BREEDING BIRDS OF MOHICAN, 1981

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Mohican State Park and Forest in Ashland County, Ohio, has been a favorite haunt of naturalists for many years. The Clearfork Gorge in particular has been noted to contain a variety of flora and fauna rare elsewhere in the state. The biological uniqueness of Clearfork Gorge is based on the striking geomorphology. The gorge, just downstream from the glacial boundary, is unusually steep-sided and positioned on an east-west axis. The microclimate of ths south-facing slope is obviously different from the north-facing slope, and the plant communities respond accordingly. Floral elements typical of certain Michigan and Ontario habitats dominate the north-facing slope, while the south-facing slope is vegetated by species more usual in north-central Ohio or more southerly. There is considerable interdigitation of vegetational types on both slopes.

Birds and other animals are attracted to habitats to which they are adapted. Breeding individuals of a species select sites of an appropriate vegetational configuration for survival and reproductive success. Thus bird communities often "track" plant communities in geographic distribution within a region. It can be expected that a mingling of northern and southern habitat types in an area will attract an amalgamation of both northern and southern birds.

Mohican State Park was, therefore, considered an ideal location for the first Breeding Birds Workshop sponsored by the Ohio Department of Natural Resources, Division of Parks and Recreation. Several birders have previously reported summer occurrence and possible breeding of unusual birds here, including accidentals. The purpose of this workshop, held June 5-7, 1981, was to familiarize participants with the techniques used in censusing bird communities and to accurately census the breeding avifauna in a large portion of the Clearfork Gorge. We furthermore hoped to document the occurrence of those rare species reported from the area. Workshop leaders, all competent birders who confirmed each observation, were Reed Noss and John Means of O.D.N.R., Division of Parks and Recreation, Steve McKee and Merrill Tawse of the Richland County Park District, Dave Waller of Kent State University and Paul Knoop of the Aullwood Audubon Center and Farm.

The study area included much of the Clearfork Gorge, both north and south slopes, although actual acreage was not determined. We also censused the vicinity of the Mohican State Park Lodge, immediately upstream from the dam and gorge. We used an auditory/visual open strip technique, counting all adult birds seen or heard from the transect path. Species-specific differences in conspicuousness and detectability undoubtedly bias our relative abundance figures, but the open strip method was judged most suitable in terms of completeness for a two-day census (approximately 12 field hours) of this large area. No attempt was made to determine absolute abundances or densities. Two important transects were censused twice, by separate groups, and the number of individuals contributed to the total was the larger of the two figures reported from the area for each species. The following is the list of 75 species observed, in order of relative abundance; the number after each species represents the total number of individuals observed in the overall census area.

Those species outside of normal range here (according to Peterson, 1980 or Trautman and Trautman, 1968) are marked with an asterisk.

Red-eyed Vireo	54	Great Blue Heron	6
Acadian Flycatcher	48	Belted Kingfisher	6
Eastern Wood Pewee	28	*Magnolia Warbler	6
Indigo Bunting	26	Song Sparrow	6
Turkey Vulture	25	Yellow-billed Cuckoo	5
Common Crow	21	Barred Owl	5
Brown-headed Cowbird	21	Carolina Chickadee	5
Hooded Warbler	20	*Pine Warbler	5
Tufted Titmouse	20	Catbird	4
American Robin	19	Cedar Waxwing	4
Cerulean Warbler	19	Yellowthroat	4
Scarlet Tanager	16	Rufous-sided Towhee	4
Cardinal	16	Red-shouldered Hawk	3
Chipping Sparrow	16	Pileated Woodpecker	3
Louisiana Waterthrush	15	Least Flycatcher	3
Blue-gray Gnatcatcher	15	Rough-winged Swallow	3
*Yellow-throated Warbler	14	White-breasted Nuthatch	3
American Redstart	13	Mourning Dove	2
Great Crested Flycatcher	11	Eastern Phoebe	2
Blue Jay	11	Barn Swallow	2
Ruby-throated Hummingbird	10	House Wren	2
Red Bellied Woodpecker	10	*Winter Wren	2
Kentucky Warbler	10	*Black-throated Blue Warbler	2
House Sparrow	10	Cooper's Hawk	1
*Veery	9	Red-tailed Hawk	1
Yellow-throated Vireo	9	Broad-winged Hawk	1
Black-and-White Warbler	9	Ruffed Grouse	1
*Black-throated Green Warbler	9	Whip-poor-will	1
Ovenbird	9	Common Flicker	1
Common Grackle	9	Hairy Woodpecker	1
American Goldfinch	9	Eastern Kingbird	1
Wood Duck	8	*Olive-sided Flycatcher	1
Chimney Swift	8	White-eyed Vireo	1
Downy Woodpecker	8	Warbling Vireo	1
Wood Thrush	8	Red-winged Blackbird	1
*Worm-eating Warbler	7	Rose-breasted Grosbeak	1
*Canada Warbler	7	Field Sparrow	1
Northern Oriole	7		

