

The Redstart

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W. R. DeGarmo
Editor

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AREA SURVEY FOR 1952 FORAY

By E. R. Chandler

The Brooks Bird Club considers West Virginia its particular province for bird study, and we therefore try to plan our Forays so that we may conduct our studies in various parts of the State. Thus the selection of Cabwaylingo State Forest as the locale for the 1952 Foray put us in the southwestern part of the State. Cabwaylingo State Forest is located in the southern part of Wayne County (W. Va.) close to the boundaries of Lincoln and Mingo counties. It is 45 miles south of Huntington and about seven miles from Tug Fork River and the Kentucky border. The 38th parallel of latitude passes through the Forest.

Cabwaylingo State Forest comprises 6491 acres of what could be classed as "rugged" terrain, made up of steep hills and narrow valleys. The only exceptions are some comparatively level sections along Twelvepole Creek, the principal stream in the area. The elevation varies from 740 feet at Twelvepole Creek to 1250 feet at the Tick Ridge fire tower. From this tower one can see that the surrounding country is broken up into a series of sharp pointed ridges, all of about the same elevation.

Most of these ridges are heavily wooded, except for a few cleared areas where small farms are located. The slopes are covered with forest which in some places contain dense undergrowth that might be called "mighty thick and laurelly." Surface rocks appear to be chiefly sandstone and shale.

The West Virginia Geological Survey (Vol. X) shows the mean annual temperature for Wayne county to be 54-54.5 degrees, F, which is higher than the state average of 52-53 degrees. The mean annual precipitation of 40 to 45 inches is about average for the State as a whole.

Biologically the area can be classed as Carolinian Life Zone; without sufficient differences in elevation to bring about great variations in flora or fauna. In spite of this apparent similarity our studies were carried out in three more or less distinct habitats: (1) the area along Twelvepole Creek, characterized by such trees as sycamore, river birch, willow, and alder, (2) Tick Ridge, with red maple, various oaks, hickory, scrub and pitch pine; and (3) the intervening slopes, covered with a fairly mature stand of beech, tulip tree, sugar maple, magnolia, and hemlock.

Most campers will agree that a few species of birds dominated the scene: parula warbler, Acadian flycatcher; Carolina wren, red-eyed vireo, wood thrush, scarlet tanager, summer tanager and even the red-bellied woodpecker.

Chester, W. Va.

ORNITHOLOGICAL RESULTS OF THE 1952 FORAY

IN WAYNE COUNTY, WEST VIRGINIA

By Howard Heimerdinger

PART I

Introduction

The Brooks Bird Club held its twelfth annual Foray in Cabwaylingo State Forest from June 7 to 15, 1952. One or two people were on the scene as early as June 5, so that for ten days some sixty campers were compiling the records herein reported.

The entire area is very heavily forested. A few large hemlocks can be found on the steep slopes, mature oaks and beeches appear on the ridge tops, but most of the forest cover varies from the pole to sapling stages.

There are only one or two large ponds in the section, west of Wayne, West Virginia. No marshes or swampy areas were found. There is almost no large-scale farming in the county. Very little land is in meadows or fields.

Thus, the terrain and the type of land-use restricted the campers to a lack of variety in habitat such as, the members of the Brooks Bird Club have not encountered in their last few Forays. This condition was reflected in the bird-list. Another feature of this year's Foray was the fact that the campers confined most of their efforts to the immediate area of the camp and the State Forest. The extended tours to all parts of the county which have featured Forays of the last few years were almost entirely absent.

The ornithological results of the Foray were interesting, not only for what was found, but also for what was either not found at all or proved to be uncommon. It came as a distinct surprise to most of the campers to find themselves in an area where both the starling and the cowbird were uncommon. The house wren, brown thrasher, and warbling vireo were reported on only one occasion. The rarity of the brown thrasher is extremely puzzling. The absence of the blue jay from the bird list is another example. The habitat requirements of the veery are present in all parts of the forest. Although we did not find this species, it is a bird that should be looked for in any future trips to this area.

The distribution of some of the birds proved to be interesting. To cite one example, redstarts were found in the hollows, while black-throated green warblers were seen mostly on the ridge-tops.

The outstanding records of the Foray were the extension of the range of the Swainson's warbler and the finding and collecting of a blue-headed vireo.

The results of the 1952 Foray show the need for a more intensive ornithological investigation of this area. The hills are steep, the roads are crooked and often bumpy, but the members of the Brooks Bird Club feel their efforts will have been rewarded, if their work will be of help to any future study of bird life in Wayne County.

Annotated List of Species

The following list is an indication of the status of the birds of Wayne County, West Virginia, as the members of the Brooks Bird Club found them. During the period from June 5 to 15, the sixty-odd participants of the Foray recorded a total of 81 species in Wayne county. This is the smallest number of species found on any Foray since 1945. This is, of course, due to the lack of variety in the environment.

Since little collecting was done during the Foray, it seems advisable to use the binomial system of scientific nomenclature. The vernacular names used here are those in common use. The number in parenthesis at the end of some of the annotations refers to the number given to those species in the nesting or breeding record which follows this section of the report.

1. Wood Duck (Aix sponsa)- Seeber of the Huntington Bird Club reported one bird on June 8, at Arkansas Branch.

2. Turkey Vulture (Cathartes aura)- Not common, but seen on most days.

3. Sharp-shinned Hawk (Accipiter striatus)- One record, on the Tick Ridge road, by E. R. Chandler and the writer.

4. Cooper's Hawk (Accipiter cooperii)- One record, at the end of the Tick Ridge study area, by E. R. Chandler and the writer.

5. Red-tailed Hawk (Buteo jamaicensis)- This bird was reported several times from the camp and the forest area. It was also observed on U. S. Route 52.

6. Red-shouldered Hawk (Buteo lineatus)- We have one report of this bird, made by John Handlan in the camp area.

7. Broad-winged Hawk (Buteo platynerus)- G. Hall and W. Davis reported one at the start of Spruce Fork trail on June 9. Another record from the same general area was made on June 11, by W. R. DeGarmo, E. R. Chandler, and the writer.

8. Ruffed Grouse (Bonasa umbellus)- Seeber reported this bird on June 8, on the hillside along Twelvepole Creek near Arkansas Branch. This was the only record.

9. Bobwhite (Colinus virginianus)- Very common. Seen and heard on U. S. Route 52 from Arkansas Branch to Wayne and beyond, wherever open fields provided suitable habitat. It was not reported from the Forest proper.

