of the towns is, of all the transient Warblers, the one most frequently occurring, and the species most numerously represented. It is seen occasionally in small straggling companies, consisting, however, of rarely more than six or seven individuals.

¹Geological Survey of Ohio IV, 1882, p. 255.

153. *Dendroica blackburniæ* (Gmel.).**Blackburnian Warbler.**

Although Wheaton considers¹ this bird an abundant transient in the vicinity of Columbus, it is seemingly very rare in Wayne County. Only three individuals have been noted; two on May 20, 1890, and one on May 20, 1892. It is possibly more common than is thus indicated.

154. *Dendroica virens* (Gmel.).**Black-throated Green Warbler.**

A common spring transient from May 1 to May 22. It is apparently rare in the fall, as there is available but one record for that season: October 4, 1891. It may be found in the woods of both the uplands and the bottoms, and there its very distinctive song may be heard almost any day during its spring migration.

GENUS *SEIURUS* SWAINSON.

OVEN-BIRD, NATURAL SIZE.

155. *Seiurus aurocapillus* (Linn.).**Oven-bird; Golden-crowned Thrush.**

A rare summer resident. It is for a while in May common in certain localities, especially in portions of the Killbuck Valley, where at this season it occurs associated with the next species. It arrives early in May, and remains until the middle of October (May 1 to October 16). It has seldom been noted on the bottom-lands except during the migrations, since it retires for the summer to the most secluded portions of the upland forests.

156. *Seiurus motacilla* (Vieill.).**Louisiana Water Thrush.**

Rare summer resident. A certain portion of the valley of the Killbuck, lying between four and five miles northwest of Wooster, is the only locality where this species has in summer been observed, and although it there probably breeds, its nest has not been discovered. In this place the species is usually common for a few days in spring, frequenting the woods and thickets along the creek, together with the many mossy ravines in the adjacent woodland. It has been in spring occasionally

¹Geological Survey of Ohio IV, 1882, p. 252.

noted in swamps in other portions of the Killbuck Valley, but no other spot seems to be quite so congenial as the one above mentioned.

This Warbler arrives usually late in April, the twenty-first of the month (1891) being the earliest date recorded. It has not been observed later than July 28 (1892). It is generally in full song at the time of its spring appearance, and for a season its notes form one of the characteristic bird melodies of its favorite haunts.

GENUS **GEOTHYLPIS** CABANIS.

SUBGENUS **OPORORNIS** BAIRD.

157. **Geothlypis agilis** (WILS.).

Connecticut Warbler.

A very rare transient visitor. The only record is a single specimen taken October 2, 1892.

SUBGENUS **GEOTHYLPIS** CABANIS.

158. **Geothlypis philadelphia** (WILS.).

Mourning Warbler.

Apparently a very rare transient visitor. It has been positively identified but once,—on May 14, 1893, when a single adult male was found in the thick undergrowth of the woodland along Killbuck Creek, about four miles northwest of Wooster.

159. **Geothlypis trichas** (LINN.).

Maryland Yellow-throat.

An abundant summer resident. The dates of its appearance range from April 23 to May 7, and it is present generally until the first of October, although less numerous during September. Dr. Wheaton¹ writing probably with regard to the vicinity of Columbus, says that this species "remains until the first of September."

It is more common on the bottoms than on the uplands, and though of course a bird of thickets and fencerows, it sometimes wanders away from both. On July 2, 1891, a Maryland Yellow-throat was heard singing in the midst of a large wheat-field, where there seemed nothing to attract it from the presumably more suitable localities in the neighborhood.

The song of this species continues throughout the whole of the bird's summer sojourn, but is more irregular during September and the latter part of August. The date of latest song heard (October 2, 1892,) is coincident with the latest record for the species. In spring it is one of the early morning singers, being often among the first species heard. On May 27, 1890, it was singing at 3:35 A. M.

¹Geological Survey of Ohio IV, 1882, p. 275.

GENUS **ICTERIA** VIEILLLOT.**160. Icteria virens (LINN.).****Yellow-Breasted Chat.**

A rare summer resident. It has not been noted earlier than May 17, nor later than August 3, but probably neither of these dates represents the extreme of its presence here.

This species on the uplands frequents the woods and the dense thickets, but on the bottoms is confined apparently to the latter. A nest taken by Mr. J. Hine, near Wooster, June 17, 1893, contained five eggs, two of them, however, being those of the Cowbird. The nest was situated in a hickory sapling in underbrush near the edge of woodland.

Although much has been written concerning the vocal powers of the Yellow-breasted Chat, little attention seems to have been called to its ability for mimicry; yet nevertheless, besides being a wonderful ventriloquist, it manifests at times a remarkable imitative faculty. The different notes of the Robin, Catbird, Brown Thrasher, together with those of many other species, including even the croak of the Green Heron, are all reproduced so faithfully that one begins to wonder whether after all the thicket contains not a number of birds instead of a single Yellow-breasted Chat. It seems, however, that such an exhibition is more rarely given than its ordinary vocal performance. This species has been found in full song on July 4, but later in the season has not been heard singing.

GENUS **SYLVANIA** NUTTALL.

WILSON'S WARBLER, NATURAL SIZE.

161. Sylvania pusilla (WILS.).**Wilson's Warbler.**

A rare transient visitor. Observed in spring from May 22 to June 1, but in autumn only on September 18, 1892. It has been noted principally in thickets along streams, and in the undergrowth of woodland. It is in full song during its spring passage, and its notes constitute a pleasing warble, in part somewhat suggestive of the song of the House Wren.

