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OBSERVATIONS ON THE BIRDS OF WEST VIRGINIA

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EXAMINATION of specimens of eastern birds in recent years has brought constantly to attention the few specimens available from the State of West Virginia, not only in the National Museum collections but elsewhere. Much of what has been known of ranges in the group concerned in this area has been based on assumption, or on material obtained somewhat casually from scattered points. In the spring of 1936 it was decided to take up a definite program of field work in the State, made possible through funds provided in part by the National Museum and in part by the Smithsonian Institution. The work was planned to include collection both of birds and of small mammals. W. M. Perrygo was assigned to this work with Carleton Lingeback as assistant, while Dr. Remington Kellogg, assistant curator of mammals, accompanied the party for the first two weeks in the field to give instruction in the trapping of small mammals and in the general technique of other work.

The party left Washington on April 16, 1936, and continued work until July 10, when through the advance of the season birds were in poor plumage. Work began in the fall on September 16 and continued until November 7.

The accompanying account gives in detail the birds collected, with pertinent data concerning them. In it I have included additional information from my own observations made in West Virginia at various times during the past five years, as well as records from the few specimens previously in the National Museum that have come from scattered sources, including the grouse taken by E. A. Preble, who visited the Cranberry Glades in 1909, and specimens obtained by

A. H. Howell, who collected in Raleigh County in July 1909, for the Biological Survey. No attempt is made to give a complete list of the birds of the State, as others have that in hand. The intention of this paper is to make available the data we have for the use of those interested in the ornithology of this area either in compiling the State list or in other ways. The work has led to the description of a new race of song sparrow with the type locality in the Cranberry Glades, to several new records for West Virginia, and to much data on distribution within the limits concerned.

An account of the mammals collected has been prepared by Dr. Kellogg.¹

The Conservation Commission of West Virginia has given most courteous assistance in these investigations in the granting of the necessary scientific permits and in other ways. We are especially indebted to H. W. Shawhan, the Commission's director of conservation, and to G. H. Overholt, executive secretary. Permission for work in the Cranberry Glades was granted by the Forest Service of the U. S. Department of Agriculture, through B. A. Eger, then district ranger of the Monongahela National Forest at Richwood, who made a cabin available for the use of the party. William L. Maule, district ranger, U. S. Forest Service, Durbin, W. Va., kindly arranged for the use of an excellent cabin on Middle Mountain during work in that area.

Finally we have to express our sincere appreciation of the friendly interest of many citizens and landowners throughout the State who aided the party by giving advice as to good localities and above all by freely granting permission to enter on their lands.

ITINERARY

The first collections of birds were made on April 18, 1936, in the mountainous country 2 miles east of White Sulphur Springs. On April 19 the party obtained quarters at Wilson's Farm Tourist Camp, near Barboursville, 4 miles east of Huntington, and remained there until May 4. From this base collections were made in the drainage of the Guyandot River and Twelve Pole Creek, the area worked extending to the region north of Logan and to points near Dunlow, Mill Creek, Tyler Creek, and Fourteen.

A base was established next at Uncle Tom's Cabin Camp near Gilboa, Nicholas County, where the party remained until May 17. This was a hilly region of farmland and forest. Localities at which collections were made included Pine Creek near Enon, Zela, Summersville, an open region near Muddlety, and the Gauley River near Persinger. I joined the party here on May 8, and on May 9 we made a reconnaissance into the Cranberry Glades.

¹ Proc. U. S. Nat. Mus., vol. 84, no. 3022.

On May 18 the party moved to Summersville, working that day near Drennen, and on May 19 they shifted quarters to Grantsville. From here collections were made along the Little Kanawha River, and in the vicinity of Big Bend, Freed, Big Springs, Smithville, MacFarlan, Walker, Arnoldsburg, Rocksedale, Mount Zion, and White Pine. The party moved to Philippi on May 27, when, through the kind permission of W. M. Bolton, they established camp on a farm 5 miles east of town in a rolling, upland country of open fields and hardwood forests, cut by the valleys of small streams. Collections here were made mainly near Sugar Creek and Bills Creek. On June 6 camp was broken, a trip was made to Moatsville, and the party continued to Richwood.

On June 8 work began in the Cranberry Glades area, to continue until June 20. A cabin on the south fork of the Cranberry River furnished comfortable quarters from which the forests and open lands of the Glades were easily accessible. On June 9 birds were collected on Kennison Mountain to 4,000 feet elevation and on June 20 on Black Mountain to 4,600 feet.

Work in the mountain area was continued on Cheat Mountain from a camp established at Cheat Bridge on June 23, on land belonging to Mr. Cromer. The weather here was cold and rainy. Collections were made up to 4,000 feet in forests of hardwood interspersed with hemlock and occasional stands of spruce, the area covered being mainly 3 to 5 miles northwest of camp and extending along the higher ridges. On June 27 the party moved to a ranger cabin on Middle Mountain, 12 miles northeast of Durbin. With its extensive forests this was one of the most interesting regions examined. Blister Swamp, The Sinks, The Big Burn, and Yokum Knob were visited successively, work terminating on July 5. The following day the party moved to Harman, where they made the final collections of the summer at Red Creek on Rich Mountain, at Flanagans Hill, and in Canaan Valley near Elk in Tucker County. The summer trip terminated here on July 10.

On September 17 work began from a camp on the farm of M. Bennett located under the summit of Spruce Knob, the highest mountain in the State. In spite of cold rainy weather, collections were made here along the ridge of the mountain, both in the forests of the slopes and over the stony summit, with its open pastures and dense stands of low bushes. From September 25 to 27 Perrygo was again at Cheat Bridge for further work on Cheat Mountain. On September 28 he worked the slopes of Smoke Camp Mountain east of Thornwood. On October 1 a broad-winged hawk was taken at Richwood, and on October 2 the men crossed through the Cranberry Glades to a camp on Williams River over a newly constructed road. Rainy, foggy weather prevailed until they left for Richwood on October 10. Collections were made near Gilboa on October 12.

On October 14 the party moved to Flat Top to collect over the slopes of Flat Top Mountain. The work here extended to Odd and Ghent. On October 22 they moved to Whitesville, from which point they covered Cherry Pond Mountain, the specimens taken being labeled Arnett and Posey. On October 24 they worked near Orgas in Boone County, and on October 25 they moved to Wilson's Farm Camp near Barboursville east of Huntington. From here they collected near Barboursville, Point Pleasant, Ben Lomond, Mercers Bottom, Ashton, and near Huntington, the area covered being principally near the Ohio River. Heavy rains caused some delays here. On November 5 they moved to White Sulphur Springs and collected on Katis Mountain on November 6 and 7. This completed the work of the season.

Family ARDEIDAE

BOTAURUS LENTIGINOSUS (Montagu)

AMERICAN BITTERN

One, evidently a bewildered migrant, was taken 4 miles east of Huntington, April 25, 1937, as it rested in a bush in a yard distant from any body of water.

Family CATHARTIDAE

CORAGYPS ATRATUS ATRATUS (Meyer)

BLACK VULTURE

On May 24, 1936, I saw half a dozen circling with a large flock of turkey vultures near Wardensville. The species is one that seems to have extended its range into the State rather recently, this being the most northern record known to me at this time.

Family ACCIPITRIDAE

ACCIPITER VELOX (Wilson)

SHARP-SHINNED HAWK

An immature female was taken on the summit of Spruce Knob, Pendleton County, at 4,800 feet on September 21, 1936. Others were seen on the two following days. Early in the summer one was observed near Freed on May 21.

According to M. Bennett, whose farm near the summit of Spruce Knob is reputed to be the highest land under cultivation in West Virginia, there is a regular hawk migration over this mountain late in fall. At times the birds have been observed by thousands, among them "booted hawks", which probably are the American roughleg.

BUTEO JAMAICENSIS BOREALIS (Gmelin)

EASTERN RED-TAILED HAWK

Found nesting in small numbers through the mountainous section of the State. Several were recorded near Muddlety on May 14, and one was seen near Philippi on May 28. Two or three pairs were found in the Cranberry Glades, and an adult female was taken here on June 16. In the Middle Mountain area the birds were common and tame, as in this remote section they have until now been little disturbed. A dozen or more pairs were observed here without particular search for them. An adult female was secured on Little Middle Mountain near Yokum Knob, Randolph County, on July 4. The birds nest early in this area as a fully grown immature bird was secured on Middle Mountain in Pocahontas County, 9 miles west of Durbin on June 30. The rectrices in this specimen still have short down adhering at the tip, the only indication of juvenile condition in the plumage. Several were observed on Spruce Knob on September 19, and on Williams River on October 3.

The specific name of the red-tailed hawk is *jamaicensis*, as indicated above.

BUTEO LINEATUS LINEATUS (Gmelin)

NORTHERN RED-SHOULDERED HAWK

A breeding record of interest is that of an adult male secured at the nest and a young bird in down just from the egg secured 3 miles south of Huntington on May 2, 1936.

BUTEO PLATYPTERUS PLATYPTERUS (Vieillot)

BROAD-WINGED HAWK

A female in full adult dress was shot near Richwood on October 1, 1936. This species was observed in addition as follows: Logan, April 22; Fourteen, April 28; Gilboa, May 5; Grantsville, May 20; and Philippi, May 31.

BUTEO LAGOPUS S. JOHANNIS (Gmelin)

AMERICAN ROUGH-LEGGED HAWK

In view of the few records for the State, it is of interest to report two seen on Spruce Knob on September 22.

AQUILA CHRYSÆTOS CANADENSIS (Linnaeus)

GOLDEN EAGLE

This great bird may still nest in West Virginia, as one was seen at The Sinks on Middle Mountain on July 4. Others were recorded on Spruce Knob on September 22 and east of Huntington on October 27.

CIRCUS HUDSONIUS (Linnaeus)

MARSH HAWK

One was seen near Ashton on October 31.

PANDION HALIAETUS CAROLINENSIS (Gmelin)

OSPREY

One was seen near Dunlow on April 22.

Family FALCONIDAE

FALCO PEREGRINUS ANATUM Bonaparte

DUCK HAWK

One was recorded at Kanawha Falls on May 4.

Family TETRAONIDAE

BONASA UMBELLUS TOGATA (Linnaeus)

CANADA RUFFED GROUSE

The ruffed grouse is widely distributed through forested sections of the State particularly in the mountains. Early in the morning of September 30, 1935, I found one in the highway near Cherry Grove, south of Circleville, that had been killed by flying into a car. Others were collected in the Cranberry Glades and on Middle Mountain northeast of Durbin. In the Biological Survey collection there are two taken in the Cranberry Glades on November 24 and 26, 1909, by E. A. Preble. Grouse were observed near White Sulphur Springs, April 18; at Fourteen, April 29; Gilboa, May 5; Cranberry Glades, May 9 and June 10 and 11; Persinger, May 16; Thornwood, July 10 and September 28, 1936, and January 1, 1937; Spruce Knob, September 30, 1935, and September 18 to 23, 1936; Williams River, October 7; Flat Top Mountain near Ghent, October 14; and near McCauley, October 13, 1935, and April 19, 1936.

After careful comparison of a good series of eastern ruffed grouse, I have identified the West Virginia birds as of the subspecies *togata*, though they have been assumed previously to be the typical form *umbellus*. Following is a summary of my understanding of the characters of the two forms under consideration:

Bonasa umbellus umbellus

Dark markings on lower surface much reduced so that the breast appears very light, almost white; under tail-coverts whiter.