10. Killdeer (Charadrius vociferus)- One record. The writer saw one bird in a mud puddle in a corn field just below Wayne, on U. S. Route 52, on June 13.

11. Woodcock (Philohela minor)- Two birds were seen flying across the open space in front of the camp on the evening of June 7, by J. Handlan and G. Conrad.

12. Spotted Sandpiper (Actitis macularia)- Beach had the only record from Twelvepole Creek below the camp, on June 12.

13. Mourning Dove (Zenaidura macroura)- Rare in the main valley of Twelvepole Creek. Several were seen on Tick Ridge road, beyond the study area, where there are several small farms.

14. Yellow-billed Cuckoo (Coccyzus americanus)- Very common in all parts of the Forest and along the roads. Three nests were found. (1).

15. Screech Owl (Otus asio)- One record. E. R. Chandler and the writer heard the bird calling from the Tick Ridge study area on the evening of June 13.

16. Barred Owl (Strix varia)- E. R. Chandler and the writer heard one calling from the Tick Ridge study area on June 9; this was the only record for this bird.

17. Whip-poor-will (Caprimulgus vociferus)- Fairly common in the Forest. It was possible to hear 4 or 5 birds at once from the study area on Tick Ridge road in the evenings.

18. Chimney Swift (Chaetura pelagica)- Uncommon in the Forest area. More common in the open areas around Wayne.

19. Ruby-throated Hummingbird (Archilochus colubris)- Fairly common. One nest was found. Probably there was a nesting bird on the road to Tick Ridge near the camp. (2).

20. Belted Kingfisher (Megasceryle alcyon)- Only one record was turned in, by G. Conrad from Twelvepole Creek on U. S. Route 52.

21. Flicker (Colaptes auratus)- Not too common. Two nests were found in the Forest proper. (3).

22. Pileated Woodpecker (Hylatomus pileatus)- Common, Judging from the calls and drumming of this species, it was probably the most common woodpecker in the area. One or two birds were always in evidence on the Tick Ridge study area and they were also reported from other sections of the Forest.

23. Red-bellied Woodpecker (Centurus carolinus)- Not uncommon. Seen in the Forest and on the road to Wayne, West Virginia.

24. Hairy Woodpecker (Dendrocopus villosus)- Uncommon. One adult with young was seen in front of the camp, (3).

25. Downy Woodpecker, (Dendrocopus rubescens)- Not uncommon.

26. Eastern Phoebe (Sayornis phoebe)- Very common. There were ten nests reported (4).

27. Acadian Flycatcher (Empidonax virescens)- Very common, especially along Twelvepole Creek. Thirteen nests were reported, (4).

28. Wood Pewee (Contopus virens)- Not uncommon. Two nests were found, (6).

29. Rough-winged Swallow (Stelgidopteryx ruficollis)- Not common in the Forest. A few were seen along Twelvepole Creek. More abundant around Wayne, where several large flocks were seen from the roads.

30. Barn Swallow (Hirundo rustica)- Uncommon in the Forest area, but seen frequently around farms and along the main roads.

31. Purple Martin (Progne subis)- Fairly common. A large percentage of the farm houses had martin boxes. However, when questioned about the status of the bird, quite a few of the local people said that martins were not as plentiful as in previous years. Several cases of martins being driven out of their boxes or not being allowed to occupy them were given. In some instances bluebirds were accused of being the aggressors. To support this, we have three records of bluebirds nesting in martins boxes. (13-A, B, D) There were three colonies reported, (7).

32. Crow (Corvus brachyrhynchos)- Uncommon, Not heard or seen too often in the Forest proper, more records from the Tick Ridge road area.

33. Carolina Chickadee (Parus carolinensis)-Not common.

34. Tufted Titmouse (Parus bicolor)- Uncommon. One nest was found, (8).

35. White-breasted Nuthatch (Sitta carolinensis)- Not common. The status of this and the previous two species was very similar, all three birds being distributed over the entire area but not plentiful in any one spot.

36. House Wren (Troglodytes aedon)- Only one record for this species by J. Handlan, on U. S. Route 52.

37. Bewick's Wren (Thyromanes bewickii)- One record, by J. Handlan, on June 13, on U. S. Route 52, near Ferguson.

38. Carolina Wren (Thyrothorus ludovicianus)- Very common in all parts of the forest and along the roads. Two nests were found, (9).

39. Catbird (Dumetella carolinensis)- Commonly seen along the roads and creeks in the forest. Seven nests were found, (10).

40. Brown Thrasher (Toxostoma rufum)- Only two birds were seen. J. Handlan and C. Conrad reported them on June 14, on U. S. Route 52, near Wayne.

41. Robin (Turdus migratorius)- Uncommon in the Forest area. It was seen in fairly good numbers in and around Wayne. Three nests were found, (11).

42. Wood Thrush (Hylocichla mustelina)- Abundant throughout the county, especially in the Forest. Eighteen nests were found, (12).

43. Bluebird (Sialia sialis)- Common, particularly around farms in the area and along the roads. Four nests, three of which were in martin boxes, (13).

44. Blue-gray Gnatcatcher (Polioptila caerulea)- Fairly common. Most records were from the hillsides and the ridge tops. No nests were found, presumably because the bird had completed it's nesting.

45. Cedar Waxwing (Bombycilla cedrorum)- Seen and heard quite frequently around the camp area and in the forest. One nest was found, (14).

46. Starling (Sturnus vulgaris)-Very uncommon. Practically all the records for this ubiquitous species were from the few cultivated fields in the area. One nest, near Ferguson.

47. White-eyed Vireo (Vireo griseus)-A common bird in suitable habitat. A pair was located beyond the end of the Tick Ridge study area, but intensive searching failed to locate the nest.

48. Yellow-throated Vireo (Vireo flavifrons)- Common: generally distributed in the Forest, more on the slopes and tops of the ridges.

49. Blue-headed Vireo (Vireo solitarius)- A pair was seen on several occasions at the lower edge of the Indian Trail study area. W. Davis saw and collected a single individual along the Sweetwater Branch of Twelvepole Creek. At the time of writing the subspecies identity of this specimen had not been determined, but probability is great that it will prove to be referable to the mountain vireo (V. s. alticola) which is known to breed in southeastern Kentucky. The finding of this species constitutes the outstanding record of the Foray.