GENUS **SETOPHAGA** SWAINSON.**162. Setophaga ruticilla (LINN.).****American Redstart.**

A very rare summer resident, though common as a spring transient. It appears usually during the first week of May, the earliest date being April 30 (1891). It frequents the woods of both the uplands and the bottoms; being often associated with other species of Warblers. It has been observed in summer on but one occasion,—July 27, 1893.—and has been entirely overlooked in the fall. It is generally in song upon its arrival in spring; and was heard singing on July 27.

FAMILY **TROGLODYTIDÆ**. WRENS, THRASHERS, ETC.SUBFAMILY **MIMINÆ**. THRASHERS.GENUS **GALEOSCOPTES** CABANIS.**163. Galeoscoptes carolinensis (LINN.).****Catbird.**

An abundant summer resident from April 26 to October 2.

The numerous and extensive thickets on the bottom-lands seem to afford particularly favorable nesting sites, since it is there that during the breeding season this species occurs most abundantly. The nests are seldom higher from the ground than six feet, and by far the greater number of those found have been but three and one-half feet or less; but almost always carefully concealed. When the situation is, as occasionally chosen, an orchard, the nest is generally at least twelve or fourteen feet from the ground and in the upright fork of a limb. The lining of the nest was ascertained to be in nearly every case entirely of dark-colored roots, the only exceptions containing in addition a small quantity of grass and weedstalks. Three or four eggs generally constitute a complement; five having been but twice recorded. Occupied nests have been noted from May 14 to June 26.

The Catbird sings very continuously from the time of its arrival until August, and subsequently more or less intermittently until September. The latest date of song heard is September 18 (1892).

GENUS **HARPORHYNCHUS** CABANIS.SUBGENUS **METHRIOPTERUS** REICHENBACH.**164. Harporhynchus rufus (LINN.).****Brown Thrasher.**

A common summer resident. It appears sometimes by April 1, though not infrequently several days later. Not observed in fall after September 17 (1893).

The breeding season continues from the first of May until about the first of July, but nests with eggs are rarely to be found subsequent to the middle of June. The usual nesting site is a brush-heap or a sheltered thicket; a location offering good opportunity for concealment being apparently preferred.

The two nests measured present the following dimensions:

No.	Height.	Depth.	Inside top diameter.	Inside middle diameter.	Outside top diameter.	Outside middle diameter.	Outside bottom diameter.	Width of rim.
1.....	3.50	1.75	4.00 x 3.00	3.50 x 2.75	6.50 x 6.00	7.00 x 7.00	5.00 x 4.00	2.50 x 0.75
2.....	4.00	2.00	4.25 x 4.00	3.75 x 2.75	7.50 x 6.50	6.00 x 5.50	5.00 x 4.50	1.50 x 0.50

This species sings quite regularly until into July, but has not been heard in song later than the thirtieth of this month.

SUBFAMILY TROGLODYTINÆ. WRENS.

GENUS **THRYOTHORUS** VIEILLOT.

SUBGENUS **THRYOTHORUS**.

CAROLINA WREN, REDUCED.

165. **Thryothorus ludovicianus** (LATH.).

Carolina Wren.

A common permanent resident; somewhat less numerous in winter. While perfectly at home in the towns, it seems to be partial to the bottom-lands and to the

wooded ravines,—the thickets and swamps along the streams being particularly suitable for its habitation.

A nest visited on May 6, 1890, contained five fully fledged young. This nest was situated in a small barn in the town of Wooster, being placed on the bare floor of a hay loft, close against the side of the building; thus being completely hidden from the outside, though plainly visible from within. The birds entered the nest through a knot-hole in the weather-boarding, but were very shy when conscious of being observed. For some unknown reason, the nest, while containing young, was removed from the loft and placed upon the ground outside, where, however, the parent birds continued their attentions until the young were able to fly.

The Carolina Wren has been observed in song during every month of the year with the exception of December, and it sings with apparently as much vivacity in zero weather as during the most pleasant days of spring.

GENUS **TROGLODYTES** VIEILLOT.

SUBGENUS **TROGLODYTES.**

166. **Troglodytes ædon** VIEILL.

House Wren.

A common summer resident. It appears late in April or early in May, and remains sometimes until October 16, though is unusual after October 1. During the breeding season the apple orchards, even though not adjacent to human habitations, seem to be its favorite resorts.

The House Wren sings from the time of its arrival until about the first of August, but less continuously during the greater part of July. The date of latest song heard is July 30 (1893).

SUBGENUS **ANORTHURA** RENNIE.

WINTER WREN, SLIGHTLY REDUCED.

167. **Troglodytes hiemalis** VIEILL.

Winter Wren.

A rare winter resident; tolerably common during the spring and fall migrations. It has been observed from September 27 to May 15, principally along fencerows, in thickets and in woodland undergrowth.

GENUS **CISTOTHORUS** CABANIS.SUBGENUS **TELMATODYTES** CABANIS.168. **Cistothorus palustris** (WILS.).**Long-billed Marsh Wren.**

A common summer resident from May 5 to September 25. It is to be found in nearly all the more extensive swamps, especially where the cat-tail flag (*Typha latifolia*) abounds. While it of course breeds regularly in this locality, no nests have been discovered, owing to the great difficulty of traversing at the proper season the swamps where it occurs.

It is in song throughout its sojourn here, but sings with much less frequency during the latter part of the summer.

FAMILY **CERTHIDÆ**. CREEPERS.GENUS **CERTHIA** LINNÆUS.169. **Certhia familiaris americana** (BONAP.).**Brown Creeper.**

A tolerably common spring and fall transient and rare winter resident. During the winter it remains principally in the woods of the bottom-lands, but during the migrations it occurs also on the high ground. Its earliest fall appearance is October 2, and it has never been observed later in spring than May 1; seldom, in fact, after the middle of April.

No positive breeding record has been established, but an unoccupied nest, which in position and structure much resembled that of this species, was discovered on May 7, 1891. This nest was situated about twenty feet from the ground in a crevice behind the bark of a dead tree, in damp bottom-land woods along the Killbuck.