The Ohio birder will readily note that the above list contains several rarities. These are species of very restricted distribution in Ohio, birds north of their usual ranges and birds south of their usual ranges. At least two species don't normally occur at all during the breeding season in Ohio.

A general assumption of breeding bird surveys like this one is that all species observed in the study area during the designated period are actually breeding there. Census methods are designed to assure reliability within somewhat hazy probability limits. The discovery of an active nest, of course, confirms breeding by a species, but this is not a tractable census method in large areas. Nest-finding invariably yields an incomplete sample of the species actually breeding in the area. Auditory/visual census, on the other

hand, are samples which may include species in reality represented only by transient or vagrant individuals within the study area. The list of supposedly breeding birds may thus be unrealistically inflated.

It is our opinion that censuses of the type reported here yield a list that corresponds to "probable" nesters. In particular cases, however, knowledge of the individual species involved allows further discrimination of the data. We believe that at least three of the species on our list were probably not breeding in the study area. The two winter wrens we observed were both males which roamed large streamside parcels and sang repeatedly. It is possible that both birds were defending unusually large, linear territories with nesting females (winter wrens are commonly polygynous), but it is most prudent to conclude that the males were unmated and still advertising their availability. Our observations failed to yield any females.

The one olive-sided flycatcher on the list was probably a late transient and to our knowledge was not seen later in the summer. The six great blue herons were most likely individuals foraging from a rookery a couple miles away. At lease some of the turkey vultures probably nested on the more inaccessible slopes of the gorge. Chimney swifts nest in man-made structures within the general study area, as do barn swallows. The two black-throated blue warblers we observed were males but their apparently fixed territories suggest they had mates. Documentation of nesting by the unusual species we observed awaits patient, careful study which does not endanger nesting success.

As mentioned in the introduction, the north and south slope aspects of the Clearfork Gorge support biotic elements from northern and southern climes. Birds north of their normal ranges here are the yellow-throated warbler and worm-eating warbler. The Carolina chickadee, white-eyed vireo and Kentucky warbler are near the northern edge of their usual ranges. The winter wren, veery, black-throated green warbler, Canada warbler, magnolia warbler and black-throated blue warbler are south of their normal ranges (or west of the Appalachian extension of the range). The least flycatcher and rose-breasted grosbeak are near the southern edge of their ranges. The pine warbler, although it breeds both north and south of this area, is a notable occurrence here.

We have not documented any first or accidental nesting records for Ohio with this study. We have, however, uncovered an unusual assemblage of breeding birds with several species outside of their normal ranges, both north and south. With about 71 species assumed to be nesting, it is obviously a diverse assemblage. The unique physiographic and physiognomic character of the Mohican area attracts an avifauna that is not predictable by looking at general range maps (Peterson, 1980) or annotated lists (Trautman and Trautman, 1968).

Literature Cited

Peterson, R. T. 1980. A field guide to the birds of eastern and central North America, 4th ed. Houghton Mifflin, Boston. 384 p.

Trautman, M. B. and M. A. Trautman. 1968. Annotated list of the birds of Ohio. Ohio J. Sci. 68: 257-332.