50. Red-eyed Vireo (Vireo olivaceus)- Common. Generally distributed throughout the Forest and other wooded areas. A total of nine nests were found. (16).

51. Warbling Vireo (Vireo gilvus)- One record. C. Conrad saw a bird in Ferguson, June 7.

52. Black and White Warbler (Mniotilta varia)- Uncommon, though it was generally distributed in the Forest. G. Hall, E. R. Chandler, and others saw three young birds out of the nest on the Twelvepole Creek study area on June 10. (32).

53. Swainson's Warbler (Limnothlypis swainsonii)- One of the few outstanding records for the Foray was established by W. R. DeGarmo, E. Sims, G. Hall and others when three stations for this bird were established along Twelvepole Creek, June 12.

54. Worm-eating Warbler (Helminthos vermivorus)- Common, particularly along the ridges of the Forest. Young birds were seen and heard on the Tick Ridge study area by E. R. Chandler and the writer on June 12 and later. (33).

55. Parula Warbler (Parula americana)- A very common bird throughout the area. Most frequent on the slopes and ridge tops. Two nests and two records of young birds out of the nest were reported. (17) & (S-3).

56. Yellow Warbler (Dendroica retachia)- Common along the streams and creeks of the area. One record of a young bird seen out of the nest. (34).

57. Black-throated Green Warbler (Dendroica virens)- Common on the ridges but very uncommon or entirely lacking in the bottom-land of the Forest area. A very common bird in the Tick Ridge study area. One nest reported. (18).

58. Cerulean Warbler (Dendroica cerulea)- Uncommon. One of the surprises of the Ferray, at least for the writer, was the relative scarcity of this species.

59. Pine Warbler (Dendroica pinus)- On June 10, E. R. Chandler and the writer saw an adult bird feeding young out of the nest, in the Tick Ridge study area. The birds were also heard in the area on later trips. (35).

60. Prairie Warbler (Dendroica discolor)-Abundant in suitable habitat. One nest. (19).

61. Ovenbird (Seiurus aurocapillus)- Uncommon. Seen on the slopes and close to the top of the ridges in the Forest.

62. Louisiana Water-Thrush (Seiurus motacilla)- Fairly common along Twelvepole Creek. One nest was reported. (20).

63. Kentucky Warbler (Oporornis formosus)- Fairly common, although not as abundant as we had expected. Generally distributed in the Forest area. One nest was found, (21), and two records of young birds out of the nest, (S-4).

64. Yellow-throat (Geothlypis trichas)- Common, both in the valleys and on the ridge-tops.

65. Yellow-breasted Chat (Icteria virens)- Very common in brushy places and in uncultivated fields. Five nests were found. (22).

66. Hooded Warbler (Wilsonia citrina)- A common bird, especially on the slopes and the ridge-tops of the Forest. It was a very common species in the Tick Ridge study area. One nest. (23).

67. Redstart (Setorhaga ruticilla)- Very common in the hollows, but rare on the ridges. Three nests were found. (24).

68. English Sparrow (Passer domesticus)- Common on the roadsides near farms and in the towns and villages. One nest. (25).

69. Red-wing (Agelaius phoeniceus)- Only one record. On June 13, G. Hall saw two birds near Wayne, West Virginia.

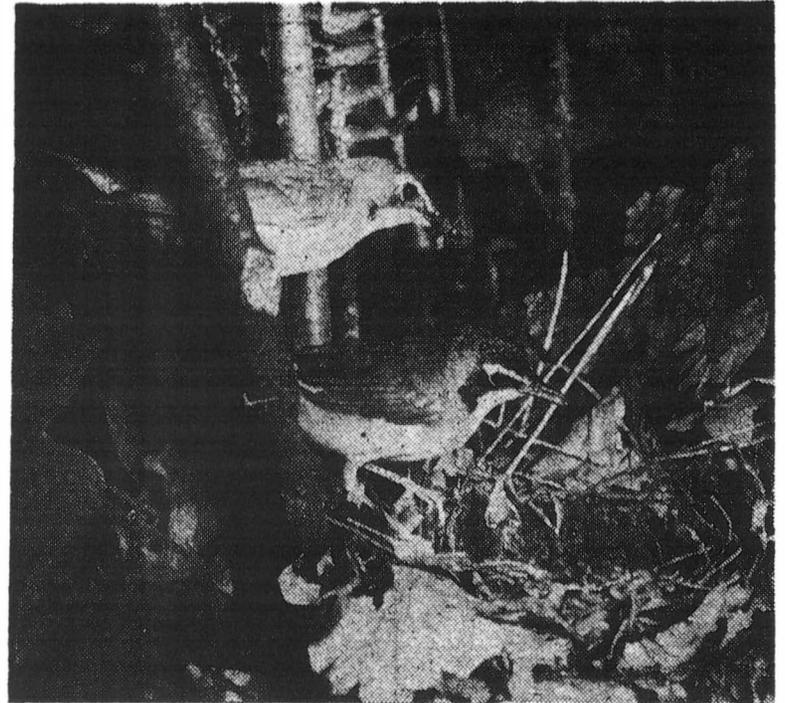
70. Orchard Oriole (Icterus spurius)- Three records, all in Wayne, by G. Hall and the writer.

71. Cowbird (Molothrus ater)-Rare in the forested areas and uncommon in the cultivated sections. No evidence of parasitism was found.

72. Scarlet Tanager (Piranga olivacea)- Common in all sections of the Forest.



Of the many nests found at the 1952 Foray this nest of the Parula Warbler was the most unusual. The piece of burlap, unbelievable as it seems, became attached to a tree branch in such a manner that it met the requirements of this particular Parula who built the nest and succeeded in raising a family.



The Kentucky Small Warbler was found to be one of the abundant warblers recorded at Cabwaylingo State Forest during the 1952 Foray. Several occupied nests were found and numerous observations made of young birds out of the nest. In the picture the male is at the bottom, the female above him.

73. Summer Tanager (*Piranga rubra*)- Common. The status of this and the above species appeared to be equal in the Forest. In brushy and more open areas the summer tanager seemed to be the more numerous. One nest. (26).

74. Cardinal (*Richmondia cardinalis*)- Fairly common in areas with suitable habitat. Three nests were found. (27).

75. Indigo Bunting (*Passerina cyanea*)- Very common along the roadsides and more open places in the area, especially along U. S. Route 52. One nest was found. (28).

76. Goldfinch (*Spinus tristis*)- Very common. Observed around the camp and Forest, also along U. S. Route 52 towards Wayne.