FAMILY **PARIDÆ**. NUTHATCHES AND TITS.SUBFAMILY **SITTINÆ**. NUTHATCHES.GENUS **SITTA** LINNÆUS.170. **Sitta carolinensis** LATH.**White-breasted Nuthatch.**

A permanent resident; common in summer, abundant in fall and winter. It is most numerous in woodland, though in winter it commonly is elsewhere encountered. During the summer it apparently is partial to the bottom-lands and to timbered ravines, but in the fall and winter it is equally if not more abundant in the upland woods, being then frequently associated with Tufted Titmice, Chickadees and Golden-crowned Kinglets.

All the nests which have fallen under the writer's observation have been situated in either natural cavities or the abandoned excavations of Woodpeckers,—in living trees, or trees only partially dead. The breeding season continues usually from about the middle of April until the middle of June, nests with eggs being most common during the first three weeks in May. The disturbance of a nest containing even eggs sometimes occasions on the part of the parent birds an exhibition of great concern, and they repeatedly approach almost within reach, making at intervals swift dashes toward the intruder.

The notes of the White-breasted Nuthatch are most frequently heard during the colder months of the year.

171. *Sitta canadensis* LINN.

Red-breasted Nuthatch.

A very rare transient visitor. The only record for this species is September 26, 1890.

SUBFAMILY PARINÆ. TITMICE.

GENUS *PARUS* LINNÆUS.

SUBGENUS *LOPHOPHANES* KAUP.

172. *Parus bicolor* LINN.

Tufted Titmouse.

A permanent resident; abundant except in summer. It is equally numerous on the uplands and the lowlands.

On October 2, 1892, a Tufted Titmouse was observed industriously hammering away at something in the crotch of a low tree. This object eventually proved to be the half-punctured cocoon of a large moth (*Telea polyphemus*).

The Tufted Titmouse sings more or less continuously all the year, being least frequently heard during December and January. The duration of its maximum song seems to be from about the first of March until some time in June, after which period it sings much less regularly.

SUBGENUS *PARUS* LINNÆUS.

173. *Parus atricapillus* LINN.

Chickadee.

Resident; abundant in winter, but considerably less numerous in summer. During the latter season it is found most frequently in the woods of the bottomlands, though is by no means entirely confined to them; while in winter it occurs almost everywhere, at only this season regularly visiting the yards along the streets of the towns.

The nesting season begins about the middle of April, full complements of eggs being most common from the first to the fifteenth of May. A second brood is sometimes reared in June. Rather open bottom woodlands, where decaying stumps

abound, seem to be the favorite localities for breeding purposes. The nests situated in these low stumps are rarely over two feet from the ground, and considerable danger threatens from the spring flooding of the bottom-lands and the consequent uninhabitable condition of the nests when the water rises high enough to enter. A nest found by Mr. W. E. Henderson, June 24, 1892, was situated in a cavity in one of the supports of an old rail fence.

FAMILY SYLVIIDÆ. WARBLERS, KINGLETS, GNATCATCHERS.

SUBFAMILY REGULINÆ. KINGLETS.

GENUS **REGULUS** CUVIER.

GOLDEN-CROWNED KINGLET, SOMEWHAT REDUCED.

174. **Regulus satrapa** LIGHT.

Golden-crowned Kinglet.

Abundant in fall and spring; tolerably common as a winter resident. During the last mentioned season it remains chiefly in the shelter of ornamental evergreens, and in the most sheltered portions of the woods, but throughout the migrations it is found nearly everywhere.

It appears in fall with considerable regularity about the first of October, the extreme dates being September 27 and October 3. It departs about the end of the third week in April, but has once been observed to linger until May 1 (1892). It moves often in small scattered companies of usually not more than fifteen individuals; sometimes, though not ordinarily, associating with other birds.

175. **Regulus calendula** (LINN.).

Ruby-crowned Kinglet.

A transient visitor; abundant in the spring, but generally not so numerous in autumn. It has been noted from April 5 to May 15, and from September 23 to Octo-

ber 20. It is found principally in woodlands and thickets, both on the uplands and the bottoms, not being so frequently as the preceding species observed along the streets of the towns.

This species is, of course, regularly in song during the season of its occurrence in spring, and has been heard singing in October fully as well as during the vernal migration.

SUBFAMILY POLIOPTILINÆ. GNATCATCHERS.

GENUS POLIOPTILA SCLATER.

176. *Polioptila cærulea* (LINN.).

Blue-gray Gnatcatcher.

A common summer resident. It arrives ordinarily during the latter part of April, the nineteenth of this month being the earliest date recorded. It has not been observed later than August 3, yet it probably does not leave until September.

Throughout the breeding season it affects chiefly the upland woods and the timbered ravines adjacent. Nest-building begins about the middle of May, or even somewhat earlier, and by the middle of June nearly all the nests contain young. Apparently no second brood is regularly reared, but should the first nest be destroyed, another is commonly constructed.

The measurements of two nests are as appended :

No.	Height.	Depth	Inside top diameter.	Inside middle diameter.	Outside top diameter.	Outside middle diameter.	Outside bottom diameter.	Width of rim.
1.....	2.65	1.70	1.35 x 1.20	1.80 x 1.60	2.25 x 2.10	2.75 x 2.35	2.85 x 2.00	0.75 x 0.35
2.....	2.50	1.60	1.35 x 1.25	1.65 x 1.50	2.05 x 1.90	2.60 x 2.25	2.25 x 1.85	0.50 x 0.25

The well-known scolding note of this species is most conspicuous from April to about the middle of July, being subsequently comparatively seldom heard. The real song of the Blue-gray Gnatcatcher has, in this locality, been detected upon only a single occasion,—August 3, 1890. It is a simple but pleasing ditty, in quality rather suggestive of the songs of some Warblers. It consists of one or two introductory notes, followed by a short warble; and the whole may be represented, very imperfectly of course, by the syllables *zē-ū, zē-ū, ksel-kse-kse-kū*.