The typical form of the ruffed grouse, *Bonasa umbellus umbellus*² is based on Edwards' account of the "Ruffed Heath-cock or Grouse."³

¹ *Tetrao umbellus* Linnaeus, Syst. Nat., ed. 12, vol. 1, 1766, p. 275.

² Gleanings of natural history, 1758, p. 79, pl. 243.

Edwards says that the bird was sent from Pennsylvania by John Bartram to Peter Colinson, which would place the type locality in eastern Pennsylvania. The characters outlined above are taken from skins from southeastern New York (Highland Falls and West Point). A bird from Carlisle, Pa., is similar though somewhat more heavily marked. Others come from Piseco, N. Y., and Glenwood in southeastern Michigan. Birds from near Washington, D. C., and Laurel, Md., are somewhat more heavily barred below but for the present are placed with the typical race.

Bonasa umbellus togata

Markings on lower surface abundant, dark, and broad, the cross bars being predominant in the coloration of this area; under tail-coverts with more brown.

Specimens from Calais, Maine, and Carberry and Rat Portage, Manitoba, are taken as typical of this form. One from Springfield, Mass., also belongs here, as does one from Hunter, in the Catskill Mountains of New York, this bird being somewhat intermediate.

On careful comparison I find that specimens from Johnstown in western Pennsylvania, Virginia, West Virginia, Tennessee, and northern Georgia agree with the northern birds. Though very slightly browner above than the average from the north, in view of the rufescent color phase found so commonly in ruffed grouse I feel that this apparent slight difference is unreliable and of no definite importance. It appears that the subspecies *togata* extends southward through the mountains as far as Georgia.

Peters⁴ attributes birds of the Appalachian region to both *umbellus* and *togata*.

Family PERDICIDAE

COLINUS VIRGINIANUS VIRGINIANUS (Linnaeus)

EASTERN BOBWHITE

An adult male was obtained 3 miles north of Big Bend, Calhoun County, May 21, 1936. There is also a bird about three-fourths grown that I found lying dead in the road near the southern limits of Elkins on September 30, 1935. Others were observed near Gilboa, May 15; near Freed, May 21; and near Grantsville, May 26.

Family PHASIANIDAE

PHASIANUS COLCHICUS Linnaeus

PHEASANT

A female from Mercers Bottom, Mason County, taken on October 30, 1936, has the reddish brown of the hindneck, and the general color of the upper surface paler than in wild-killed specimens of the

⁴ Check-list of birds of the world, vol. 2, 1934, p. 40.

typical ringneck (*Phasianus colchicus torquatus*) of southeastern China. It thus carries a lighter coloration, suggestive of typical *colchicus*.

Family RALLIDAE

PORZANA CAROLINA (Linnaeus)

SORA

Two or three were seen and one was taken in a swampy meadow near Muddlety in Nicholas County, May 11, 1936. It was believed that they were nesting. One was observed on October 14 in a glade near Ghent on Flat Top Mountain.

Family CHARADRIIDAE

OXYECHUS VOCIFERUS VOCIFERUS (Linnaeus)

KILLDEER

A young bird barely able to fly was taken 7 miles east of Philippi on June 4, 1936. One was seen near Moorefield on June 5, 1935.

Family SCOLOPACIDAE

PHILOHELA MINOR (Gmelin)

AMERICAN WOODCOCK

One was recorded in the Cranberry Glades on June 10.

Family COLUMBIDAE

ZENAIIDURA MACROURA CAROLINENSIS (Linnaeus)

EASTERN MOURNING DOVE

Males were collected 5 miles east of Huntington on April 20 and near Ashton, Mason County, on October 31. These birds were far from common in the localities visited. They were noted near Beaver Dam on Middle Mountain in June.

Family CUCULIDAE

COCCYZUS AMERICANUS AMERICANUS (Linnaeus)

YELLOW-BILLED CUCKOO

Two males were secured on Cheat Mountain at an elevation of 3,800 feet on September 25 and 26, one coming from 3 miles west and one from 8 miles northwest of Cheat Bridge.

COCCYZUS ERYTHROPHthalmus (Wilson)

BLACK-BILLED CUCKOO

Specimens were obtained on Pine Creek, near Enon, on May 8; near Muddlety, Nicholas County, May 13; 5 miles east of Philippi, May 30; and in the Cranberry Glades, Pocahontas County, June 15. The last two were certainly on their breeding grounds. One was seen near Persinger on May 16.

Family STRIGIDAE

STRIX VARIA VARIA Barton

NORTHERN BARRED OWL

On June 24 a young bird not quite grown was found on Cheat Mountain, 3 miles west of Cheat Bridge. An adult female was shot on Middle Mountain 12 miles northeast of Durbin on June 29, and a female 9 miles northeast of Durbin on June 30. In the Cranberry Glades in June barred owls were heard calling regularly at night. Those taken show the extent of feather development on the toes characteristic of the northern race.

CRYPTOGLAUX ACADICA ACADICA (Gmelin)

ACADIAN OWL

The first breeding record for this owl in West Virginia was reported by A. B. Brooks⁵ on the basis of an immature bird found June 22, 1932, near Cranestville in Preston County. The locality is in the extreme northern part of the State not far from the western boundary of Garrett County, Md. On June 12, 1936, Perrygo and Lingeback found an Acadian owl resting in a hole in a dead tree in the Cranberry Glades of Pocahontas County, at an elevation of 3,300 feet. The bird was obtained with some difficulty and proved to be an immature female, fully grown and on the wing but in juvenal dress. This is the most southern breeding record for this species in the East.

This particular specimen is decidedly darker above than a series of a dozen in comparable plumage in the National Museum, suggesting that there might be a local race in this area. To examine into this W. E. Clyde Todd has permitted study of the specimen reported by Brooks, which now is mounted in the Children's Museum, in the Carnegie Museum (Catalog no. 111804, prepared by Reinhold L. Fricke). This bird proves to resemble those from elsewhere in color, so that the darker shade of the Cranberry Glades specimen is assumed to be an individual variation.

Family MICROPODIDAE

CHAETURA PELAGICA (Linnaeus)

CHIMNEY SWIFT

Fairly common about houses throughout the area covered. A male was collected on Middle Mountain 12 miles northeast of Durbin on June 27.

⁵ Auk, 1933, p. 361.

Family PICIDAE

COLAPTES AURATUS LUTEUS Bangs

NORTHERN FLICKER

The flicker is universally distributed through the State, six males and six females being included in the collection. Birds taken in the breeding season, except in the northern section, are small and show definite approach to the southern form, *Colaptes auratus auratus*. A female from the south side of the Guyandot River near Huntington taken on May 2 has the wing only 149.8 mm, suggesting the desirability of further material from this area to determine whether breeding birds may not be the southern subspecies. Another from 5 miles east of Huntington, secured on April 21, measures 152.5 mm, but judged from the date it may be a migrant from farther north. Males from near Muddlety, May 14 (wing, 148.5), and Persinger, May 16 (wing, 151.2), are somewhat worn, as is one from the Cranberry Glades, June 18 (wing, 151.2), and one from near Yokum Knob on Middle Mountain, July 4 (wing, 150.7). A male from 7 miles east of Philippi, Barbour County, June 2 (wing, 156) is distinctly large. A series of three females taken near Flat Top, Mercer County, on Flat Top Mountain, October 20, range in wing measurement from 154 to 161 mm and may be migrants from the north. The mountain birds are somewhat worn and so would have shorter wings, but this does not hold in the small specimen from near Huntington. After careful consideration all are identified as of the northern race.

CENTURUS CAROLINUS (Linnaeus)

RED-BELLIED WOODPECKER

This species, only fairly common, was collected in Nicholas County on Pine Creek near Enon, May 8, and at Gilboa, October 12; in Barbour County, 5 miles east of Philippi, May 28; and in Pocahontas County, at an elevation of 3,600 feet on Red Lick Mountain, October 9. An adult male from near Philippi has a suffusion of pink extending across the throat.

MELANERPES ERYTHROCEPHALUS ERYTHROCEPHALUS (Linnaeus)

EASTERN RED-HEADED WOODPECKER

The present species is somewhat erratic in occurrence. Breeding birds were taken near Yokum Knob on Middle Mountain in a locality known as The Sinks on July 4. In fall these birds were abundant on Cherry Pond Mountain, Raleigh County, near Arnett, where two adults and one immature bird were taken October 20, and near Posey in the same county, where three more, including another immature bird, were secured October 23. It seems evident that they were established at these points for the winter. The species was observed

near Drennen on May 18, near Philippi on May 29 and 31, and near Petersburg on January 1, 1937.

On considering the measurements as given by Oberholser⁶ and Brodkorb⁷ for eastern and western groups in this species, I find that the average difference in wing length for the two is approximately 5 percent. In view of this constant difference there seems to be no reason for refusing to accept the western race, which in my opinion should be called *Melanerpes erythrocephalus caurinus* Brodkorb.

SPHYRAPICUS VARIUS (Linnaeus)

YELLOW-BELLIED SAPSUCKER

Specimens were obtained as follows: Five miles east of Huntington, April 20 to 22; Tyler Creek, April 27; Pine Creek, near Enon, May 8; Cranberry Glades, May 9 and June 19; Middle Mountain, 12 miles northeast of Durbin, June 29; Williams River, October 3 and 5; Thornwood, September 28; Cheat Mountain, 8 miles northwest of Cheat Bridge, September 26; Orgas, Boone County, October 24; 3,200 feet elevation on Flat Top Mountain, Mercer County, October 15. One was taken at 4,600 feet on Spruce Knob, September 30, 1935.

The species nests in some numbers in the mountain area.

DRYOBATES VILLOSUS VILLOSUS (Linnaeus)

EASTERN HAIRY WOODPECKER

This widely distributed woodpecker was taken as follows: Katis Mountain, 3,000 feet, near White Sulphur Springs, November 6; Flat Top Mountain, 3,000 and 3,200 feet, near Flat Top, October 15 and 20; Posey, Raleigh County, October 23; 5 miles north of Drennen, Nicholas County, May 18; 12 miles north of Logan, April 22; Fourteen, April 28; Middle Mountain, 11 miles northeast of Durbin, July 2; Rich Mountain, 7 miles south of Harman, July 7; Cranberry Glades, 3,300 to 3,800 feet, June 11 and 19; Little Spruce Mountain, 3,500 feet, above Williams River, October 5; 7 miles east of Philippi, June 2.

Measurements are as follows:

Eight males: Wing, 116.5–125 (120.4); tail, 60–71 (66.4); culmen from base, 27.5–33 (29.7); tarsus, 21.5–24 (23) mm.

Six females: Wing, 115.5–121.5 (117.6); tail, 63–73 (66.5); culmen from base, 24.5–26 (25.1)⁸; tarsus, 19.5–24 (21) mm.

All come within the range of size characteristic of the form *villosus* with no definite approach to the smaller *auduboni* of the south.

⁶ Can. Field-Nat., vol. 33, 1919, p. 48.

⁷ Occ. Pap. Mus. Zool. Univ. Michigan, no. 303, 1935, p. 2.

⁸ Five individuals.