77. Red-eyed Towhee (*Pipilo erythrophthalmus*)- Uncommon. Most reports were from roadsides in the Forest. One nest was found. (29).

78. Vesper Sparrow (*Pooecetes gramineus*)- One record. D. Baker saw one bird on the Copley farm on Tick Ridge road on June 14.

79. Chipping Sparrow (*Spizella passerina*)- Very common. Wherever there was the slightest opening in the forest, this bird made itself heard. One nest was found and there were two reports of young birds out of the nest. (30) & (S=5).

80. Field Sparrow (*Spizella pusilla*)- A common bird in farming areas.

81. Song Sparrow (*Melospiza melodia*)- Uncommon in the Forest, common in more open areas along the roads. One young bird out of the nest was seen. More intensive work in suitable habitat would probably have disclosed more records. (36).

PART II

Breeding Records

The campers who attended the 1952 Foray recorded a total of 103 nests, which represented 30 species, plus records of six additional species based on observations of young birds out of the nest, making a total of 36 species.

On the face of it, this is a very low score, when compared with records of the past few years; however, there are some redeeming

factors. The ratio of breeding birds to resident birds provides a rough measure of the campers' efficiency in establishing breeding records. This percentage figure is contained in Table I.

Table I

Year	Resident Species	Breeding Species	% of Resident Species Found Breeding	Nests Found
1945 - -	79 - - - -	38 - - - -	48%	127
1946 - -	111 - - - -	40 - - - -	36%	130
1947 - -	94 - - - -	45 - - - -	48%	189
1948 - -	107 - - - -	47 - - - -	44%	115
1949 - -	122 - - - -	42 - - - -	34%	83
1950 - -	126 - - - -	57 - - - -	45%	132
1951 - -	127 - - - -	40 - - - -	32%	117
1952 - -	81 - - - -	36 - - - -	44%	103

It will be seen that, percentage-wise at least, the 1952 Foray produced results comparable to those of previous Forays. The undeniable fact that we had a very low number of nests found, can be explained by the absence of several of our best nest finders, either for the entire period of the Foray, or for most of it.

Table II consists of records of resident and breeding warblers for the past few Forays. Warblers have always been of particular interest to the members of the Brooks Bird Club, since West Virginia has so many species breeding within its boundaries.

Table II

Year	Resident Warblers	Breeding Warblers
1946 - - - - -	22 - - - - -	11
1947 - - - - -	22 - - - - -	9
1948 - - - - -	18 - - - - -	8
1949 - - - - -	18 - - - - -	8
1950 - - - - -	25 - - - - -	13
1951 - - - - -	22 - - - - -	5
1952 - - - - -	16 - - - - -	12

The table indicates that the members of the 1952 Foray did a very good job on the Warbler group; and when one considers the limited environment encountered, the results look very good indeed.

Nesting Data

A. Breeding records based on occupied nests.

1. Yellow-billed Cuckoo
 - a. Along campfire path, in hemlock, 10 feet*, June 8, Carol Conrad.
 - b. Twenty feet from entrance road, in beech, 25 feet, June 10, Nick Florea.
 - c. In Tick Ridge study area, along road, 6 feet in tree, June 14, Hicks.
2. Ruby-throated Hummingbird
 - a. Side road off U. S. Route 52, near Ferguson, W. Va., 20 feet on limb of white oak, young in nest, June 11, Conrad.
3. Flicker
 - a. Along Twelvepole Creek in camp area, 15 feet in telephone pole, young in nest, June 8, Teddy Heimerdinger.
 - b. In telephone pole, near Cabins 2 and 3, young in nest, June 10, Hal Harrison.
4. Phoebe
 - a. In ravine, back of store opposite Camp, nest on side of cliff, adult birds visiting nest, June 12, E. Sims.
 - b. In garage behind store opposite camp, 15 feet, on rafter, young in nest, June 11, M. Stahl.
 - c. On side of cabin #7, under the eave, 4 eggs, Marnie Murdoch June 11.
 - d. Along Sweetwater road, on cliff by roadside, very much exposed, adult bird on nest, June 14, Fostlethwaite.
 - e. Side of Sweetwater road, on cliff, bird on nest, June 14, Fostlethwaite.
 - f. Under bridge on Twelvepole Creek at cabins, on a girder, bird on nest, June 6, Harrison.
 - g. At cabin #7, under eaves, bird incubating, June 11, Jane Chandler.
 - h. Under bridge at camp entrance, on a girder, adult feeding young, June 13, Handlan.
 - i. Four miles up Twelvepole road from the end of hard surface, on rock face, 8 feet, young in nest, June 11, Hall.
 - j. Under bridge on Twelvepole Creek road at the administration building, on bridge girder, bird incubating, June 11, Ganier.

* Figure represents height of nest.

5. Acadian Flycatcher

- a. Along Twelvepole Creek, in birch, 5 feet high, 3 eggs, June 11, Sims.
- b. Two hundred yards from camp entrance, along Twelvepole Creek, 10 feet high in young elm, 3 eggs, June 10, Euverard.
- c. On camp entrance road, high in beech, bird incubating, June 10, Harrison.
- d. On Indian Trail study area, between stations 3 and 4, 20 feet in fork of tree, bird on nest, June 9, Freund.
- e. Along entrance road, 10 feet off road, 20 feet in elm, eggs in nest, June 9, Peg Mayo.
- f. On Twelvepole Creek at Cabin #2, 20 feet in beech, bird on nest, June 10, Freund.
- g. Up sideroad leading off Sweetwater road, 10 feet in beech, eggs in nest, June 12, Chandler.
- h. On Twelvepole Creek, 100 yards below camp, 10 feet in small maple, bird on nest, June 10, Postlethwaite.
- i. On Twelvepole Creek near camp, 20 feet in birch, June 13, Mathison.
- j. On Twelvepole Creek, at the foot of the study area, 6 feet above the water in a beech, 3 eggs, June 10, Mathison.
- k. Opposite entrance to Indian Trail, 20 feet in beech, young in nest, June 10, Sturm.
- l. Along road opposite camp fire circle, 15 feet in beech, adult bird on nest, June 9, Sturm.
- m. On Twelvepole Creek trail, about 200 yards past the swimming pool, in large beech, 15 feet, June 10, Beach.