FAMILY TURDIDÆ. THRUSHES, SOLITAIRES, BLUEBIRDS, ETC.

SUBFAMILY TURDINÆ. THRUSHES.

GENUS TURDUS LINNÆUS.

SUBGENUS HYLOCICHLA BAIRD.

177. *Turdus mustelinus* GMEL.

Wood Thrush.

An abundant summer resident from April 21 to September 27. It may, in general, be regarded as a somewhat more numerous inhabitant of the woods on the bottoms

than of those on the uplands, although it is found in almost all suitable localities. It is particularly numerous in the woods along portions of Killbuck Creek.

The breeding season continues from about the end of the first week in May until the middle of July, but is at its height during the last two weeks of May and the first week in June. The favorite nesting places are wooded ravines and the timbered banks bordering the bottom-lands. Nearly all the nests found have been in saplings or bushes, usually from three to five, never higher than ten, feet from the ground.

The measurements of two nests are as follows:

No.	Height.	Depth.	Inside top diameter.	Inside middle diameter.	Outside top diameter.	Outside middle diameter.	Outside bottom diameter.	Width of rim.
1.....	3.50	1.63	3.13 x 3.00	2.75 x 2.75	4.50 x 4.00	5.50 x 5.25	4.00 x 3.50	0.63 x 0.38
2.....	4.00	2.25	3.00 x 3.00	3.00 x 3.00	4.50 x 4.25	5.25 x 5.00	6.00 x 4.50	1.00 x 0.50

This species is commonly imposed upon by the Cowbird, sometimes to the extent of two or even three eggs. A nest discovered June 28, 1891, contained three eggs of the Wood Thrush and three of the Cowbird. The former, with two of the latter, were perfectly fresh, while the third Cowbird's egg, besides being badly cracked and addled, was buried nearly out of sight among the materials composing the bottom of the nest. These circumstances seem clearly to indicate that this Cowbird's egg had been deposited several days in advance of the other eggs, and while the nest was in process of construction.

The Wood Thrush is in full song from the time of its arrival until the middle of June; subsequently continuing, but with less regularity, up to about the middle of July.

178. *Turdus fuscescens* STEPH.

Wilson's Thrush.

This species is apparently the least numerous of all the transient Thrushes. It has been observed only in 1892, when on May 1, 15, and 22, it was seen near Wooster, in woodland in the valley of the Killbuck. In the collection of Mr. E. N. Freeman, of Orrville, is a single specimen, which was taken in spring near that place.

179. *Turdus aliciae* BAIRD.

Gray-checked Thrush.

A tolerably common spring and fall transient, yet owing to the character of the localities frequented, and to its shy, retiring habits, is somewhat liable to be overlooked. It has been noted from May 8 to May 14, and from September 18 to October 2; principally in thickets along streams and the borders of woods, and in the timbered ravines adjoining the lowlands.

The stomach of a specimen shot on September 18, 1892, was filled with berries of the poke-weed (*Phytolacca decandra*), on which the bird was feeding when killed.

180. *Turdus ustulatus swainsonii* (CAB.).**Olive-backed Thrush.**

A tolerably common transient visitor from October 3 to 12, but not observed in the spring. It has been noted principally in timbered ravines, and on the wooded banks bordering the bottom-lands.

181. *Turdus aonalaschkæ pallasii* (CAB.).**Hermit Thrush.**

The most common species of the four transient Thrushes. It has been observed in spring from April 9 to May 11, and in fall from October 15 to October 20. It frequents chiefly the forests' areas of the bottoms, and the woods along the upland streams, though is occasionally seen on the outskirts of the towns. It is apparently not in song during its migration through this region.

GENUS *MERULA* LEACH.**182. *Merula migratoria* (LINN.).****American Robin.**

An abundant summer resident. A few sometimes remain over winter. Its arrivals in spring have been from February 5 to 27, according to the severity of the season, but it is usually present before the middle of this month. It generally disappears by the first of November, and occasionally even earlier.

Nest-building is begun commonly about the first of April, and young with short tails, but able to fly, may be seen by the fifteenth of the following month. The breeding season appears to be at its height during May and the latter part of April, and to be practically ended by the first of July, since no occupied nests have been found later than June 26.

This species constructs its nest in all sorts of situations: not infrequently on a fence-post close to the railroad track, or even on the cross-bar of a telegraph pole. A nest discovered April 20, 1890, was on the top of one of the posts supporting an old shed; another, found on April 13 of the same year, was placed on the projecting end of one of the horizontal beams of a carriage bridge over a small stream. A nest was observed May 4, 1890, on one of the iron girders of a railroad bridge near Wooster. It was scarcely three feet below the rails, and directly beneath one of them. When found it contained three eggs, which in due time were hatched, and the young probably (though this was not positively determined) reared in safety. A nest noted May 18, 1890, was situated on the bank of a creek, in a small bush which overhung the water. It was built upon another Robin's nest, evidently an old one, for the new material of the superstructure was in marked contrast to the weatherbeaten appearance of the foundation.

Of sixty-two nests examined, thirty-seven were less than ten feet from the ground; twelve were between ten and fifteen feet; eight between fifteen and twenty; three between twenty and twenty-five; and one each at altitudes of twenty-five and thirty feet.

Robins in a condition of partial albinism seem not to be very uncommon. One in the writer's collection was taken March 9, 1892, and another was secured on March 27 of the same year; but these have, however, only a small proportion of white feathers.