DRYOBATES PUBESCENS MEDIANUS (Swainson)

NORTHERN DOWNY WOODPECKER

Universally distributed throughout the State, including the mountainous section. Recorded as follows: 12 miles north of Logan, April 22; Tyler Creek, April 27; Orgas, Boone County, October 24; Barboursville, Cabell County, October 26 and November 3; Mercers Bottom, Mason County, October 30; Ashton, October 31; 3 miles north of Point Pleasant, October 27; Gilboa, Nicholas County, October 12; West Fork River near Rocksedale, Calhoun County, May 23; 7 miles east of Philippi, June 2; Rich Mountain, 7 miles south of Harman, July 8; 3,950 feet elevation on Smoke Camp Mountain, 3 miles east of Thornwood, September 28; 4,600 to 4,800 feet elevation on Spruce Knob, September 22 and 23; 3,500 feet on Little Spruce Mountain, Williams River, October 5; 3,700 to 3,800 feet, Cranberry Glades, June 9, 19, and 20; Cheat Mountain above Cheat Bridge, June 27; 2,900 feet on Flat Top Mountain, near Flat Top, October 19; 2 miles east of White Sulphur Springs, April 18.

Measurements are as follows:

Males: Wing, 90-97 (94.2); tail, 50-58 (53); culmen from base, 17-20 (17.2); tarsus, 15-18 (16.2) mm.

Females: Wing, 91-99 (93.8); tail, 51-56.5 (54.2); culmen from base, 16-19 (17.1); tarsus, 15.5-18 (16.3) mm.

All come within the size range of *medianus* and are identified as that race. The largest individuals come from the mountain area particularly in the section above Williams River, and the smallest from along the Ohio River, but the differences are relatively slight.

Family TYRANNIDAE

TYRANNUS TYRANNUS (Linnaeus)

EASTERN KINGBIRD

This species is found locally throughout the State, except in heavy forests. Specimens were obtained at Walker, Wirt County, May 22; 5 miles east of Philippi, Barbour County, May 30; near Persinger, Nicholas County, May 16; on Flanagans Hill, near Elk, Tucker County, July 6; and at The Sinks, near Yokum Knob on Middle Mountain, July 4.

MYIARCHUS CRINITUS BOREUS Bangs

NORTHERN CRESTED FLYCATCHER

Birds were obtained in the hills south of the Guyandot River near Huntington, May 2, near Grantsville, Calhoun County, May 20 and 26, and 5 miles east of Philippi, Barbour County, May 29.

SAYORNIS PHOEBE (Latham)

EASTERN PHOEBE

The phoebe, fairly common throughout the State, was obtained at Fourteen near the Guyandot River, April 28; Zela, Nicholas County, May 13; Freed, May 21; Big Springs, May 22; and Mount Zion, May 23. In fall specimens were secured in the Cranberry Glades at 3,600 feet elevation on October 2, near Ghent, at 2,900 feet on Flat Top Mountain, October 14, and near Orgas, Boone County, October 24.

EMPIDONAX VIRESCENS (Vieillot)

ACADIAN FLYCATCHER

This species was secured at Summersville May 13; 5 miles north of Drennen in Nicholas County, May 18; and along the Kanawha River near Grantsville, Calhoun County, May 20.

EMPIDONAX MINIMUS (Baird and Baird)

LEAST FLYCATCHER

A female was taken at 3,300 feet in the Cranberry Glades on June 16. From the date it is assumed to be a breeding bird. The wing measures 61 mm.

MYIOCHANES VIRENS (Linnaeus)

EASTERN WOOD PEWEE

Taken in the Cranberry Glades on June 13 and 7 miles east of Philippi on June 1 and 2.

Family ALAUDIDAE

OTOCORIS ALPESTRIS PRATICOLA Henshaw

PRAIRIE HORNED LARK

This lark nests sparingly in open country at various points. One was observed near Wardensville on April 19, and one near Nettie on May 9, both evidently being on the nesting grounds. Specimens were taken near Walker in Wirt County and in the vicinity of Smithville, Ritchie County, on May 22, and 7 miles east of Philippi on June 4.

Family HIRUNDINIDAE

HIRUNDO RUSTICA ERYTHROGASTER Boddaert

BARN SWALLOW

A widely distributed bird that was taken 4 miles south of Wayne on May 1; near Muddlety, Nicholas County, May 14; and on Middle Mountain, 9 miles northeast of Durbin, June 30.

After consideration of the variations found in the Old World swallows of this type, particularly of *Hirundo rustica gutturalis*, *transitiva*, and *tytleri*, it seems reasonable to include the American

birds under the same specific name. While typical *rustica* of western Europe has a pronounced black band across the breast, this becomes interrupted in part at least of the birds of eastern Asia, some specimens of *tytleri* especially being very closely similar to *erythrogaster*. On this basis the American birds will be called *Hirundo rustica erythrogaster*.

Family CORVIDAE

CYANOCITTA CRISTATA CRISTATA (Linnaeus)

NORTHERN BLUE JAY

In the breeding season blue jays were obtained only at Persinger, Nicholas County, May 16; on Cheat Mountain above Cheat Bridge, June 26; and in Blister Swamp on Middle Mountain, June 29, the last being a young bird recently from the nest. A few were noted in the Cranberry Glades on May 9 and June 10. The species seems rare as a nesting bird in the State, and of irregular occurrence in general.

In the migration season blue jays were commoner. Specimens were taken at 3,000 feet on Katis Mountain near White Sulphur Springs, November 6; at 2,900 feet on Flat Top Mountain near Ghent, October 14; at 2,000 feet on Cherry Pond Mountain near Arnett, October 23; and at 4,800 feet on Spruce Knob, September 21. Blue jays were seen on Williams River on October 5 and at Romney on January 1, 1937.

Three males taken in the breeding season measure as follows: Wing, 133.7 to 136.5; tail, 124.1–132.8; culmen from base, 26.3–27.7; and tarsus, 33.3–36.0 mm. In size these individuals average a little small, in this indicating possible approach to the southern race, but in color they resemble the northern form distinctly. Most of the fall birds are like those taken in the breeding season in size, though two, probably northern migrants, are distinctly larger.

CORVUS CORAX PRINCIPALIS Ridgway

NORTHERN RAVEN

This fine bird is found in small numbers throughout the wilder sections of the mountains in the eastern part of the State. A male in full plumage taken at 4,860 feet on the summit of Spruce Knob, September 18, has the following measurements: Wing, 451; tail, 248; culmen from base, 75.8; height of bill at nostril, 27.9; and tarsus, 66.6 mm. I saw several at this same place on September 30, 1935, and Perrygo reports that during one period of storm with heavy rain, on September 18, he counted 25 resting near one another on rocks on the summit of the mountain. Mr. Bennett, resident here, says that in winter they are sometimes present in numbers.

A female taken 6 miles south of Harman, July 6, 1936, measures as follows: Wing, 405; tail, 223; culmen from base, 63.2; depth of

bill at nostrils, 26.0; and tarsus, 54.7 mm. This specimen is in somewhat worn dress.

In addition to the above I noted one flying low over cultivated fields at Circleville on October 1, 1935, and another on Lost River near McCauley on October 13. Near this same postoffice I observed one on May 24, 1936, above the slopes of Short Mountain. Perrygo recorded them also on Kennison Mountain, bordering the Cranberry Glades, June 9, and on Cheat Mountain above Cheat Bridge June 27. They were seen at The Sinks on Middle Mountain on July 4, and on Rich Mountain south of Harman on July 6 and 7. One was recorded near Thornwood on July 10.

CORVUS BRACHYRHYNCHOS BRACHYRHYNCHOS Brehm

EASTERN CROW

An adult male crow taken with a young bird just from the nest 5 miles west of Grantsville, Calhoun County, has the following measurements: Wing, 315; tail, 187; culmen from base, 50.5; tarsus, 62.8 mm. It is identified as *C. b. brachyrhynchos*, which should nest through the extreme northern and northwestern part of the State.

CORVUS BRACHYRHYNCHOS PAULUS Howell

SOUTHERN CROW

Following are specimens ascribed to the southern race of the crow: Wayne, May 1; Mercers Bottom, November 3; Ben Lomond, October 28; and Cranberry Glades, June 18. A young bird just from the nest was taken in the latter locality on June 15.

From near Wayne a male measures as follows: Wing 286, tail 156, culmen from base 48.8, and tarsus 62.1 mm; and a female: Wing 296, tail 178, culmen from base 45.1, and tarsus, 57.5 mm. A male from Mercers Bottom has the wing 295, tail 176, culmen from base 45.9, and tarsus 55.6 mm, and a female from Ben Lomond measures: Wing 296, tail 178, culmen from base 45.1, and tarsus 57.5 mm. A breeding male from the Cranberry Glades has the wing 306, tail 175, culmen from base 47.5, and tarsus 59.7. All these fall within the size range of shorter wing and smaller bill assigned to *C. b. paulus*. From this material it appears that the southern crow ranges from the central part of the State southward.

Family PARIDAE

PENTHESTES ATRICAPILLUS ATRICAPILLUS (Linnaeus)

BLACK-CAPPED CHICKADEE

This bird was recorded as follows: 2 miles east of White Sulphur Springs, April 18; 3,000 feet elevation on Katis Mountain, above White Sulphur Springs, November 6; 3,800 feet elevation on Cheat Mountain, 3 miles west of Cheat Bridge, June 25 and September 26;

Middle Mountain, 11 miles northeast of Durbin, July 2; Cranberry Glades, May 9 and June 8 and 13; 4,600 feet and 4,800 feet on Spruce Knob, September 30, 1935, and September 21, 1936; and 3,000 feet elevation above Williams River, October 3. I have also a male that I secured on Short Mountain, above Lost River, near McCauley, October 13, 1935, and have record of another seen here May 24, 1936. Judged from the above, this is the chickadee of the mountainous area of the eastern part of the State.

The series of birds from West Virginia when compared with specimens from New York, New England, and Ontario average very slightly darker on the back, with somewhat restricted light edgings on wing and tail feathers. They also appear smaller in bulk, though this difference does not register in the usual measurements of wing, tail, culmen, and tarsus. The northern birds, it is observed, have distinctly longer and fluffier feathers, the apparent greater bulk coming possibly from this source. The differences in color, especially evident in fall plumage, are tenuous and at present do not seem to warrant a subspecific name. It would be interesting to compare a series of records of body weights from the two areas.

PENTHESTES CAROLINENSIS EXTIMUS Todd and Sutton

NORTHERN CAROLINA CHICKADEE

A common bird through the lowland areas of the State. Specimens were secured as follows: 5 miles east of Huntington, April 21; near Dunlow, April 23; near Fourteen, April 28; 2 miles east of Ben Lomond, October 28; near Barboursville, October 26 and November 3; 5 miles east of Philippi, May 29; 2,000 feet elevation on Cherry Pond Mountain, near Arnett, October 23; and 2,900 feet elevation on Flat Top Mountain, near Ghent, October 14.

It is interesting to find this species on the somewhat isolated Flat Top and Cherry Pond Mountains in the southeastern part of the State when the black-capped chickadee ranges in the mountains from White Sulphur Springs northward.

The type locality of the true Carolina chickadee (*Penthestes carolinensis carolinensis*) is Charleston, S. C. Birds from the northern part of the range of the species have been separated recently by Todd and Sutton⁹ as *Penthestes carolinensis extimus*. On comparison of specimens it develops that the northern birds average slightly larger, are lighter in color on the back, and have the sides and flanks brighter buffy brown. The color differences are evident mainly in birds taken in fall and winter. While the distinctions are not very great, they seem sufficient to warrant recognition of a northern race.

