

Woodcock Singing Ground Descriptions for Two Indiana Sites

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Abstract

The American Woodcock, *Philohela minor*, has a statewide breeding distribution in Indiana. While conducting a survey of woodcock activity on singing grounds in the spring of 1968 we found that singing ground cover requirements were more comprehensive than anticipated. Two contrasting areas were selected which were known singing grounds, one in Randolph Co. and one in Delaware Co. The Delaware Co. site is situated in cultivated fields with subdivisions in close proximity. The Randolph Co. site is also in a cultivated area but due to poor drainage the site proper has minimal disturbance. No subdivisions are located near the Randolph Co. site. A description was made of each site on the basis of vegetation, soils, drainage, land use and the more common fauna.

Introduction

The American woodcock (*Philohela minor*) has a statewide breeding distribution in Indiana. While conducting a survey of woodcock activity on singing grounds during April and May 1968, we noted that singing ground cover requirements appeared to be quite broad. A search of the literature revealed no descriptions of singing grounds in Indiana.

Study areas in Delaware and Randolph Counties were chosen after woodcock were known to be using them as singing grounds. Field work was conducted during June.

Delaware County Study Area

The site chosen for the following description was considered typical of several woodcock singing areas located north of Muncie in central Delaware county. The site is located at T21N, R9E, Sec 25, NE $\frac{1}{4}$. The general area is one of rolling cultivated land, with occasional small woodlots and scattered subdivisions. The woodlots are generally oak-hickory stands with a brushy understory indicating a history of intensive timber removal. The subdivisions are composed of one story homes usually on half acre lots with virtually no trees.

The site surveyed was one of cultivated fields through which a small dredged stream, Jake's Creek, flows in a southwesterly direction. A small stand of trees is located approximately three hundred yards to the south of the stream. The singing birds had been heard in the cultivated fields north of and adjacent to the stream. North of the surveyed area is a complex of old farm buildings used only for implement storage. North of the barns and across a road, is a small housing development. There is no evidence of livestock pastured in the singing area. The land use for the past few years has been that of cash grain crops.

Jake's Creek is located about eight feet below the general land level due to dredging. It averages about six feet in width, is relatively

deep for its width, has a low turbidity and is a perennial stream. A strip of natural vegetation 35 feet on each side parallels the creek channel.

The soils represented in the singing area are of the Morley-Blount-Pewamo series.

The cultivated fields on both sides of the stream have been under apparently continuous crop cover for some years with soybeans, wheat, oats, and corn evident this current year. The strip along the stream was composed of small trees, shrubs, and herbaceous plants. The dominant plant of the herbaceous species was Redtop (*Agrostis vulgaris*); dominance was shared in the woody plants by several species. The following is a list of the woody plants present on the surveyed area: Black walnut (*Juglans nigra*), Pignut hickory (*Carya glabra*), Shagbark hickory (*Carya ovata*), Hackberry (*Celtis occidentalis*), White ash Hawthorn (*Crataegus spp.*), Red-osier dogwood (*Cornus stolonifera*), Honeylocust (*Gleditsia triacanthos*), Black willow (*Salix nigra*), Boxelder (*Acer negundo*), Bur oak (*Quercus macrocarpa*), and Smooth sumac (*Rhus glabra*). The herbaceous plants were: Redtop (*Agrostis alba*), Wild parsnip (*pastinaca sativa*), Wild carrot (*Daucus carota*), Common ragweed (*Ambrosia trifida*), Red clover (*Trifolium erectum*), Dandelion (*Taraxacum officinale*), Chicory (*Cichorium intybus*), Common milkweed (*Asclepias syriaca*), Wild rose (*Rosa virginiana*), Burdock (*Arctium lappa*), Horseweed (*Erigeron canadense*), Common thistle (*Cirsium lanceolatum*), Canada thistle (*Cirsium arvense*), Teasel (*Dipsacus sylvertria*), Wild morning glory (*Ipomoea spp.*), Sweet clover (*Melilotus alba* and *M. officinalis*), Poison ivy (*Toxicodendron radicans*), Wild lettuce (*Lactuca canadensis*), Dock (*Rumex spp.*), Green foxtail (*Setaria viridis*), Timothy (*Phleum pratense*), Moth mullein (*Verbascum blattaria*), and Great mullein (*Verbascum thapsus*).