The Robin has been ascertained to feed upon the fruits of the following plants and trees, the three first mentioned, at the season of their abundance, entering regularly and largely into its diet: elder (*Sambucus Canadensis*), poke-weed (*Phytolacca dacandra*), dogwood (*Cornus florida*), laurel oak (*Quercus imbricaria*), basswood (*Tilia Americana*).

During the course of the writer's investigations in the County, two Robin roosts were discovered. One of these was in a thick, bushy swamp along the Pittsburg, Fort Wayne and Chicago R. R. track, about two miles southwest of Wooster; but was seldom observed to be occupied. The other roost was situated in the northern portion of the city of Wooster, where, along parts of two streets, the birds made use of the thick foliated maple trees. This roost, like the first, was the rendezvous for a comparatively small number of birds, which resorted thither more or less irregularly from 1891 to 1893, inclusive. It was first discovered in 1891, when on April 12, between six and seven o'clock in the afternoon, 494 birds were counted as they flew in from the southern part of the city. This was, of course, the census from only one direction, circumstances preventing more extended observations. Although no birds were seen to enter the roost again that year, some may very probably have been present. During the next year the Robins were noted at the roost on but a single occasion,—a few being seen July 17.

In 1893, however, the roost was used with apparently considerable regularity, both in the spring and after the close of the breeding season. Although similar gatherings in both summer and winter are, of course, well known to take place, the fact that the Robin resorts to roosts in the spring, before, and even for a while during the breeding season, is alluded to by neither Mr. Brewster,¹ Mr. Torrey² nor Mr. Widmann.³ Mr. Brewster states that none were seen at the roosts earlier than June 11, and is inclined to consider this exceptionally early. Small numbers of birds were, however, seen to enter this Wooster roost every few days from March 27 to May 15, after which date none were noticed until August 8. From August 8 to August 31, the flight was almost nightly observed, the number recorded gradually increasing, reaching its maximum towards the latter part of the month.

Throughout this period the largest number seen on any one evening was 265, but since the count was made from a single point, this number probably represents only a fraction of the total number of birds which daily resorted to the roost. None were noted on any occasion earlier than 6.36 P. M., and by 7.15 all had passed; the bulk being seen usually between 6.50 and 7.05 P. M. The time utilized by the birds was thus between sunset and dusk. In passing over the city most of the earlier comers flew quite high, only descending as the roost was neared; but a little later the flight was lowered so as barely to clear the house-tops; while the last flew close to the ground, passing chiefly through openings between the buildings.

The Robin commences to sing within a few days after its arrival, and continues in full song until late in June. Through July it sings regularly, though less frequently, and subsequently is heard more or less intermittently until towards the last of August. Then it is usually silent till late in September, when for a brief period its song is again resumed. The latest record of song is October 19 (1892). The following data indicate the time at which on several days the first note of the Robin was heard:—

May 8 (1891) at 4.03 A. M.;
 May 22 (1890) at 3.55 A. M.;
 May 27 (1890) at 3.25 A. M.;
 July 28 (1892) at 4.00 A. M.

¹ Auk VI., 1890, pp. 360 et seq.

² The Footpath Way, 1893, pp. 153 et seq.

³ Auk XII, 1895, pp. 1 et seq.

GENUS **SIALIA** SWAINSON.**183. *Sialia sialis* (LINN.).****Bluebird.**

Abundant; usually a permanent resident, though less numerous in winter, but if this season be especially severe, is probably altogether absent. Those individuals of the species which migrate south for the winter apparently return in February.

The breeding season extends from the middle of April to about the first of August, two or three broods being reared. A nest found May 25, 1890, in a small decaying stump, contained well fledged young and one addled egg. The entrance to this nest was only one foot above the ground.

The Bluebird sings regularly from about the middle of February until late in June, but much less frequently thereafter. It may at intervals, however, be heard till October, the latest recorded date of song being October 21 (1892).

HYPOTHETICAL LIST.

The following list is intended to comprise such birds as seem of probable occurrence in the region at present under consideration. Future investigations will doubtless establish Wayne County records for many of the species thus catalogued.

ORDER PYGOPODES.

FAMILY PODICIPIDÆ.

1. *Colymbus holboëllii* (REINH.).

Holboëll's Grebe.

Given by Wheaton, in his Report on the Birds of Ohio,¹ as a rare transient. It has been taken both on Lake Erie and on the waters of the interior of the State.

FAMILY URINATORIDÆ.

2. *Urinator lumme* (GUNN.).

Red-throated Loon.

A rare transient in Ohio.

ORDER LONGIPENNES.

FAMILY LARIDÆ.

3. *Larus delawarensis* ORD.

Ring-billed Gull.

In Ohio, especially on Lake Erie, a tolerably common species during the migrations.

¹ Geological Survey of Ohio IV, 1882, p. 566.

4. *Sterna forsteri* NUTT.**Forster's Tern.**

A transient visitor; of more or less frequent, though irregular, occurrence in the interior of the State.

5. *Sterna hirundo* LINN.**Common Tern.**

Common as a transient; apparently not a regular summer resident in the State, except on the Lake shore.

6. *Hydrochelidon nigra surinamensis* (GMEL.).**Black Tern.**

Wheaton records this species as a common summer resident in northern Ohio, and as a common transient elsewhere in the State.

ORDER STEGANOPODES.**FAMILY PHALACROCORACIDÆ.****7. *Phalacrocorax dilophus* (SWAINS.).****Double-crested Cormorant.**

A tolerably common transient in Ohio.

ORDER ANSERES.**FAMILY ANATIDÆ.****8. *Anas strepera* LINN.****Gadwall.**

A tolerably common transient visitor; probably also a summer resident in at least portions of the State.

9. *Aythya marila nearctica* STEJN.**American Scaup Duck.**

Transient visitor in Ohio; apparently not abundant.