⁹ Proc. Biol. Soc. Washington, vol. 49, July 3, 1936, p. 70 (Bethany, W. Va.).

Following are measurements of birds from the West Virginia localities listed above, with an additional male from Bethany presented by Dr. Sutton:

Nine males: Wing, 59.0–64.9 (62.4); tail, 50.2–57.3 (53.7); culmen from base, 8.0–9.0 (8.5); tarsus, 15.0–16.2 (15.7) mm.

Five females: Wing, 58.0–60.0 (59.1); tail, 49.5–53.0 (51.5); culmen from base, 8.3–9.0 (8.7); tarsus, 14.7–16.2 (15.5) mm.

BAEOLOPHUS BICOLOR (Linnaeus)

TUFTED TITMOUSE

This titmouse is distributed abundantly through the State except in the higher elevations of the eastern portion. It was collected at the following localities: 5 miles east of Huntington, April 20; 12 miles north of Logan, April 22; Fourteen, April 27; 3 miles north of Point Pleasant, October 27; Barboursville, November 3; Gilboa, May 5; 2,000 feet elevation on Cherry Pond Mountain, near Arnett, October 23; near Philippi, May 29 and June 4. In addition to this, I observed it on Lost River near McCauley on October 13, 1935, and May 24, 1936, and near Upper Tract and Franklin on January 1, 1937.

Birds from South Carolina (Kershaw County and Port Royal) in winter have the brownish wash on the back slightly duller than those from West Virginia, but the difference is too slight in my opinion to merit distinction of a subspecific name.

Family SITTIDAE

SITTA CAROLINENSIS CAROLINENSIS Latham

WHITE-BREADED NUTHATCH

Recorded as follows: Near Posey, Raleigh County, October 23; near Huntington, April 24 and May 2; 12 miles north of Logan, April 22; Gilboa, May 5 and October 12; West Fork River near Rocksdales, May 23 (including one bird just from the nest); 5 miles east of Philippi, May 5. It was seen at Freed on May 21 and on Spruce Knob on September 17.

Birds in breeding plumage appear somewhat darker than the average in the typical race, thus showing a tendency toward the southern form *atkinsi*. Those in fall plumage appear much lighter gray than *atkinsi*. There is indicated an approach toward the southern form, but the nuthatch of West Virginia is identified definitely as *carolinensis*.

SITTA CANADENSIS Linnaeus

RED-BREADED NUTHATCH

A male secured at 3,000 feet elevation on Katis Mountain near White Sulphur Springs, November 6, was the only one observed.

Hartert¹⁰ has listed *Sitta whiteheadi* Sharpe of the mountains of Corsica and *Sitta villosa* Verreaux of northern and northwestern China and Mongolia as subspecies of the North American red-breasted nuthatch. Hellmayr¹¹ also gives *villosa* as a race of the present species.

The Corsican nuthatch (*Sitta whiteheadi*) is similar to *Sitta canadensis* in general only, as it is decidedly larger, does not have the same under wing pattern and tail markings, and differs in coloration. Its resemblances to *canadensis* are in my opinion only those that place it in the same genus, and its differences are so great as to preclude its being considered specifically the same.

Sitta villosa is similar in size to *canadensis* but here close resemblance ceases, as it does not have the line through the eye distinctly black, the under tail coverts are not tipped with white, there is no definite white marking at the tips of the outer tail feathers, and the under wing pattern is not so strongly developed. In addition, the tone of color is much grayer. Here again the differences are so great, when coupled with distant distribution, as to forbid consideration of *villosa* as a race of *canadensis*.

Family CERTHIIDAE

CERTHIA FAMILIARIS AMERICANA Bonaparte

BROWN CREEPER

Specimens of this migrant form were taken 8 miles east of Huntington on November 1, and at 3,000 feet elevation on Katis Mountain, near White Sulphur Springs, on November 6.

CERTHIA FAMILIARIS NIGRESCENS Burleigh

SOUTHERN CREEPER

A female was taken at 3,800 feet on Cheat Mountain 3 miles west of Cheat Bridge, September 25. A pair was recorded at this point in June. Mr. Burleigh secured one at the Cranberry Glades in Pocahontas County on June 19, 1931.

This recently described race,¹² when compared with the form *americana*, as indicated in the original description, has the anterior part of the body, including the crown, darker, the tail more grayish, and the rump darker.

The coloration of the under surface in tree-creeping birds is so subject to stain that differences in color in this region are unreliable in making comparisons.

¹⁰ Vög. pal. Fauna, vol. 1, June 1905, pp. 335-336.

¹¹ Field Mus. Nat. Hist., zool. ser., vol. 13, pt. 7, 1934, p. 96.

¹² *Certhia familiaris nigrescens* Burleigh, Proc. Biol. Soc. Washington, vol. 43, May 3, 1935, p. 62 (Mount Mitchell, N. C.).

Family TROGLODYTIDAE

TROGLODYTES AËDON BALDWINI Oberholser

OHIO HOUSE WREN

This recently described form ¹³ is darker in color above, with the brown duller and less rufescent, and the sides, flanks, and underparts grayer. Specimens assigned to this race were obtained as follows: 7 miles east of Philippi, Barbour County, June 3; Cave Creek Run, near Moatsville, Barbour County, June 6; Flanagans Hill, Canaan Valley, southern Tucker County, July 6; 3,000 feet elevation above Williams River, October 3; Cranberry Glades (where they were unusually abundant), June 12 to 16; Middle Mountain, 12 miles north-east of Durbin, June 29; and 4,860 feet elevation on Spruce Knob, September 19 and 23. These agree fairly well with a series from the type locality though averaging somewhat grayer above.

According to Oberholser (*l. c.*, p. 90) typical *aëdon* occurs at Charlestown in the extreme eastern part of the State, while possibly the western house wren (*T. a. parkmani*) might occur in the extreme west along the Ohio River as a migrant. Wrens seem to be rare in this western section, as none were recorded here during the work of 1936. The breeding bird of West Virginia, except for the extreme eastern section, seems to be the Ohio house wren.

Oberholser (*l. c.*, p. 87) uses *Sylvia domestica* Wilson (*Amer. Ornith.*, vol. 1, 1808 [after Sept. 1], p. 5, description on p. 129, pl. 8, fig. 3) for the typical race of the house wren, designating Philadelphia as type locality, on his supposition that *Troglodytes aëdon* Vieillot (*Ois. Amér. Sept.*, vol. 2, p. 52) appeared in May 1809. The title page of this volume, however, is dated 1807. Vieillot's work came out in parts, and Oberholser writes "since *Troglodytes aëdon* occurs in the second volume in the text to plate 107 (there are only 124 in the whole work) it could hardly have appeared before 1809." This, however, seems to be assumption without definite fact, and I do not care to abandon the long-current name *aëdon* without certain proof that such action is necessary.

Vieillot's work was projected originally to appear in four volumes but was abandoned at the close of the second, presumably because of the appearance of Wilson's work covering the same ground.

NANNUS HIEMALIS HIEMALIS (Vieillot)

EASTERN WINTER WREN

The only one obtained was secured 2 miles east of Ben Lomond, Mason County, on October 28.

¹³ Ohio Journ. Sci., vol. 34, 1934, p. 90 (Gates Mills, Ohio).

NANNUS HIEMALIS PULLUS Burleigh

SOUTHERN WINTER WREN

A male collected at 4,860 feet on the summit of Spruce Knob on September 19 is the first State record for this recently described subspecies.¹⁴ It appears that this is the resident form of the mountains of West Virginia, at least from Spruce Knob southward. It is distinguished readily from the typical winter wren (*Nannus hiemalis hiemalis*) by darker, less rufescent color above, lighter underparts, smaller bill, and slightly longer wing.

The bird from Spruce Knob has the following measurements: Wing, 48.9; tail, 30.5; culmen from base, 11.6; and tarsus, 18.2 mm.

THRYOMANES BEWICKI BEWICKI (Audubon)

BEWICK'S WREN

A male, and an immature bird just from the nest, come from 7 miles east of Philippi, June 3. This bird, seemingly, is becoming uncommon through much of the northern part of its range in the Eastern States.

THRYOTHORUS LUDOVICIANUS LUDOVICIANUS (Latham)

CAROLINA WREN

Widely distributed but only fairly common during the period of this work. One was taken near Gilboa on October 12, 1936, though none were recorded there in May. Two were secured near Barboursville on November 3, and one was collected and another seen 2 miles south of Philippi on January 2, 1937. Sight records include one near Franklin, October 1, one near Keyser, October 2, and one near McCauley, October 13, in 1935.

CISTOTHORUS STELLARIS (Naumann)

SHORT-BILLED MARSH WREN

A male taken near Point Pleasant on October 27 was the only one seen.

Family MIMIDAE

MIMUS POLYGLOTTOS POLYGLOTTOS (Linnaeus)

EASTERN MOCKINGBIRD

Seen only near Richland on June 23.

DUMETELLA CAROLINENSIS (Linnaeus)

CATBIRD

This common species, distributed through the State, was obtained as follows: Wayne, May 1; hills south of the Guyandot River near Huntington, May 2; Gilboa, May 6 and 8; Freed and Big Bend,

¹⁴ *Nannus hiemalis pullus* Burleigh, Proc. Biol. Soc. Washington, vol. 48, May 3, 1935, p. 61 (Mount Mitchell, N. C.).

Calhoun County, May 21; 7 miles east of Philippi, June 4; 3,500 feet on Williams River, October 7; 4,860 feet on Spruce Knob, September 18; 3,300 feet in the Cranberry Glades, May 8 and June 8 to 20; and Middle Mountain, 12 miles northeast of Durbin, June 29. The bird ranges from the lowlands through the mountains. Catbirds were present in unusual abundance during June along the south fork of the Cranberry River just below the Cranberry Glades.

TOXOSTOMA RUFUM (Linnaeus)

BROWN THRASHER

Fairly common and widely distributed. Specimens were taken as follows: Muddlety, Nicholas County, May 11; 4,700 feet elevation on Spruce Knob, September 19; 3,300 feet elevation in the Cranberry Glades, June 16; Middle Mountain, 11 miles northeast of Durbin, July 1. I saw this species at Richwood on May 9 and near Yellow Spring on May 24. One was observed on Cheat Mountain above Cheat Bridge on September 26.

Family TURDIDAE

TURDUS MIGRATORIUS MIGRATORIUS Linnaeus

EASTERN ROBIN

The robins of West Virginia are an interesting puzzle in allocation since both the eastern and southern forms nest in the State. In general the bird of the eastern part of the State, including the mountainous area, may be called *migratorius*, while the southern form, *achrusterus*, is found in the lower country in the central and western portions.

The typical eastern bird (*T. m. migratorius*) is richer brown below, and darker above, with the crown distinctly blackish, marked sharply from the gray of the hindneck. It is also larger, the wing ranging to more than 130 mm in length.