6. Wood Pewee

- a. On entrance road near parking area, 25 feet in sycamore, bird on nest, June 14, Teddy Heimerdinger.
- b. Near farmhouse, on U. S. Route 52, near Ferguson, 20 feet in dead elm, in a cavity in the tree, June 11, Orpha Euverard. (Editors note. This is one for the books!)

7. Purple Martin

- a. On Tick Ridge road, in front of farmhouse, in martin house (colony), June 11, Stahl.
- b. On Tick Ridge road, in front of house near cemetery, in bird house, June 14, Stahl.
- c. Six miles up Twelvepole Creek road, from end of pavement, in martins house, June 11, Hall.

8. Tufted Titmouse

- a. In back of cabin on entrance road, 10 feet up in hollow of dead tree, male carrying food, June 10, Euverard.

9. Carolina Wren

- a. On supporting post underneath dining hall floor, 3 feet up, 3 young in nest, June 8, Dale Miller.
- b. On Sweetwater road, in mailbox, 5 eggs, June 14, Sims.

10. Catbird

- a. Near camp road, 20 feet up in pine tree, bird on nest, June 8, Carol Conrad & Teddy Heimerdinger.
- b. In yard across Twelvepole Creek, in birch, 6 feet up, 3 eggs, June 12, Sims.
- c. In yard across Twelvepole Creek, in a low bush, 1 egg, June 14, Sims.
- d. Near the road at the Tick Ridge fire tower, 8 feet up in grapevine, 2 eggs, June 9, Euverard.
- e. Along Twelvepole Creek, near Cabins 1 & 4, 15 feet up in pine, 4 eggs, June 9, Harrison.
- f. On the left side of Twelvepole Creek road, 10 feet up in willow, under construction, June 12, Marnie Murdoch.
- g. Below camp area on Twelvepole Creek, on a pile of flood debris, 3 young, June 13, Mathison.

11. Robin

- a. Beside Twelvepole Creek road, opposite swimming pool, on horizontal limb, 30 feet in tree, bird incubating, June 12, Euverard.
- b. On Twelvepole Creek across from custodian's house, 40 feet up in birch, June 10, Fostlethwaite.
- c. Near Cabin #3, in tulip tree, bird incubating, June 10, Sylvia Harrison.

12. Wood Thrush

- a. Near the camp road, 15 feet up in an oak, bird seen on nest, June 9, Kay Bowman.
- b. Along Twelvepole Creek, in elm, 20 feet, young birds in nest, June 8, Dale Miller.
- c. In parking area, 15 feet in sycamore, adult bird seen on nest, June 10, Dale Miller.
- d. On campfire trail, 20 feet in sycamore, 2 young, June 8, Teddy Heimerdinger.
- e. On hillside above drinking fountain, 12 feet in sourwood, June 12, Sims.
- f. Up the slope opposite the campfire circle, 15 feet in sycamore, bird on nest, June 12, Sims.
- g. One-fourth mile below camp on entrance road, 15 feet in young beech, June 8, Stahl.
- h. Twenty-five feet the road bank near the custodian's home, 6 feet in spicebush, 1 egg, June 9, Hester Chandler.
- i. Near Twelvepole Creek road, in white oak, bird incubating, June 10, Nick Florence.

12. Wood Thrush (cont.)

- j. On the entrance road, 20 feet in white oak, over the road, young in nest, June 10, Davis.
- k. On the Indian Trail, 20 feet in beech, eggs in nest, June 10, Fostlethwaite.
- l. One-fourth mile from the start of Sweetwater road, 20 feet in maple, adult bird carrying food, June 14, Fostlethwaite.
- m. On the right side of Sweetwater road, 30 feet in tulip, bird on nest, June 14, Fostlethwaite.
- n. Up the left fork of Sweetwater Branch, 20 feet in redbud, bird feeding young, June 14, Fostlethwaite.
- o. Near the road across from the Sportsman's Cafe, 25 feet in oak, under construction, June 12, Marion Freeman.
- p. On Twelvepole Creek trail east of the swimming pool, about 40 feet in basswood, bird incubating, June 10, Beach.
- q. Near Picnic area on Twelvepole Creek road, 10 feet in beech, eggs in nest, June 11, Jane Chandler.
- r. Near Cabin #3, 15 feet in tulip, eggs in nest, June 10, Sylvia Harrison.

13. Bluebird

- a. On U. S. Route 52 near Radnor, in martin house, young in nest, June 11, Kay Conrad.
- b. On U. S. Route 52 near Radnor, in martin house, young in nest, June 11, Kay Conrad. (not the same as 13-a.).
- c. In front of farmhouse near fire tower, 4 feet in fence post, 3 young in nest, June 14, Hicks.
- d. In front yard of home in Doane, W. Va., in a martin house, young in nest, June 6, Hall.

14. Cedar Waxwing

- a. In camp parking area, about 50 feet in sycamore, adults feeding young, June 12, Mike Williamson.

15. Starling

- a. About 10 miles from camp on U. S. Route 52 near Ferguson, 25 feet in tulip tree, birds entering the nest, June 11, Euverard.

16. Red-eyed Vireo

- a. In front of custodian's cabin, 30 feet in tulip, bird seen on nest, June 8, Dale Miller.
- b. On the slope beyond the Rec. Hall, 30 feet in tree, bird incubating, June 12, Euverard.
- c. On Twelvepole Creek near Cabins 1 & 4, 40 feet in white oak, young in nest, June 9, Harrison.
- d. On Tick Ridge road above camp, 15 feet in basswood on the top of the road bank, adult bird seen carrying food to the nest, June 10, Thacker.

16. Red-eyed Vireo (cont.)

- e. On the roadside by a cornfield, beyond the end of the Tick Ridge study area, 6 feet in a cherry tree, 1 egg, June 13, Freeman.
- f. On the bank of the camp entrance road, 10 feet in sycamore, young in nest, June 14, Chandler.
- g. On the Indian Trail, high in maple tree, bird on nest, June 10, Postlethwaite.
- h. On Twelvepole Creek opposite custodian's cabin, eggs in nest, June 10, Postlethwaite.
- i. On Twelvepole Creek study area at Station #2, in sweet gum, 3 young in nest, June 9, Hall.

17. Parula Warbler

- a. On Twelvepole Creek study area, 12 feet in hemlock, male bird feeding the young, June 10, Thacker.
- b. At the shelter house on Tick Ridge road just above camp, about 40 feet in hemlock, female bird seen leaving and returning to the nest, June 13, Naomi Moss and Chandler.