10. *Aythya collaris* (DONOV.).**Ring-necked Duck.**

According to Wheaton, this species occurs abundantly as a transient in the State.

11. *Oidemia americana* SW. & RICH.**American Scoter.**

Occurs as an occasional winter visitor in the State.

12. *Oidemia deglandi* BONAP.**White-winged Scoter.**

This species has been taken both on Lake Erie and in the interior of the State.

13. *Chen hyperborea* (PALL.).**Lesser Snow Goose.**

Probably occurs, at least sparingly, with the next species.

14. *Chen hyperborea nivalis* (FORST.).**Greater Snow Goose.**

Mentioned by Wheaton as a rather irregular transient in Ohio, apparently more common on the Lake shore than elsewhere in the State.

15. *Anser albifrons gambeli* (HARTL.).**American White-fronted Goose.**

A transient visitor; occurring more or less frequently throughout the State.

16. *Branta canadensis hutchinsii* (RICH.).**Hutchins' Goose.**

Wheaton gives it as a rare transient; but a critical examination of the wild Geese killed in Ohio may possibly determine this subspecies to be of more frequent appearance than it has heretofore been considered.

17. *Olor buccinator* (RICH.).**Trumpeter Swan.**

Has been several times taken in Ohio; and some of the Swans which have from time to time been seen in Wayne County may have been of this species.

ORDER HERODIONES.

FAMILY ARDEIDÆ.

18. *Ardea candidissima* GMEL.

Snowy Heron.

Although not of common occurrence, specimens have been taken in northern Ohio.

19. *Nycticorax nycticorax nævius* (BODD.).

Black-crowned Night Heron.

Wheaton mentions this species as probably breeding in suitable places throughout the State.

ORDER PALUDICOLÆ.

FAMILY GRUIDÆ.

20. *Grus americana* (LINN.).

Whooping Crane.

A rare and probably an irregular transient in the State.

21. *Grus canadensis* (LINN.).

Little Brown Crane.

A rare transient visitor in Ohio.

FAMILY RALLIDÆ.

22. *Porzana noveboracensis* (GMEL.).

Yellow Rail.

A transient visitor; possibly a summer resident, though apparently not very common in the State.

ORDER LIMICOLÆ.

FAMILY PHALAROPODIDÆ.

23. *Phalaropus lobatus* (LINN.).

Northern Phalarope.

A transient visitor in Ohio; but seems to be not very common.

24. *Steganopus tricolor* VIEILL.¹

Wilson's Phalarope.

Like the last, a somewhat uncommon and irregular transient on the streams and lakes of the State. Wheaton mentions its possible summer residence in northwestern Ohio.

FAMILY RECURVIROSTRIDÆ.

25. *Himantopus mexicanus* (MÜLL.).

Black-necked Stilt.

This is a rare species in Ohio, but specimens have been several times taken in the northern part of the State.

FAMILY SCOLOPACIDÆ.

26. *Macrorhamphus griseus* (GMEL.).

Dowitcher.

A rare transient in the State.

27. *Tringa canutus* LINN.

Knot.

Transient visitor; perhaps not uncommon on the larger bodies of water.

28. *Tringa fuscicollis* VIEILL.

White-rumped Sandpiper.

Transient visitor; apparently more frequently found on the Lake shore than elsewhere in the State.

¹ *Phalaropus tricolor* of the A. O. U. Check-List; but the claims of *Steganopus* to full generic rank seem to be perfectly valid. (Cf ELLIOT, North American Shore Birds, 1895, p. 222.)

29. *Tringa bairdii* (COUES).**Baird's Sandpiper.**

A spring and fall transient; probably not rare in suitable localities in at least portions of the State.

30. *Tringa minutilla* VIEILL.**Least Sandpiper.**

A common transient, probably throughout the State. It is possibly a rare summer resident on Lake Erie.

31. *Tringa alpina pacifica* (COUES).**Red-backed Sandpiper.**

A common transient; perhaps more numerous on Lake Erie than in the interior of the State.

32. *Ereunetes pusillus* (LINN.).**Semipalmated Sandpiper.**

An abundant transient visitor in Ohio.

33. *Calidris arenaria* (LINN.).**Sanderling.**

A common transient visitor in the State, though apparently most numerous on the shore of Lake Erie.

34. *Limosa fedoa* (LINN.).**Marbled Godwit.**

A transient visitor; probably not uncommon in some portions of the State.

35. *Limosa hæmastica* (LINN.).**Hudsonian Godwit.**

Of less frequent occurrence in Ohio than the preceding species, but has been taken on Lake Erie and also in the interior.

36. *Symphemia semipalmata* (GMEL.).**Willet.**

A transient visitor; possibly a summer resident on the shore of Lake Erie. It appears to be not very common throughout the greater portion of Ohio.

37. *Numenius longirostris* WILS.**Long-billed Curlew.**

A transient visitor; in northwestern Ohio possibly an occasional summer resident.

38. *Numenius hudsonicus* LATH.**Hudsonian Curlew.**

A transient visitor; rare in the State.

39. *Numenius borealis* (FORST.).**Eskimo Curlew.**

A transient visitor; seemingly of rare occurrence in Ohio.

FAMILY CHARADRIIDÆ.**40. *Charadrius squatarola* (LINN.).****Black-bellied Plover.**

Apparently not a common species, but occurring sometimes in the interior of the State.

41. *Charadrius dominicus* MÜLL.**American Golden Plover.**

An abundant transient in Ohio, being found during migration in large numbers in suitable localities.

42. *Ægialitis semipalmata* BONAP.**Semipalmated Plover.**

Common transient visitor; according to Wheaton, most numerous in the fall.