A male from Charmco, east of Rainelle, at an elevation of 2,200 feet (wing, 130 mm), May 8, in size and color is definitely the typical bird. A male (wing, 131 mm), taken by A. H. Howell at Beckley, Raleigh County, July 17, 1909, also is typical. Two males from Cheat Mountain, 3 and 5 miles west of Cheat Bridge, June 24 and 25 (the latter taken at 4,000 feet), have the rich, dark color of *migratorius*, though a little small (wing, 127 and 128 mm). Two males from 3,300 and 3,700 feet in the Cranberry Glades taken June 12 and 16 are definitely of the *migratorius* type, being dark in color and large (wing, 130.5 and 133 mm). A female taken there at 3,300 feet on June 16 is intermediate, as it agrees in color with *migratorius* but has the dimensions of *achrusterus* (wing, 121.7 mm). Another female, from Middle Mountain, 11 miles northeast of Durbin, July 1, is likewise intermediate, resembling the one just mentioned in size (wing, 121 mm) but is slightly

darker above. A female from Rich Mountain, 7 miles southwest of Harman, July 7, is likewise intermediate, being paler in color and somewhat larger (wing, 125 mm). A male from Red Creek, Tucker County, July 7 (wing, 133.5 mm) is large and dark. Another male from 5 miles north of Moorefield on the South Branch of the Potomac River, June 5, 1935 (wing, 129 mm) is also typical *migratorius*.

From this series it might appear that in the eastern mountainous sections male robins have the typical characters of *migratorius*, while females tend to be intermediate.

Birds in first or juvenal plumage were secured on Cheat Mountain, 3 miles west of Cheat Bridge, on June 24, and at Red Creek, Tucker County, on July 6.

In fall specimens assigned to the typical race were taken as follows: 3,000 feet elevation above Williams River, October 3; 4,860 feet elevation on Spruce Knob, September 22; 3,900 feet on Smoke Camp Mountain, 3 miles east of Thornwood, September 28; 3,000 feet elevation on Flat Top Mountain, near Flat Top, October 15 and 20; and Orgas, Boone County, October 24.

TURDUS MIGRATORIUS ACHRUSTERUS (Batchelder)

SOUTHERN ROBIN

This race is characterized by smaller size and paler color. A female taken 4 miles east of Huntington on April 24, with a wing measurement of 121 mm, is definitely this race and is assumed to be of the breeding form of that area; a male secured at the same place is dark and agrees so well with true *migratorius* that it is identified as that form, with the assumption that it is a bird in migration to other breeding grounds. Birds from Muddlety in Nicholas County, May 11, are definitely *achrusterus*. A female from Walker, Wirt County, May 22, with a wing measurement of 126 mm, verges in color toward true *migratorius*, as does a male from White Pine, Calhoun County, May 25, with a wing of 126 mm. Though intermediate these two seem nearer *achrusterus*. A male taken 7 miles east of Philippi, Barbour County, June 1, with the wing 124 mm, seems to be definitely *achrusterus*. In fall a female was taken at 3,000 feet on Flat Top Mountain near Flat Top, October 20, evidently a migrant.

HYLOCICHLA MUSTELINA (Gmelin)

WOOD THRUSH

A common species observed in woodlands throughout the State. Specimens were collected as follows: 5 miles east of Huntington, April 23; Tyler Creek, April 27; Muddlety, May 11; Persinger, Nicholas County, May 16; Grantsville, May 26; 3,300 feet elevation, Cranberry Glades, June 12; Middle Mountain, 11 to 15 miles northeast of Dublin, July 1, 2, and 3; and Thornwood, September 28.

HYLOCICHLA GUTTATA FAXONI Bangs and Penard

EASTERN HERMIT THRUSH

Common and widely distributed in migration, as indicated by the following specimens: 2 miles east of White Sulphur Springs, April 18; 5 miles east of Huntington, April 20; 12 miles north of Logan, April 22; Zela, May 7; Gilboa, October 12; Orgas, Boone County, October 24; and 3,500 feet on Williams River, October 8. A female was collected at 3,300 feet in the Cranberry Glades on June 11, marking a breeding record at this point.

HYLOCICHLA USTULATA SWAINSONI (Tschudi)

OLIVE-BACKED THRUSH

In migration this widely distributed bird was taken on Pine Creek near Enon on May 8; at 3,800 feet on Cheat Mountain above Cheat Bridge, September 26; at 4,600 feet on Spruce Knob, September 22; and at 3,000 feet on Williams River, Pocahontas County, October 3. A female was taken on Cheat Mountain 3 miles west of Cheat Bridge on June 24, indicating that this thrush breeds in that locality. One was seen in the Cranberry Glades on May 9, but at this date it may have been a migrant individual.

HYLOCICHLA MINIMA ALICIAE (Baird)

GRAY-CHEEKED THRUSH

An immature male was taken at an elevation of 3,500 feet on Williams River in Pocahontas County, October 8. The wing measures 107.5 mm.

HYLOCICHLA FUSCESCENS FUSCESCENS (Stephens)

VEERY

In spring one was taken at Fourteen, April 28. During summer one male was secured on Cheat Mountain, 5 miles northwest of Cheat Bridge, June 26, and another on Middle Mountain 11 miles northeast of Durbin, July 2. These thrushes are fairly common through the mountain area but are shy and difficult to see.

SIALIA SIALIS SIALIS (Linnaeus)

EASTERN BLUEBIRD

Distributed universally through the State. Specimens were taken at the following localities; Ashton, October 31; Barboursville, November 3; Mercers Bottom, November 2; Orgas, October 24; Gilboa, Nicholas County, May 15 and October 12; Grantsville, May 20; Philippi, June 1 and 2; 3,300 feet elevation in the Cranberry Glades, June 16; Middle Mountain, northeast of Durbin, June 30 and July 3 (one fully grown but in juvenal dress); and 3,000 feet elevation on Flat Top Mountain, near Flat Top, October 20.

Family SYLVIIDAE

POLIOPTILA CAERULEA CAERULEA (Linnaeus)

BLUE-GRAY GNATCATCHER

Specimens were secured as follows: 5 miles east of Huntington, April 20; 12 miles north of Logan, April 22; Fourteen, April 29; Tyler Creek, April 27; Grantsville, May 20. Apparently this bird is common in the hilly regions of the western part of the State. Details of its distribution will be worked out slowly since it is so small that when leaves are fully grown in summer it is seen in the trees only with difficulty.

REGULUS SATRAPA SATRAPA Lichtenstein

EASTERN GOLDEN-CROWNED KINGLET

The only specimens taken were secured near White Sulphur Springs. Two were collected 2 miles east on April 18, and two others at 3,000 feet elevation on Katis Mountain on November 6. I saw others near Cheat Bridge on October 1, and one near McCauley on October 13, 1935. One was seen at high altitude in the Cranberry Glades on June 20.

CORTHYLIO CALENDULA CALENDULA (Linnaeus)

EASTERN RUBY-CROWNED KINGLET

Distributed in migration throughout the State and obtained as follows: White Sulphur Springs, April 18 and November 6; 5 miles east of Huntington, April 20; Dunlow, April 23; Mill Creek, 9 miles east of Huntington, April 25; 3,000 feet elevation on Williams River, October 3; 4,700 feet elevation on Spruce Knob, September 24; 2,900 feet elevation on Flat Top Mountain near Ghent, Raleigh County, October 14. One male from Dunlow, obtained April 23, has the crown patch zinc-orange instead of the usual red.

Family BOMBYCILLIDAE

BOMBYCILLA CEDRORUM Vieillot

CEDAR WAXWING

The cedar waxwing, though reduced in numbers about Washington, D. C., in recent years, remains a common bird in West Virginia. Specimens were obtained as follows: Orgas, Boone County, June 24; 2 miles west of Barboursville, Cabell County, October 26; 3 miles north of Point Pleasant, Mason County, October 27; 5 miles north of Drennen, Nicholas County, May 18; 5 and 7 miles east of Philippi, May 28, and June 1 and 4; 3,200 feet elevation on Flat Top Mountain, near Flat Top, October 15; Middle Mountain, 12 and 15 miles north-east of Durbin, June 29 and July 3; 3,300 feet elevation in the Cranberry Glades, June 9 and 12.

Family LANIIDAE

LANIUS LUDOVICIANUS MIGRANS Palmer

MIGRANT SHRIKE

The two taken are both females, coming from Barboursville, October 26, and Mercers Bottom, October 30. In addition, I obtained another female 5 miles west of Romney on January 3, 1937, and recorded a bird that was not collected near Pansy on January 1.

Family VIREONIDAE

VIREO GRISEUS GRISEUS (Boddaert)

WHITE-EYED VIREO

Taken at Fourteen, April 29; south of the Guyandot River, near Huntington, May 2; and near Persinger in Nicholas County, May 16.

VIREO FLAVIFRONS Vieillot

YELLOW-THROATED VIREO

Apparently widely distributed but of scattered occurrence, the yellow-throated vireo was recorded as follows: Near Dunlow, April 23; Tyler Creek, April 27; Gilboa, May 5 and 6; and Zela, May 7. It is probable that all these were migrants.

VIREO SOLITARIUS SOLITARIUS (Wilson)

BLUE-HEADED VIREO

The wing of a female secured on Peters Creek, near Gilboa, May 5, measures 72.5 mm, and the culmen from base 11.8 mm. The bill is a little large, but the bird agrees best with the typical form. Two others were taken in fall migration. A male secured 4 miles northwest of Gilboa, October 12, has the wing 76.3, and the culmen from base 11.9 mm, being somewhat large, but having the brighter green of the back of the typical form. Another male taken at an elevation of 1,800 feet near Posey, Raleigh County, October 23, measures as follows: Wing, 74.5; and culmen from base, 11.0 mm.

The shade of green on the back in these birds seems to change definitely with storage in collections. Freshly taken birds appear much brighter in color.

VIREO SOLITARIUS ALTICOLA Brewster

MOUNTAIN VIREO

This race of the blue-headed vireo nests commonly in the higher mountains of the State. Three were taken at the Cranberry Glades on June 13 and 17. On Cheat Mountain above Cheat Bridge they were common from June 23 to 27. A young one recently from the nest was secured here on June 26, and birds were taken in fall on

September 25 and 26. Others were secured in fall near the summit of Spruce Knob on September 22, and at elevations of 3,000 to 3,500 feet on Williams River from October 3 to 8. A male taken June 17 in the Cranberry Glades has an irregular patch of white and scattered feathers of the same color in the crown. A. H. Howell collected males at Marshes on July 20, 1909, and at Mabscott on July 24, both in Raleigh County.

This race differs from the typical form in having the back with more gray, and the green slightly darker, in longer wing on the average, and in somewhat larger bill. Following are measurements from birds taken in West Virginia:

Eleven males: Wing, 74.8–80.4; tail, 50.7–56.2; culmen from base, 12.2–13.4; tarsus, 18.0–19.4 mm.

Five females: Wing, 74.6–77.9; tail, 52.0–54.5; culmen from base, 11.3–12.3; tarsus, 18.0–19.1 mm.

VIREO OLIVACEUS (Linnaeus)

RED-EYED VIREO

Of universal distribution during summer throughout the State; recorded as follows: Fourteen, April 28; Wayne, May 1; south of Guyandot River near Huntington, May 2; Zela, May 7; Pine Creek, near Enon, May 8; Freed, Calhoun County, May 21; Grantsville, May 26; near Philippi, May 31 and June 1; Rich Mountain, 7 miles southwest of Harman, July 7; 4,800 feet elevation on Spruce Knob, September 19; Cranberry Glades at 3,300 feet, June 15 and 3,800 feet, June 19; 4,000 feet elevation on Cheat Mountain, 5 miles northwest of Cheat Bridge, June 25 and 27.