18. Black-throated Green Warbler

- a. At the N.W. corner of Indian Trail study area, 30 feet in white oak, adult bird seen feeding the young, June 10, Thacker.

19. Prairie Warbler

- a. Near observer's cabin at Tick Ridge fire tower, 10 feet in peach tree, female seen on the nest, June 14, Hicks.

20. Louisiana Water-Thrush

- a. On the bank of Wiley Branch, 1 foot off the ground, 3 eggs, June 13, Floyd Bartley.

21. Kentucky Warbler

- a. On hillside near Cabins 1 & 4, in a clump of Christmas fern, 4 young in nest, June 10, Mathison.

22. Yellow-breasted Chat

- a. On the bank of Sweetwater Branch above the road, 3 feet high in a blackberry bush, 1 egg, June 14, Sims.
- b. On the bank of Twelvepole Creek road opposite camp, 2½ feet high in witch hazel, 2 eggs, June 12, Sims.
- c. Near side road off U. S. Route 52 below Ferguson, W. Va., 5 feet in dwarf sumac, nest under construction, June 11 Heimerdinger.
- d. On hillside north of Twelvepole Creek road, in grape tangle, 1 egg, June 11, Mathison.

22. Yellow-breasted Chat (cont.)
e. Near the observer's cabin at Tick Ridge fire tower, in grape vine on sassafras, under construction, June 14, Hicks.
23. Hooded Warbler
a. In the camp area 30 feet up the hill from the drinking fountain, 4 feet high in hydrangea shrub, 3 eggs in the nest, June 11, Ganier.
24. Redstart
a. In the parking area, 20 feet in a sycamore, bird seen on the nest, June 10, Dale Miller.
b. On Sweetwater Branch, 30 feet in a beech tree, eggs in nest, June 9, George Harrison.
c. On path by Twelvepole Creek, 20 feet in an umbrella tree, young in nest, June 8, Mathison.
25. English Sparrow
a. At the Administration Building in the weather instrument station, nest under construction, June 13, Hall.
26. Summer Tanager
a. In front of the Rec. Hall, 10 feet in a walnut tree overhanging the road, birds seen on the nest, June 8, Dale Miller.
27. Cardinal
a. On the path to the camp fire circle, 15 feet in maple tree, nest under construction, June 10, Carol Comrad.
b. Beyond the grocery store on Twelvepole Creek road, 6 feet in a small pine tree, 4 young in nest, June 10, Stahl.
c. In Spruce Fork picnic area, 7 feet in cedar, young in nest, June 11, Chandler.
28. Indigo Bunting
a. Near observer's cabin at Tick Ridge fire tower, 7 feet in black locust, 3 eggs, June 14, Hicks.
29. Red-eyed Towhee
a. On the hillside above a barn on Twelvepole Creek road opposite camp, 2½ feet high in spirea bush, 3 young, June 14, Sims.
30. Chipping Sparrow
a. On path by Twelvepole Creek, 25 feet in a pine tree, young in nest, June 9, Mathison.

B. Additional breeding records based on young birds being fed by parents.

31. Hairy Woodpecker

- a. Adult birds seen feeding young in trees on parking area, June 12, Heimerdinger.

32. Black and White Warbler

- a. Three young birds seen out of the nest on Twelvepole Creek study area, June 10, Hall, Chandler, Scharr, Miller.

33. Worm-eating Warbler

- a. Young birds seen on the ground and in shrubs and low trees on Tick Ridge study area, June 12, Heimerdinger and Chandler.

34. Yellow Warbler

- a. Young bird seen in brush on Twelvepole Creek near Arkansas Branch, June 13, Hall & Davis.

35. Pine Warbler

- a. Adult feeding young birds in pitch pine tree on the Tick Ridge study area, June 10, Chandler & Heimerdinger.

36. Song Sparrow

- a. Young bird seen in thicket on Tick Ridge road, beyond the study area, June 13, Heimerdinger & Chandler.

C. Supplementary breeding records based on young birds of above reported species.

S 1. Acadian Flycatcher

- a. Young bird seen on Twelvepole Creek at Spruce Fork, June 10, Hall.

S 2. Carolina Wren

- a. Young birds seen on Tick Ridge study area, June 10, Chandler & Heimerdinger

S 3. Parula Warbler

- a. Young birds seen being fed by adults on Tick Ridge study area, June 12, Chandler & Heimerdinger.
b. Young birds seen on small hemlock on Tick Ridge road by members of early-morning bird walk, June. 8

S 4. Kentucky Warbler

- a. Young bird seen being fed by adult on slope in back of custodian's cabin, June 11, Everard.
b. Young bird seen on trail at Spruce Fork picnic area, June 11, Jane Chandler.

- S 5. Chipping Sparrow
 a. Young birds seen on camp grounds, June 5, Hall.
 b. Young birds seen at picnic area, June 5, Hall.

PART III

Results of the Nesting Contest

In accordance with the traditions of the Brooks Bird Club, a nesting contest was held. The campers were organized into three teams, Whites, Yellows, and Reds. In addition, the Junior Campers (those under 12 years of age) had their own team.

The Junior Team, although restricted to the area around the camp, and also hampered by the fact that they had only eight members on their team, gave a very good account of themselves.

The following are the results of the contest.

<u>Team</u>	<u>Captain</u>	<u>Nests</u>	<u>Species</u>	<u>Points</u>
Reds	D. Euverard	36	19	106
Whites	F. Kift	30	14	54
Yellows	D. Baker	22	14	48
Juniors	Carol Conrad & Teddy Heimerdinger	14	11	38

Girard, Ohio

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BREEDING BIRD POPULATION STUDIES, 1951