43. *Ægialitis meloda circumcincta* RIDGW.**Belted Piping Plover.**

A summer resident probably only on Lake Erie; a tolerably common transient elsewhere in the State. This, the Mississippi Valley form, seems more likely to occur here than *Ægialitis meloda* from the Atlantic Coast; but no Ohio specimens have been examined.

FAMILY APHRIZIDÆ.

44. *Arenaria interpres* (LINN.).

Turnstone.

A transient visitor; apparently not common in the State.

ORDER RAPTORES.

FAMILY FALCONIDÆ.

45. *Accipiter atricapillus* (WILS.).

American Goshawk.

Of occasional occurrence as a winter visitor in Ohio.

FAMILY BUBONIDÆ.

46. *Surnia ulula caparoch* (MÜLL.).

American Hawk Owl.

A rare winter visitor in the State.

ORDER PASSERES.

FAMILY TYRANNIDÆ.

47. *Contopus borealis* (SWAINS.).

Olive-sided Flycatcher.

A rare transient visitor in Ohio.

FAMILY CORVIDÆ.

48. *Corvus corax principalis* RIDGW.

Northern Raven.

A rare winter visitor in Ohio, chiefly in the northern portion. Although no Ohio specimens of the Raven have been accessible, it seems probable that the form occurring in the State is as above given.

FAMILY FRINGILLIDÆ.

49. *Coccothraustes vespertinus* (COOP.).

Evening Grosbeak.

Although there appear to be but five published records of the occurrence of this species in Ohio, it is, during a winter favorable to its wanderings, liable to be found in almost any part of the northern half of the State.

50. *Pinicola enucleator canadensis* (CAB.).

American Pine Grosbeak.

An irregular winter visitor, chiefly to northern Ohio. The American form, as here distinguished, though not admitted to the A. O. U. Check-List, is recognized by Mr. Ridgway, and is apparently tenable as a subspecies.

51. *Loxia curvirostra minor* (BREHM).

American Crossbill.

An irregular winter visitor, though sometimes numerous even in the southern part of the State.

52. *Loxia leucoptera* GMEL.

White-winged Crossbill.

Winter visitor; in Ohio, of much less frequent occurrence than the preceding species.

53. *Spinus pinus* (WILS.).

Pine Siskin.

Wheaton mentions this species as an abundant winter visitor, and as possibly breeding in northern Ohio.

54. *Calcarius lapponicus* (LINN.).

Lapland Longspur.

A common and moderately regular winter visitor in at least the northern half of the State.

55. *Ammodramus henslowii* (AUD.).

Henslow's Sparrow.

Recorded by Mr. Lynds Jones¹ as a summer resident at Oberlin, Ohio, where it "was found to be not uncommon during the summer of 1894". Aside from the statement of Audubon², this seems to be the only reliable record of the occurrence of the species in the State. Its appearance in other suitable localities may, however, with reasonable confidence be anticipated.

¹ Auk XII, 1895, p. 241; Bulletin of Wilson Ornithological Chapter, No. 6, January 30, 1896, p. 2.

² Birds of America III, 1841, p. 76.

56. Chondestes grammacus (SAY).**Lark Sparrow.**

Rare summer resident in northern Ohio; apparently more common towards the middle of the State.

57. Melospiza lincolnii (AUD.).**Lincoln's Sparrow.**

A tolerably common transient visitor in Ohio.

FAMILY TANAGRIDÆ.**58. Piranga rubra (LINN.).****Summer Tanager.**

A common summer resident in the southern part of the State, but apparently rare in northern Ohio.

FAMILY HIRUNDINIDÆ.**59. Clivicola riparia (LINN.).****Bank Swallow.**

Summer resident in some parts of Ohio, but appears to be only transient in others.

FAMILY AMPELIDÆ.**60. Ampelis garrulus LINN.****Bohemian Waxwing.**

A winter visitor to northern Ohio.

FAMILY VIREONIDÆ.**61. Vireo philadelphicus (CASS.).****Philadelphia Vireo.**

A transient visitor; probably not rare in the State.

62. Vireo solitarius (WILS.).**Blue-headed Vireo.**

A transient visitor; apparently not breeding in Ohio.

63. *Vireo noveboracensis* (GMEL.).**White-eyed Vireo.**

A summer resident in Ohio; probably more common in the southern portion of the State.

FAMILY MNIOTILTIDÆ.

64. *Helminthus vermivorus* (GMEL.).**Worm-eating Warbler.**

A summer resident in the more southern parts of the State. It probably occurs also in northern Ohio.

65. *Helminthophila chrysoptera* (LINN.).**Golden-winged Warbler.**

A summer resident; apparently not common in Ohio.

66. *Helminthophila rubricapilla* (WILS.).¹**Nashville Warbler.**

A common transient visitor in at least portions of the State.

67. *Helminthophila celata* (SAY).**Orange-crowned Warbler.**

An occasional transient visitor in the State.

68. *Compsothlypis americana usneæ* BREWSTER.**Northern Parula Warbler.**

A transient visitor throughout much of the State, though probably breeding in suitable localities. This species has been on one or two occasions partially identified in Wayne County, but no specimens have been secured.

69. *Dendroica dominica albilora* RIDGW.**Sycamore Warbler.**

A summer resident, at least formerly, even in northern Ohio, though probably local in its distribution.

¹ Cf. FAXON, Auk XIII, 1896, p. 263.

70. *Dendroica kirtlandi* BAIRD.**Kirtland's Warbler.**

The possibility that Kirtland's Warbler may yet be taken in Wayne County is suggested by the proximity of the type locality of the species, together with the probability that the valleys of the tributaries of the Muskingum River form the highway of migration for many of the birds which breed about Cleveland, or which occur there during the spring season.

71. *Dendroica vigorsii* (AUD.).**Pine Warbler.**

A rare transient visitor in Ohio.