Family COMPSOTHYLPIDAE

MNIOTILTA VARIA (Linnaeus)

BLACK AND WHITE WARBLER

Obtained 2 miles east of White Sulphur Springs on April 18; at Mill Creek, 9 miles east of Huntington, April 25; Muddlety, May 11; 5 miles east of Philippi, May 28; and at 3,500 feet elevation on Williams River, October 8. I have seen it also near Wardensville, July 21, 1935, and in the Cranberry Glades, May 9, 1936.

LIMNOTHYLPIS SWAINSONI (Audubon)

SWAINSON'S WARBLER

A male was taken near Fourteen in southwestern Lincoln County on April 28. It was found on the ground at the swampy border of a little stream, and until in the hand was thought to be a water-thrush. The only other record for the State known to me is that of Earle A.

Brooks¹⁵ who reports "one taken by P. C. Bibbee on Cheat River, June 14, 1924."

VERMIVORA CHRYSOPTERA (Linnaeus)

GOLDEN-WINGED WARBLER

Breeding at 3,300 feet elevation in the Cranberry Glades, where a male was taken May 9 and a female June 16.

VERMIVORA PEREGRINA (Wilson)

TENNESSEE WARBLER

One was taken at 4,800 feet on Spruce Knob, September 19, and one near Ben Lomond, Mason County, October 28.

VERMIVORA RUFICAPILLA RUFICAPILLA (Wilson)

NASHVILLE WARBLER

A male was collected at Tyler Creek, April 27, and another at 3,100 feet on Williams River, October 2.

COMPSOTHLYPIS AMERICANA PUSILLA (Wilson)

NORTHERN PARULA WARBLER

A male taken at Fourteen, Lincoln County, April 27, has a wing measurement of 60.2 mm, and another from Gilboa, May 6, one of 57.0 mm.

DENDROICA AESTIVA AESTIVA (Gmelin)

EASTERN YELLOW WARBLER

Taken on Peters Creek near Gilboa, May 5, and on Pine Creek near Enon, May 8. A pair was observed nesting at Gilboa on May 9.

DENDROICA MAGNOLIA (Wilson)

MAGNOLIA WARBLER

This handsome bird was found in migration 5 miles north of Drennen, Nicholas County, May 18, and at 4,800 feet on Spruce Knob, September 19. In summer it was taken on Cheat Mountain, 3 miles west of Cheat Bridge, June 23; on Middle Mountain, 12 miles north-east of Durbin, June 27 and 29; and at elevations of 3,300 to 3,700 in the Cranberry Glades, May 9 and June 8, 9, and 15.

DENDROICA TIGRINA (Gmelin)

CAPE MAY WARBLER

Common on the summit of Spruce Knob from 4,600 to 4,800 feet, September 19 to 22. Two were taken at 3,500 feet on Williams River, October 8 and 9.

¹⁵ West Virginia Encyc., 1929, p. 72.

DENDROICA CAERULESCENS CAERULESCENS (Gmelin)

BLACK-THROATED BLUE WARBLER

Found in migration at 3,300 feet elevation in the Cranberry Glades on May 9; on Cheat Mountain, 3 miles west of Cheat Bridge, September 26; at 3,900 feet on Smoke Camp Mountain, 3 miles east of Thornwood, September 28; at 4,600 to 4,700 feet on Spruce Knob, September 22 and 24; and at 3,500 feet on Williams River, October 7.

DENDROICA CAERULESCENS CAIRNSI Coues

CAIRNS'S WARBLER

On the summit of Cheat Mountain west of Cheat Bridge this warbler was common from June 23 to 26, and one was taken here on September 25. A male was secured on Middle Mountain, 12 miles northeast of Durbin, June 29, and two were obtained at 3,300 feet in the Cranberry Glades, June 15 and 18. On July 6 and 7 birds were collected on Rich Mountain from 6 to 7 miles southwest of Harman. The last recorded in fall was a male secured at 3,500 feet on Williams River on October 7. A. H. Howell obtained one at Dry Creek on July 22, 1909.

This series indicates that Cairns's warbler is more different from the typical black-throated blue than I had supposed from examination of material from the mountains of western Maryland. Males are distinctly deeper blue in color above, ordinarily with more black in the dorsum, though this does not always hold. Females are distinctly darker above both in summer and in fall dress.

DENDROICA CORONATA CORONATA (Linnaeus)

MYRTLE WARBLER

Obtained in spring 12 miles north of Logan on April 22, and at Tyler Creek on April 27. In fall specimens were taken at 2,900 feet on Flat Top Mountain, near Flat Top on October 19, at 2,100 feet on Cherry Pond Mountain near Arnett on October 22, and near Orgas on October 24.

The western race of the myrtle warbler, *Dendroica coronata hooveri*, I consider valid. If this is accepted then the name of the eastern bird is *Dendroica coronata coronata*.

DENDROICA VIRENS VIRENS (Gmelin)

BLACK-THROATED GREEN WARBLER

In spring this common warbler was taken 2 miles east of White Sulphur Springs, April 18; 12 miles north of Logan, April 22; near Dunlow, April 23; near Fourteen, April 28; and near Zela, May 7. Breeding specimens were secured on Cheat Mountain, 3 miles west of

Cheat Bridge, June 24; on Rich Mountain, 7 miles southwest of Harman, July 7; and in the Cranberry Glades, June 11 and 20. I saw them in the latter locality on May 9. One was observed on Middle Mountain July 3. In fall these birds were found on Williams River at 3,100 feet elevation on October 2; at 4,600 feet on Spruce Knob, September 22; and on Flat Top Mountain, near Odd, October 17. There is a juvenile specimen in the Biological Survey collection taken on July 22, 1909, at Dry Creek by A. H. Howell.

DENDROICA CERULEA (Wilson)

CERULEAN WARBLER

One male was taken at Fourteen, April 27, and two were secured on Pine Creek, near Enon, May 8.

DENDROICA FUSCA (Müller)

BLACKBURNIAN WARBLER

One was taken on Spruce Knob on September 22 and one was seen on Pine Creek, near Enon, on May 8.

DENDROICA PENNSYLVANICA (Linnaeus)

CHESTNUT-SIDED WARBLER

Taken at Huntington on May 2; on Cheat Mountain, 5 miles northwest of Cheat Bridge, June 25; on Middle Mountain, 11 miles northeast of Durbin, July 2; and at 3,300 feet in the Cranberry Glades, May 9 and June 20. In this last locality on May 9 this was the most abundant warbler, being found in pairs that were preparing to nest. The species was recorded on Middle Mountain on July 3.

DENDROICA CASTANEA (Wilson)

BAY-BREADED WARBLER

Taken at 3,800 feet on Cheat Mountain, 3 miles west of Cheat Bridge, September 25 and 26; at the Cranberry Glades, May 9; and at 3,000 to 3,300 feet on Williams River, October 2, 3, and 5, the last coming from Little Spruce Mountain.

DENDROICA STRIATA (Forster)

BLACK-POLL WARBLER

One was taken at 4,800 feet on Spruce Knob on September 21, and one at 3,100 feet on Williams River on October 2. I observed this species near McCauley on October 13, 1935.

DENDROICA DISCOLOR DISCOLOR (Vieillot)

NORTHERN PRAIRIE WARBLER

Found 5 miles east of Huntington, April 21 and 22; near Mill Creek, 9 miles east of Huntington, April 25; and at Fourteen, April 27.

DENDROICA PALMARUM PALMARUM (Gmelin)

WESTERN PALM WARBLER

Two were collected on Flat Top Mountain, one near Ghent, October 14, and one near Flat Top, October 20.

The Rev. E. A. Brooks¹⁶ records only the yellow palm warbler from the State. The two listed above are typical of the western form.

SEIURUS AUROCAPILLUS (Linnaeus)

OVEN-BIRD

Common and widely distributed and collected as follows: Tyler Creek, April 27; Zela, May 7; Enon, May 8; Cranberry Glades, June 9 and 15; 4,000 feet elevation on Cheat Mountain, 5 miles northwest of Cheat Bridge, June 25; Cranberry Glades, June 9 and 15; 4,800 feet elevation on Spruce Knob, September 21.

SEIURUS NOVEBORACENSIS NOVEBORACENSIS (Gmelin)

NORTHERN WATER-THRUSH

This bird was observed at 3,300 feet in the Cranberry Glades on May 9. It breeds there, as three specimens, including two males and a female, were secured on June 10.

SEIURUS MOTACILLA (Vieillot)

LOUISIANA WATER-THRUSH

Taken near Dunlow, April 23; 4 miles east of Huntington, April 24; near Persinger, Nicholas County, May 16; and 5 miles east of Philippi, May 29. On July 21, 1935, I recorded one near Baker City. On April 19, 1936, I located a pair along a small brook running along a valley on Short Mountain, near McCauley. On May 24 this stream was dry, and the birds flew continually down to Lost River a short distance below and then returned, apparently to secure food for their young.

OPORORNIS FORMOSUS (Wilson)

KENTUCKY WARBLER

A locally common species that was obtained at Fourteen, April 29; at Gilboa, May 5; and near Smithville, Ritchie County, May 22. I observed it near Lost River in the vicinity of McCauley on May 24.

OPORORNIS PHILADELPHIA (Wilson)

MOURNING WARBLER

An adult female was taken in the Cranberry Glades on June 20.

¹⁶ West Virginia Encycl., 1929, p. 72.

GEOTHPIS TRICHAS TRICHAS (Linnaeus)

MARYLAND YELLOW-THROAT

An immature male taken at the summit of Spruce Knob on September 18 is of this race, as indicated by its wing measurement of 52.8 mm and by its dull coloration both above and below. It is evidently a migrant in this locality.

It is assumed that this is the breeding bird of extreme eastern West Virginia, in the section east of the mountains, though specimens need to be collected to establish this.

GEOTHPIS TRICHAS BRACHIDACTYLA (Swainson)

NORTHERN YELLOW-THROAT

Careful study of specimens indicate that this is the yellow-throat that nests through the mountain area and the hill section to the west, as well as in the northwestern portion. Whether true *trichas* is found in the southwestern part of the State as a breeding bird remains to be ascertained, as the only specimen at hand, from Fourteen, taken April 28, is *brachidactyla*, though at that date it may have been a migrant individual. One was taken at Zela, May 7; one at Grantsville, May 20; one at Freed, Calhoun County, May 21; and one at White Pine, May 25. In three males the wing ranges from 56.2 to 56.3 and the exposed culmen from 11.2 to 12.3 mm; and in two females the wing is 52.0 and 54.7 and the exposed culmen 11.8 and 12.0 mm.

In the mountains breeding specimens were taken in the Cranberry Glades, on May 9 and between June 9 and 20, and on Middle Mountain 12 miles northeast of Durbin, June 29. Males have the wing 54.3 to 56.2 mm and the culmen from base 12.5 to 12.8 mm. Females have the wing 49.3 to 51.7 and the culmen from base 11.4 to 11.7 mm.

Fall specimens include a female from Cheat Mountain, 3 miles west of Cheat Bridge, September 26 (wing, 52.3; culmen from base, 11.4 mm), and a pair from Spruce Knob, September 18 and 21 (male, wing 56.2, culmen from base 12.5 mm; female, wing 52.0, culmen from base 11.2 mm).

All these specimens are brighter green above and more extensively yellow below when compared with typical *trichas*, the colors being especially rich in fall plumage.

This marks a definite southern extension of the range of the northern yellow-throat from what is given in the fourth edition of the A. O. U. Check-list of North American Birds, 1931, p. 296.