1. Young Northern Hardwood Forest.

LOCATION: Top of Canaan Mountain, 3 miles southeast of Davis, Tucker Co., West Virginia. SIZE: 15 acres (rectangular, 132 yards by 439 yards with one square projection 132 x 132 yards, chained). DESCRIPTION OF AREA: A mixed stand of deciduous northern hardwoods with narrow band of spruce plantation along one edge. Dominant trees 4 to 5 inches DBH, of red maple (Acer rubrum), beech (Fagus grandifolia), yellow birch (Betula lutea), and striped maple (Acer remnsylvanicum), with scattered mountain ash (Sorbus americana), mountain holly (Ilex monticola), and service berry (Cercis canadensis). The shrub layer

is sparse, consisting of scattered reproduction of above species together with black-berry (Rubus sp.) and hobble-bush (Viburnum alnifolium). Ground vegetation is also light except in more open spots. Most common herbs are hay-scented fern (Dennstaedtia punctilobula), bracken fern (Pteris aquilina), shield fern (Dryopteris sp.), Canada mayflower (Maianthemum canadense), wood sorrel (Oxalis montana), club mosses (Lycorodium spp.), and goldenrod (Solidago spp.) Portion of area in spruce plantation with dense stand of red spruce (Picea rubra), white spruce (P. canadensis) and Norway spruce (P. abies) to height of 30 feet. EDGE: One edge of spruce plantation, other dense stand of northern hardwoods. TOPOGRAPHY: West slope, gently rolling, elevation approximately 3750 feet. COVERAGE: June 12 to 16, 1951; early a.m. counts and one late p.m. count. Total man-hours 36½. CENSUS: Wood thrush, 8 (53); oven-bird, 6 (40); red-eyed vireo, 5 (33); rose-breasted grosbeak, 4.5 (30); Am. robin, 2.5; slate-colored (Carolina) junco, 2.5; eastern towhee, 2; blue jay, 1.5; ruffed grouse 1 (female with brood of 2 young flushed, female seen on another occasion and male heard drumming often); yellow-shafted flicker, 1; hairy woodpecker, 1; chestnut-sided warbler, 1; magnolia warbler, 1; common yellowthroat, 1; field sparrow, 1; screech owl, ½; black-capped chickadee, ½; Am. crow, ½; veery, ½; black-throated green warbler, ½; scarlet tanager, ½. Seen flying over area: Chimney swift, brown-headed cowbird, Am. goldfinch, cedar waxwing. TOTAL: 27 species: 39 territorial males (260 males per 100 acres). — BROOKS BIRD CLUB, INC. (reported by W. R. DeGarmo, Elkins, W. Va.).

2. Young Spruce Plantation.

LOCATION: Top of Canaan Mountain three miles southeast of Davis, Tucker Co., West Virginia, one-half mile from census area in young deciduous forest. SIZE: 35 acres (rectangular, 220 by 1320 yards, with one projection 55 yards square, paced). DESCRIPTION OF AREA: A young stand of planted spruce (Picea rubra, P. canadensis and P. abies) with trees open, and reaching heights to 25 feet. Trees intermixed with young red maple (Acer rubrum), mountain holly (Ilex monticola), mountain ash (Sorbus americana), hemlock (Tsuga canadensis), service berry (Cercis canadensis), mountain laurel (Kalmia latifolia), rhododendron (Rhododendron maximum), striped maple (Acer pennsylvanicum), wild raisin (Viburnum cassinoides), and chokecherry (Prunus sp.), blueberry (Vaccinium spp.) and huckleberry (Gaylussacis sp.) and blackberry (Rubus spp.). Most common herbs are: bracken (Pteris aquilina) hay-scented fern (Dennstaedtia punctilobula), cinnamon fern (Osmunda cinnamomea), golden-rod (Solidago spp.), painted trillium (Trillium undulatum), dwarf cornel (Cornus canadensis) and club mosses (Lycorodium spp.). EDGE: Same as census area except for generally larger growth of trees along one side on lower slope. TOPOGRAPHY: Gently sloping from crest of mountain, elevation approximately 3750 feet. COVERAGE: June 11 to 16, 1951, five early a.m. counts and three late p.m. coverages. Total man-hours, 40½. CENSUS: Chestnut-sided warbler 6 (17); magnolia warbler, 5 (14); common yellowthroat, 4.5 (13); Carolina junco, 4.5 (13); hermit thrush, 3.5 (10); eastern towhee, 3 (9);

Nashville warbler, 2; catbird, 1; brown thrasher, 1; Am. robin, 1; purple finch, 1; black-billed cuckoo, .5; rose-breasted grosbeak, .5; yellow-shafted flicker, $\frac{1}{2}$; blue jay, $\frac{1}{2}$; Am. crow, $\frac{1}{2}$; cedar waxwing, $\frac{1}{2}$; brown-headed cowbird, $\frac{1}{2}$; Am. goldfinch, $\frac{1}{2}$; field sparrow, $\frac{1}{2}$. TOTAL: 20 species; 33.5 territorial males (96 males per 100 acres).
BROOKS BIRD CLUB, INC. (Reported by W. R. DeGarmo, Elkins, W. Va.).

3. Wooded Marsh.

LOCATION: Bordering Blackwater River, west of State Route 32 in Canaan Valley, Tucker Co., West Virginia (nearest post office, Davis). SIZE: 15 acres (rectangular, 132 by 572 yards, paced). DESCRIPTION OF AREA: A mixed marsh, about half open stands of burreed (Spartanium acaule), sedge (Carex rostrata), and rush (Juncus brevicaudatus and J. effusus); and woody vegetation of alder (Alnus incana), meadow-sweet (Spiraea sp.), shrubby St. John's wort (Hypericum prolificum), willow (Salix sp.) and a few balsam fir (Abies balsamea). A portion of the area was occupied with a series of small ponds and interconnecting ditches, totaling $\frac{3}{4}$ acre, which were blown with dynamite in 1948 in an experimental muskrat development. EDGE: One edge occupied by dense alder thickets, other by open sedge-rush marsh. TOPOGRAPHY: Nearly level, elevation 3200 feet. COVERAGE: June 11-16, 1951, early a.m. and late p.m. Total man-hours, 12. CENSUS: Swamp sparrow, 9 (60); common yellowthroat, 7 (47); Traill's flycatcher, 4 (27); chestnut-sided warbler, 3 (20); red-winged blackbird, 2; short-billed marsh wren, 1; song sparrow, 1; house wren, .5; veery, .5; Canada warbler, .5; Am. bittern, $\frac{1}{2}$; marsh hawk, $\frac{1}{2}$; Am. woodcock, $\frac{1}{2}$; downy woodpecker, $\frac{1}{2}$; blue jay, $\frac{1}{2}$; Am. crow, $\frac{1}{2}$; red-breasted nuthatch, $\frac{1}{2}$; catbird, $\frac{1}{2}$; Am. robin, $\frac{1}{2}$; cedar waxwing, $\frac{1}{2}$; magnolia warbler, $\frac{1}{2}$; brown-headed cowbird, $\frac{1}{2}$; Am. goldfinch, $\frac{1}{2}$; Savannah sparrow, $\frac{1}{2}$. TOTAL: 24 species; 2815 territorial males (190 males per 100 acres).
BROOKS BIRD CLUB, INC. (Reported by W. R. DeGarmo, Elkins, W. Va.).