72. *Dendroica palmarum* (GMEL.).**Palm Warbler.**

A common transient visitor, though perhaps somewhat local in the State.

73. *Dendroica discolor* (VIEILL.).**Prairie Warbler.**

Given as a summer resident in northern Ohio, by Wheaton, who says that it is rare. A Warbler seen by the writer in May, 1891, was probably of this species, but the bird was unfortunately not secured.

74. *Seiurus noveboracensis* (GMEL.).**Water Thrush.**

A tolerably common transient visitor in the State.

75. *Geothlypis formosa* (WILS.).**Kentucky Warbler.**

A summer resident in Ohio, but rare and local. On April 23, 1893, an individual, undoubtedly of this species, was seen singing in the woods on the bottom-lands of the Killbuck, in Wayne County. As, however, the bird was not obtained, the circumstance is mentioned merely as a hypothetical record.

76. *Sylvania mitrata* (GMEL.).**Hooded Warbler.**

A rare summer resident in Ohio.

77. *Sylvania canadensis* (LINN.).**Canadian Warbler.**

A transient visitor; not uncommon in the State.

FAMILY MOTACILLIDÆ.

78. *Anthus pensilvanicus* (LATH.).

American Pipit.

A common transient visitor in Ohio.

FAMILY TROGLODYTIDÆ.

79. *Mimus polyglottos* (LINN.).

Mockingbird.

A summer resident; rare even in the southern part of the State, but has been reported breeding near Lake Erie.

80. *Thryothorus bewickii* (AUD.).

Bewick's Wren.

A summer resident in southern Ohio.

81. *Cistothorus stellaris* (LICHT.).

Short-billed Marsh Wren.

A summer resident in the State, but apparently of local distribution. A careful investigation of the numerous swamps of Wayne County would possibly reveal the presence of this species.

FAMILY PARIDÆ.

82. *Parus carolinensis* AUD.

Carolina Chickadee.

A regular summer resident in Ohio, at least from the latitude of Columbus southward.

NOTE.

By reason of an unfortunate misunderstanding, the proof-sheets of pages 243-270 were not submitted to the author for revision. This oversight has resulted in the admission of a number of unpleasant inaccuracies of punctuation, particularly in the generic and subgeneric names; and furthermore has rendered necessary the insertion of the following list of

ERRATA.

- Page 245, 2nd line from bottom, for occasional read occasional.
Page 247, 3d line from top, for *Egialites* read *Egialitis*.
Page 247, 13th line from top, *Syrnum* read *Syrnium*.
Page 248, 13th line from bottom, for *valutina* read *velutina*.
Page 249, 14th line from top, for *saccharum* read *Saccharum*.
Page 249, 21st line from top, for prevalent read prevalent.
Page 250, 8th line from bottom, for Chelidon read Chelidon.
Page 250, 9th line from bottom, for Progue read Progne.
Page 250, 16th line from bottom, for Spicella read Spizella.
Page 251, 1st line from top for Deudroica read Dendroica.
Page 251, 4th line from top, for pennsylvanica read pensylvanica.
Page 251, 27th line from top, for asia read asio.
Page 252, 21st line from top, for pennsylvanica read pensylvanica.
Page 252, 5th line from bottom, for Eris matur read Eris matura.
Page 252, 9th line from bottom, for valisneria read vallisneria.
Page 255, 6th line from top, for (LINN.) read LINN.
Page 255, 18th line from top, for CEPHI read CEPPHI.
Page 255, 1st line from bottom, for park read part.
Page 256, 5th line from top, for (COUES) read COUES.
Page 256, 7th line from top, for Appearing read Appears.
Page 256, 8th line from bottom, for (GMEL.) read GMEL.
Page 256, footnote, for survey read Survey.
Page 256, footnote, for p. 42 read p. 542.
Page 257, 2nd line from bottom, for hough read though.
Page 258, 4th line from top, for (LINN.) read LINN.
Page 258, 5th line from bottom, for (GMEL.) read GMEL.
Page 258, 10th line from bottom, for Badpate read Baldpate.
Page 258, 11th line from bottom, for (GMEL.) read GMEL.
Page 258, 16 h line from bottom, for (GMEL.) read GMEL.
Page 259, 2nd line from top, for (LINN.) read LINN.
Page 261, footnote, for survey read Survey.
Page 263, 2nd line from top, for LINN. read LINNÆUS.
Page 263, 7th line from bottom, for (LINN.) read LINN.
Page 264, 5th line from top, for (GMEL.) read GMEL.
Page 264, 14th line from top, for (LINN) read LINN.
Page 264, 22nd line from top, for approa h read approach.
Page 264, footnote 4, for i dicated read indicate.
Page 265, 6th line from top, for (AUD.) read AUD.
Page 265, 8th line from bottom, for (LINN) read LINN.
Page 267, 3rd line from top, for (GMEL.) read GMEL.
Page 267, 21st line from top, for were read was.
Page 268, 3rd line from top, for (VIEILL) read VIEILL.
Page 268, 12th line from bottom, for occuring read occurring.
Page 269, 14th line from top, for fieldst read fields.
Page 269, 4th line from bottom, for shriveled read shrivelled.
Page 270, 4th line from bottom, for preferring read preferring.
Page 271, 10th line from top, for (LINN.) read LINN.
Page 279, 9th line from top, for (LINN.) read LINN.
Page 279, 18th line from top, for (LINN.) read LINN.
Page 280, 4th line from top, for (BONAP.) read BONAP.

J. S. Palmer

Oct. 31, 1896.

BULLETIN

OF THE

Ohio Agricultural Experiment Station.

TECHNICAL SERIES.—VOLUME I, NUMBER 4.

Wooster, Ohio, July, 1896.

A PRELIMINARY LIST

OF THE

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OF

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