ICTERIA VIRENS VIRENS (Linnaeus)

YELLOW-BREADED CHAT

A common bird that is difficult to find. Specimens were taken at Fourteen, April 28; Zela, May 7; Persinger, May 16; Grantsville,

May 20; and Walker, May 22. I secured one near Wardensville on July 21, 1935, and in 1936 I observed it at Gilboa on May 9; Cranberry Glades, May 9; and on Short Mountain near McCauley, May 24.

WILSONIA CITRINA (Boddaert)

HOODED WARBLER

Specimens were taken by Perrygo and Lingeback at Tyler Creek, April 27; 5 miles north of Drennen, May 18; and 7 miles east of Philippi, June 4. I secured a female near McCauley, May 24.

WILSONIA CANADENSIS (Linnaeus)

CANADA WARBLER

In migration one was collected on Pine Creek, near Enon, May 8, and another near Wayne, May 1. A common summer resident in the mountains, found on Middle Mountain (including Yokum Knob) 11 to 15 miles northeast of Durbin, June 29 to July 4, and in the Cranberry Glades, May 9 and June 9 to 15.

SETOPHAGA RUTICILLA (Linnaeus)

REDSTART

A common resident that was collected as follows: Near Dunlow, April 23; Fourteen, April 27; Gilboa, May 5 and 6; Enon, May 8; Mt. Zion, Calhoun County, May 23; 5 miles east of Philippi, May 28.

Family PLOCEIDAE

PASSER DOMESTICUS DOMESTICUS (Linnaeus)

ENGLISH SPARROW

Two were taken 4 miles east of Huntington on April 24. Distributed about towns and farms throughout the State.

Family ICTERIDAE

STURNELLA MAGNA MAGNA (Linnaeus)

EASTERN MEADOWLARK

Distributed throughout the State in open fields and meadows. Specimens were taken as follows: Mercers Bottom, October 29; Gilboa, October 26; Muddlety, May 11; Grantsville, May 26; and near Yokum Knob, on Middle Mountain, July 4. In the mountains they occur only in extensive meadows, such as the Big Burn near Yokum Knob. Here they were fairly common. In four males the wing ranges from 118.2 to 122.0 mm, and in three females from 105.8 to 109.0 mm. In size and color these birds agree with the typical form.

In addition to the localities cited I have recorded these birds as follows: Near Moorefield, June 5, 1935; Mathias, July 4, 1935; and Wardensville, July 21 and October 13, 1935.

AGELAIUS PHOENICEUS PHOENICEUS (Linnaeus)

EASTERN RED-WING

The red-wing is widely distributed through West Virginia along the borders of streams in open country. It is found usually in scattered groups of one to three or four pairs, being less abundant numerically than in areas where there are more extensive marshes. It has a wide altitudinal range, as breeding birds were taken near Muddlety in Nicholas County, May 11, 12, and 14; 5 miles east of Philippi, May 30; and at 3,300 feet elevation in the Cranberry Glades, June 16. Migrants were secured near Ashton on October 31.

Wing measurements in males range from 116.3 to 120.9 mm, and in females from 97.4 to 102.0 mm.

AGELAIUS PHOENICEUS ARCTOLEGUS Oberholser

GIANT RED-WING

It was a distinct surprise to find in the small series of red-winged blackbirds a fine specimen of this race taken near Enon, Nicholas County, on May 11, 1936. The bird is a male in full adult plumage, with the following measurements: Wing, 129.2; tail, 94.6; culmen from base, 24.0; and tarsus, 31.3 mm. It is of interest to compare the perfect plumage of this bird with the worn wing and tail feathers of skins of the resident race taken at the same time near Muddlety only a few miles away. This seems to be the first record of this northern migrant for the State.

ICTERUS SPURIUS (Linnaeus)

ORCHARD ORIOLE

One was seen near Grantsville on May 20, and I observed this species at Moorefield on June 5, 1936.

ICTERUS GALBULA (Linnaeus)

BALTIMORE ORIOLE

I saw this bird in Summersville on May 9, and one was collected at Mount Zion, Calhoun County on May 23.

EUPHAGUS CAROLINUS (Müller)

RUSTY BLACKBIRD

The only two seen were taken October 30 near Mercers Bottom, one being prepared as a skeleton.

QUISCALUS QUISCULA AENEAS Ridgway

BRONZED GRACKLE

The only specimen taken is a young male recently from the nest from near Richland, Greenbrier County, June 24. Its identification is based on assumption, since it is entirely in juvenal plumage. It is dark in color and shows indistinct streakings of dusky on the gray brown of the breast and abdomen.

Grackles are local during the nesting season, and no adults were taken though special search was made for them. I saw a few near Enon on May 9.

MOLOTHRUS ATER ATER (Boddaert)

EASTERN COWBIRD

Found in summer mainly, if not entirely, west of the mountains. Following are localities at which specimens were taken: Near Huntington (including a point 4 miles east, and another in the hills south of the Guyandot River), April 25 and May 2; Muddlety, May 14; 5 miles north of Drennen, May 18; West Fork River, near Arnoldsburg, Calhoun County, May 23; Laurel Creek near White Pine, May 25; and 7 miles east of Philippi, June 1. On April 19 I observed several flocks in migration near McCauley.

Family *THRAUPIDAE**PIRANGA ERYTHROMELAS* Vieillot

SCARLET Tanager

Common and widely distributed wherever there is woodland. Specimens were taken as follows: Fourteen, April 28; Gilboa, May 5; Enon, May 8; Wayne, May 1; Rich Mountain, 7 miles southwest of Harman, July 8; 3,300 to 3,700 feet in the Cranberry Glades, June 9 and 15; and 3,800 feet elevation on Cheat Mountain, 8 miles northwest of Cheat Bridge, September 26. Near White Sulphur Springs and Charmco I found them common on May 8, and on the following day I observed many at Gilboa and in the Cranberry Glades. Several were seen near McCauley on May 24.

PIRANGA RUBRA RUBRA (Linnaeus)

SUMMER Tanager

Two were secured in the hills south of the Guyandot River near Huntington on May 2, and another along the Little Kanawha River near Grantsville on May 20. I observed one near Barboursville on October 10, 1932.

Family *FRINGILLIDAE**RICHMONDENA CARDINALIS CARDINALIS* (Linnaeus)

EASTERN CARDINAL

This handsome bird is universally distributed except in the higher mountains of the State. A male secured at 3,500 feet elevation on

Williams River marks the highest altitude at which it was encountered. It was also found 7 miles east of Philippi on June 2. In the western section of the State it was common, being recorded as follows: 5 miles east of Huntington, April 20; 12 miles north of Logan, April 22; near Dunlow, April 23; Gilboa, where it was common, May 15; Orgas, Boone County, October 24; Barboursville, October 26; Mercers Bottom, October 29; Ben Lomond, October 28; Point Pleasant, October 27; Big Springs, Calhoun County, May 22; West Fork River near Rocksdales and Arnoldsburg, May 23.

HEDYMELES LUDOVICIANUS (Linnaeus)

ROSE-BREADED GROSBILL

Collected as follows: Wayne, May 1; Enon, May 8; summit of Cheat Mountain, 5 miles northwest of Cheat Bridge, June 27; Middle Mountain, 11 miles northwest of Durbin, July 2; Cranberry Glades, June 18 and 20; 4,800 feet elevation on Spruce Knob, September 21; 3,000 feet elevation on Williams River, October 3.

PASSERINA CYANEA (Linnaeus)

INDIGO BUNTING

Obtained at the following points: Little Kanawha River near Grantsville, May 20; Big Bend, May 21; Macfarlan, Ritchie County, May 22; Walker, Wirt County, May 22; West Fork River near Arnoldsburg, May 23; 5 miles west of Grantsville, May 26; 7 miles east of Philippi, June 4; Cranberry Glades, June 12 and 15 (the latter including one bird just from the nest); and 7 miles south of Harman, July 8.

CARPODacus PURPUREUS PURPUREUS (Gmelin)

EASTERN PURPLE FINCH

Two migrant males in full color and a female were taken 5 miles east of Huntington on April 20 and 21. More interesting is a male in dull dress with plumage considerably worn secured at high altitude in the Cranberry Glades on June 20. A dozen pairs were found on this day over rough, stony slopes, where they were approached with difficulty. This represents a considerable southern extension of summer range from the former known limit in western Maryland. Two were observed on Spruce Knob on September 18.

SPINUS PINUS PINUS (Wilson)

NORTHERN PINE SISKIN

One specimen was taken from a little flock at 3,000 feet on Katis Mountain near White Sulphur Springs on November 6.

SPINUS TRISTIS TRISTIS (Linnaeus)

EASTERN GOLDFINCH

A common, widely distributed bird of which records were made as follows: 5 miles east of Huntington, April 21; Huntington, April 29; 2 miles west of Barboursville, October 26; Mercers Bottom, October 29; Gilboa, May 5; Enon, May 8; 5 miles east of Philippi, May 30; Little Spruce Knob on Williams River, October 5; 3,500 feet elevation on Williams River, October 7; Cranberry Glades, June 19; 3,000 feet elevation on Katis Mountain, near White Sulphur Springs, November 6.

PIPILO ERYTHROPHthalmus ERYTHROPHthalmus (Linnaeus)

RED-EYED TOWHEE

A species widely distributed in summer that was recorded as follows: 5 miles east of Huntington, April 20 and 21; 12 miles north of Logan, April 22; Fourteen, April 28 and 29; Zela, May 7; Enon, May 8; Mount Zion, Calhoun County, May 23; 5 miles east of Philippi, May 29; Red Creek, Tucker County, July 6; Rich Mountain, 7 miles southwest of Harman, July 7; summit of Spruce Knob, September 19 and 24; Cranberry Glades, June 8, 15, and 20; Middle Mountain, 12 miles southeast of Durbin, June 27. A young bird not fully grown was secured on Spruce Knob on September 19. This bird may possibly winter in the southwestern section near the Ohio River, as one was taken at Barboursville on November 3.

PASSERCULUS SANDWICHENSIS SAVANNA (Wilson)

EASTERN SAVANNAH SPARROW

Three adults taken at the Big Burn near Yokum Knob, on Middle Mountain, on July 4 constitute an extension in breeding range for this bird. They were fairly common. In fall one was taken at 3,200 feet on Flat Top Mountain, near Flat Top, October 15, and another near Mercers Bottom, October 29. On June 5, 1935, I recorded one near the South Branch of the Potomac River, five miles north of Moorefield. On October 2, 1935, I observed a number near Mount Storm, and saw others on October 13 near Lehw.

PASSERCULUS SANDWICHENSIS LABRADORIUS Howe

LABRADOR SAVANNAH SPARROW

An immature male taken on November 2 near Mercers Bottom is definitely darker above, with the black markings more extensive and bordered on lower back and rump with dark brown, and the breast markings reduced in number but larger, than in specimens of *P. s. savanna*. Its differences are so evident that it is identified as the Labrador form, a race whose range as yet is poorly defined, particularly in its migrations.

AMMODRAMUS SAVANNARUM AUSTRALIS Maynard

EASTERN GRASSHOPPER SPARROW

Specimens were taken 7 miles east of Philippi, June 2, and near Ashton, Mason County, October 31.