4. Brushy Field.

LOCATION: One mile north of Davis, Tucker Co., West Virginia, along State Route, 32. SIZE: 70 acres (rectangular, 440 by 770 yards, paced). DESCRIPTION OF AREA: A more or less open field with invasion of woody species just beginning following a series of severe burns as late as 1930. One-half of area pastured and under fence. Ground vegetation on pastured portion contains some grasses, primarily blue-grasses (Poa sp.) and poverty grass (Danthonia sp.); otherwise a rather dense growth of such herbs as bracken fern (Pteris aquilina), hay-scented fern (Dennstaedtia punctilobula), cinquefoil (Potentilla canadensis), strawberry (Fragaria virginiana), joe-pye weed (Euratorium purpureum), yarrow (Achillea millefolium), golden-rods (Solidago spp.) and asters (Aster spp.). Two small drainages traverse the area, supporting dense growths of rice cut-grass (Leersia oryzoides), rush (Juncus effusus and J. brevicaudus), sedge (Carex sp.), jewelweed (Impatiens biflora), upland boneset (Euratorium sessilifolium) and a low growing will (Salix sp.) The area is being invaded to varying

degrees by deciduous trees and shrubs hence, supports a scattered growth of red maple (Acer rubrum), service berry (Cercis canadensis), hawthorn (Crataegus sp.), black cherry (Prunus serotina), choke cherry (P. virginiana), mountain holly (Ilex monticola), wild raisin (Viburnum cassinoides) and dentate viburnum (V. dentatum). EDGE: Similar in most respects to the pastured or un-pastured portions. Pastured portion bounded on one side by un-pastured field similar to remainder of census area. At one end the growth of shrubby vegetation is more dense, composed primarily of wild raisin. TOPOGRAPHY: Very gently sloping to nearly level, elevation approximately 3100 feet. COVERAGE: June 11-16, 1951, early a.m. on most dates. Two counts in mid a.m. Total man-hours, 33. CENSUS: Common yellowthroat, 5 (7); song sparrow, 4.5 (6); Savannah sparrow, 3 (4); field sparrow, 3 (4); brown thrasher, 2.5; Am. robin, 2; killdeer, 1; horned lark, 1; eastern meadowlark, 1; eastern towhee, 1; spotted sandpiper, .5; Am. woodcock, $\frac{1}{2}$; common raven, $\frac{1}{2}$; common starling, $\frac{1}{2}$; red-eyed vireo, $\frac{1}{2}$; red-winged blackbird, $\frac{1}{2}$; brown-headed cowbird, $\frac{1}{2}$; Am. goldfinch, $\frac{1}{2}$; Henslow's sparrow, $\frac{1}{2}$; vesper sparrow, $\frac{1}{2}$. TOTAL: 20 species; 24.5 territorial males (35 males per 100 acres). ← BROOKS BIRD CLUB, INC. (Reported by W. R. DeGarmo, Elkins, W. Va.).

BREEDING BIRD POPULATION STUDIES, 1952

By George A. Hall

At the 1952 Foray the Brooks Bird Club carried out its fifth series of quantitative breeding bird population studies. The three censuses for this year now bring the number of such studies carried out by this group to sixteen. This year a total of twenty one persons devoted about ninety man-hours to the project.

Cabwaylingo State Forest does not offer as wide a selection of habitats as some of the areas worked in the past, and so while the three areas studied were sufficiently different to merit individual study, the differences in the populations, and in the species which occurred, between the several areas are not very pronounced. A total of thirty three species were recorded on the three areas, with eleven additional species being listed as visitors. Of these, fourteen species were found in all three areas and seven were recorded in only one area. It is interesting to note that all three areas had essentially the same number of species. Table 1 gives a comparison of the results obtained on the three areas.

Table 1

<u>Study Area</u>	<u>Species</u>	<u>Density (Males per 100 acres)</u>
Upland Oak-Hickory		
Second Growth Forest (Tick Ridge)	23	266
Mature Mixed Hardwoods (Indian Trail)	23	275
Bottomland Hardwoods (Twelvepole Creek)	26	328

As might be expected the Creek bottom habitat produced the highest population, but it is remarkable that despite the great difference in habitat, and the differences in the species which occurred, the Tick Ridge area and the Indian Trail area gave almost identical results in both number of species and in density of population.

The black-throated green warbler presents the most interesting comparison between the three areas. This was the dominant bird (9.5 pairs) on the top of Tick Ridge (1200 ft.); it decreased to 3.5 pairs on the lower slopes of the ridge at Indian Trail and was nearly absent along Twelvepole Creek. On the other hand the hemlock, with which this bird is often associated was concentrated in the lower elevations. It seems to be fairly typical of this bird in West Virginia, that it does not require hemlock or other conifers. It is indeed striking that the populations of the hooded warbler parallel the black-throated green almost exactly. The hooded was the third most abundant bird on the ridge top, was of moderate occurrence along Indian Trail, and barely occurred along Twelvepole Creek.

The redstart was the third most abundant bird in the Twelvepole Creek bottoms and was completely absent from the other two areas.

Only the red-eyed vireo had high populations in all three areas and it was the second most abundant bird in each of them.

The Acadian flycatchers present a most interesting problem. They were completely absent from the ridge top as was to be expected, but they were the most abundant bird in each of the other two areas. This species is difficult to census and the assignment of the population figures is subject to a considerable uncertainty. The "dawn" song, which is to be heard for only twenty to thirty minutes at sunrise, seems to be the most reliable indicator of the location of a territorial male. This song was used in determining the population in the bottomland area and the figure of nine pairs for the area is probably fairly accurate. Unfortunately this technique was not used on the Indian Trail census and the figure of nine-pairs on that area is highly uncertain. The density may well be higher than that but a conservative choice was made. It is interesting to note that along Twelvepole Creek the density of flycatchers is actually about twice the listed 56 pairs per 100 acres since the birds were concentrated in approximately one-half of the study area which was the actual creek bottom.

Of the eleven pairs of parula warblers listed in the three areas seven were found in areas of hemlock and four were found in sections where hemlock did not occur.

It is probable that the occurrence of Swainson's warbler in the Twelvepole Creek area marks the first time this species has appeared in a published census.