POOECETES GRAMINEUS GRAMINEUS (Gmelin)

EASTERN VESPER SPARROW

Through the upland section this species is widely distributed wherever there are open fields. In the western and central parts of the State it was found at Muddlety, May 13; Grantsville, May 25; and 5 miles east of Philippi, May 30. I saw many near Richwood on May 9. In fall they were found in migration at Mercers Bottom, near the Ohio River, October 30 and November 2. Breeding birds were taken on Middle Mountain, nine miles southeast of Durbin on June 30. Others, taken in fall, come from the summit of Spruce Knob, September 22 and 24; 2,100 feet elevation on Cherry Pond Mountain near Arnett, October 22; and 2,900 and 3,200 feet on Flat Top Mountain, near Flat Top, October 15 and 19. I found a nest near Moorefield on June 5, 1935, and observed that they were common from Baker City to Mathias on July 4 and at Lehew on October 13, 1935.

CHONDESTES GRAMMACUS GRAMMACUS (Say)

EASTERN LARK SPARROW

A pair found 7 miles east of Philippi on June 4 were the only ones seen. The female was taken. Maurice Brooks¹⁷ has recorded this bird at French Creek, Upshur County, in 1932, stating that in recent years it has become rare in the State.

JUNCO HYEMALIS HYEMALIS (Linnaeus)

SLATE-COLORED JUNCO

Common as a migrant, this junco in the mountain sections mingles with the resident Carolina junco. In mixed flocks the smaller size, with the darker slate of males and the more pronounced brownish wash on back and sides in females in the present form, is ordinarily easily evident. Specimens were obtained as follows: 12 miles north of Logan, April 22; Barboursville, November 3; Mercers Bottom, October 30; Ben Lomond, October 28; 3,500 feet elevation on Williams River, October 7; 2,900 to 3,200 feet elevation on Flat Top Mountain near Flat Top, October 15 and 19; and near White Sulphur Springs April 18 and November 6 (the latter date referring to specimens taken at 3,000 feet on Katis Mountain).

¹⁷ Auk, 1933, p. 121.

JUNCO HYEMALIS CAROLINENSIS Brewster

CAROLINA JUNCO

This resident form is restricted to the higher mountains of the eastern part of the State. It breeds mainly above 3,000 feet, descending in the valleys adjacent to the mountain bases in winter, but not moving far from the sections that are its summer home. A female was collected on Rich Mountain, 7 miles southwest of Harman, on July 7. On Williams River three were taken on October 7 at an elevation of 3,500 feet, one still showing some of the striped juvenal plumage. Two were collected on September 18 and 21 on the summit of Spruce Knob at 4,800 feet, a locality where I found them common on September 30, 1935. On the latter day I took a bird still in juvenal dress 4 miles northeast of Thornwood. On January 1, 1937, I collected one at an elevation of 2,000 feet in the narrow valley of Friends Run on the slopes of North Fork Mountain, 3 miles west of Franklin. We found them in the Cranberry Glades on May 9, and they were common here from June 9 to 20. A young bird just from the nest was taken there on June 20. On Middle Mountain, 12 miles northeast of Durbin, specimens were taken June 29, including a bird fully grown, but in juvenal dress. Others were secured on Cheat Mountain, 3 miles west of Cheat Bridge from June 23 to 25. Two were taken at 3,000 and 3,500 feet elevation on Flat Top Mountain, near Flat Top, October 15 and 20. I recorded one on April 19 on the slopes of Short Mountain near McCauley.

In life this bird seems quite distinct from the ordinary junco, appearing larger and distinctly grayer. Its field identification is ordinarily not difficult. Immature females in fall show some wash of brown on back, flanks, and under tail-coverts and have brownish edgings on the tertials and rectrices. The brown, however, is less in extent and is duller in color than in *J. h. hyemalis* in the same stage, and the gray is lighter and clearer.

SPIZELLA ARBOREA ARBOREA (Wilson)

EASTERN TREE SPARROW

Three were seen and one was taken near Upper Tract on January 1, 1937.

SPIZELLA PASSERINA PASSERINA (Bechstein)

EASTERN CHIPPING SPARROW

Collected as follows: 2 miles east of White Sulphur Springs, April 18; 5 miles east of Huntington, April 21; Mercers Bottom, October 30; Point Pleasant, October 27; Zela, May 7; Summersville, May 13; Arnoldsburg, May 23; 7 miles east of Philippi, June 1; Flanagans Hill near Elk, Tucker County, July 6; 3,000 feet elevation on Williams River, October 3; 3,300 feet elevation in the Cranberry Glades, June 12;

Orgas, Boone County, October 24; 2,100 feet elevation on Cherry Pond Mountain, near Arnett, October 22; and 2,900 feet elevation on Flat Top Mountain, near Flat Top, October 19.

SPIZELLA PUSILLA PUSILLA (Wilson)

EASTERN FIELD SPARROW

A bird distributed universally in the State that was obtained as follows: 4 and 5 miles east of Huntington, April 23 and 24; Tyler Creek, April 27; Mercers Bottom, October 29 and November 2; Point Pleasant, October 27; Zela, May 7; Enon, May 8; Gilboa, October 12; Muddlety, May 11 and 14; Grantsville, May 20; 3,000 to 3,500 feet elevation on Williams River, October 3, 5 and 7; Cranberry Glades, June 12 (young), and 13; Cheat Mountain, above Cheat Bridge, June 25; Flat Top Mountain, near Flat Top, October 15 and 19.

ZONOTRICHIA LEUCOPHRYS LEUCOPHRYS (Forster)

WHITE-CROWNED SPARROW

Found in fall migration, when three were obtained near Mercers Bottom, October 29, and one near Ashton, October 31.

ZONOTRICHIA ALBICOLLIS (Gmelin)

WHITE-THROATED SPARROW

A common migrant for which the following records were made: 5 miles east of Huntington, April 20; 12 miles north of Logan, April 22; Barboursville, October 26; Mercers Bottom, October 29 and 30, and November 2; Ben Lomond, October 28; Point Pleasant, October 27; Zela, May 8; 3,000 feet elevation on Williams River, October 3; Cranberry Glades, May 9 and October 2; 2,800 feet elevation on Flat Top Mountain, near Odd, October 20; 3,000 feet elevation on Katis Mountain, near White Sulphur Springs, November 6; and Wades Creek, 4 miles southeast of White Sulphur Springs, May 8.

PASSERELLA ILIACA ILIACA (Merrem)

EASTERN FOX SPARROW

Found in fall at Orgas, Boone County, October 24; Mercers Bottom, October 30; and at 3,000 feet elevation on Katis Mountain, near White Sulphur Springs, November 6. The last mentioned is partially albinistic, having a few white feathers in back and crown.

MELOSPIZA LINCOLNI LINCOLNI (Audubon)

LINCOLN'S SPARROW

Found as a migrant 5 miles north of Drennen, May 18; at 3,000 feet elevation on Williams River, October 3; and near Orgas, October 24.

MELOSPIZA GEORGIANA (Latham)

SWAMP SPARROW

Found during the migration period near Huntington, May 2; Barboursville, October 26; Mercers Bottom, October 30 and November 2; Ashton, October 31; 2,900 feet elevation on Flat Top Mountain, near Ghent, October 14; 2,000 feet elevation on Cherry Pond Mountain, near Arnett, October 23; Orgas, October 24; 3,800 feet elevation on Cheat Mountain, 3 miles west of Cheat Bridge, September 25; and 3,000 feet elevation on Williams River, October 3.

In the Cranberry Glades specimens were obtained on June 11 and 12. One was taken on Middle Mountain, 12 miles northeast of Durbin, on June 29, and a young bird recently from the nest was secured at Yokum Knob on Middle Mountain on July 4.

MELOSPIZA MELODIA MELODIA (Wilson)

EASTERN SONG SPARROW

That the true eastern song sparrow nests in extreme eastern West Virginia is indicated by a male in worn breeding plumage in the National Museum taken at Halltown on August 1, 1898. In migration this form may occur casually elsewhere, as a male collected by Perrygo and Lingeback at 2,000 feet elevation on Cherry Pond Mountain near Arnett on October 23, 1936, has the brighter color of the eastern race.

MELOSPIZA MELODIA EUPHONIA Wetmore

MISSISSIPPI SONG SPARROW

For several years I have examined song sparrows from localities in the eastern United States to work out the ranges of the geographic races in that area. It has been evident that breeding birds from the Allegheny Mountain section were darker in color than the typical eastern song sparrow (*Melospiza melodia melodia*), and for a time I followed W. E. Clyde Todd in calling this darker mountain race *Melospiza melodia beata* Bangs.¹⁸ This name has become current for the bird of the eastern Mississippi Valley drainage in general, as it was adopted in the fourth edition of the A. O. U. Check-list of North American birds in 1931.

Last year, however, I had opportunity to see the type specimen of *beata* in the collections of the Museum of Comparative Zoölogy, and I found that it was a specimen of the Dakota song sparrow (*Melospiza melodia juddi* Bishop), migrant to winter quarters in Florida. As *beata* Bangs thus became a synonym of *juddi*, I described the breeding bird

¹⁸ *Melospiza melodia beata* Bangs, Proc. New Zealand Zool. Club, vol. 6, June 5, 1912, p. 87 (Enterprise, Fla.).

of the West Virginia mountains as *Melospiza melodia euphonia*.¹⁹ This name replaces *beata*, therefore, as given in the A. O. U. Check-list.

Breeding birds from the mountain region of West Virginia appear somewhat darker than those from the central Mississippi Valley, but it seems doubtful with material now at hand that the Allegheny Mountain birds and those from the lowlands to the westward can properly be separated. A good series of fall specimens indicates no evident differences.

To the eastward *euphonia* intergrades with *melodia*, a specimen secured on Lost River, near McCauley, W. Va., on May 24, 1936, being intermediate but nearer to *euphonia*.

This song sparrow is widely distributed from the eastern line of the mountains westward in West Virginia, as indicated by the following localities from which specimens have been examined: Barboursville, November 3; Mercers Bottom, October 29 and 30 and November 2; Ben Lomond, October 28; Ashton, October 31; Point Pleasant, October 27; Zela, May 13; Muddlety, May 14; Drennen, May 18; Big Bend, Calhoun County, May 21; Rocksdale, May 23; White Pine, June 25; 5 miles east of Philippi, May 30; 3,000 to 3,500 feet on Williams River, October 3 to 8; 4,800 feet on Spruce Knob, September 21; Cranberry Glades (the type locality), May 9 and June 8 to 12; Middle Mountain 12 miles northeast of Durbin, June 29 and July 4; Cheat Mountain, above Cheat Bridge, June 26 and September 26; 2,000 feet elevation on Cherry Pond Mountain near Arnett, October 23; Flat Top Mountain (2,900 to 3,000 feet), near Flat Top, October 19 and 20, near Odd, October 20, and near Ghent, October 14 and 20.

CALCARIUS LAPPONICUS LAPPONICUS (Linnaeus)

LAPLAND LONGSPUR

On January 1, 1937, in company with W. M. Perrygo I saw a flock of 25 longspurs circling high in the air over the open level valley of the South Fork of the Potomac River, 3 miles north of Moorefield, and collected two at long range as they passed overhead. These seem to be the first specimens taken in the State, the only other report for the species being two seen by Maurice Brooks²⁰ at Red House, Putnam County, on March 7, 1936.

¹⁹ *Melospiza melodia euphonia* Wetmore, Smithsonian Misc. Coll., vol. 95, no. 17, Sept. 26, 1936, p. 1 (3,300 feet elevation, Cranberry Glades, Pocahontas County, W. Va.).

²⁰ Auk, 1936, p. 454.