The birds listed were actually seen while some of the animals were included on the basis of various indications of their presence. The birds observed were: mourning dove (*Zenaidura macroura*), purple martin (*Progne subis subis*), barn swallow (*Hirundo rustica erythrogaster*), bank swallow (*Riparia riparia riparia*), goldfinch (*Spinus triatis triatis*), redwing (*Agelaius phoeniceus*), sparrow (*Passer domesticus domesticus*), bronzed grackle (*Quiscalus versicolor*), and bobwhite (*Colinus virginianus*). The mammals observed or which gave evidence of their activities were: deer mouse (*Peromyscus leucopus*), meadow mouse (*Microtus pennsylvanicus*), muskrat (*Ondatra zibethica*), woodchuck (*Marmota monax*), and raccoon (*Procyon lotor*).

Randolph County Study Area

Cabin Creek Bog was the location of a woodcock singing ground in Randolph county. The bog is located about 500 feet south of Cabin Creek on Indiana State Hwy. #1. The topography of the region is rolling with several smaller bogs nearby. The Cabin Creek Bog was selected due to the contrast it presents to the site described in Delaware county. The

bog is elevated above the general terrain and perennial springs flow from its highest points. The area surrounding the bog is farmland of moderate quality mainly in the U. S. Soil Conservation Service Land Capability Classes of III and IV. Woodcock have been observed singing and nesting in the bog proper for many years.

The soil is peaty, probably Rifle peat, and very unstable to walk upon. The soil in the bog stays wet throughout the summer as evidenced by the many springs flowing from the bog.

The more dominant plants in the bog are given here. On the western side, above a marshy border of *Carex spp.*, *Juncus spp.*, and Skunk cabbage (*Symplocarpus foetida*) the dominants are mainly prairie plants and occur in the open. This area is covered with small hummocks formed by plant roots and peat, the most prevalent plant appears to be Prairie dock (*Silphium terebinthinaceum*) and several grasses, Big and Little Bluestem (*Andropogon gerardii* and *A. scoparius*), Indian grass (*Sorghastrum nutans*), and Panic Grass (*Panicum implicatum*). The center of the bog, used by nesting woodcocks, is the location of groves of small trees and shrubs that have formed an overstory. The main plants of this area are Ninebark (*Physocarpus opulfolius*) and Quaking aspen (*Populus tremuloides*). A large variety of other shrubs and trees occupy this area in association with the aspen and Ninebark. There are: Dogwood (*Cornus stolonifera* and *C. obliqua*), Sumac (*Rhus vernix*), Buckthorn (*Rhamnus laceolata*), Viburnum (*V. lantago*), Willow (*Salix spp.*) and Hazelnut (*Corylus americana*). East of the bog center is another open area dominated by the Shrubby cinquefoil (*Potentilla fruticosa*).

The mammals of the area include the meadow jumping mouse (*Zapus hudsonius*), shorttail shrew (*Blarina brevicauda*), eastern mole (*Scalopus aquaticus*), and the red fox (*Vulpes fulva*). Birds observed include bronzed grackle and flicker (*Colaptes auratus*).

Discussion and Conclusions

Delaware County singing ground surveyed was selected because it was very typical of the other singing grounds in east-central Indiana. It had relatively little cover and was located in the proximity of houses. Some of the other singing grounds in the country were situated between subdivisions with houses located within two hundred feet in either direction. There was some evidence of a correlation between soil types and woodcock breeding areas. Most of the breeding grounds were located on Pewamo silty clay loams. This soil type has a high moisture holding capacity; in Delaware county it is generally artificially drained.

The Randolph County singing ground is relatively undisturbed by agricultural activities. There is open space as is required for singing grounds (2, 3) as well as a soft soil suitable for probing for food. Scattered shrubs are present as Marshall (1) found on Minnesota singing grounds.

The American woodcock is apparently not uncommon in east-central Indiana. Its singing grounds are located in cover types that are very extensive as well as in some unusual less extensive types.

Literature Cited

1. MARSHALL, WILLIAM H. 1958. Woodcock singing grounds at the Cloquet Experimental Forest, 1947-1956. *Trans. N. American Wildl. Conf.* p. 296-305.
2. MENDALL, HOWARD L., and CLARENCE M. ALDONS. 1943. The ecology and management of the American Woodcock. Maine Cooperative Wildlife Research Unit, Orono. 202 p.
3. STUDHOLME, ALAN T., JOHN D. BUELE and RUSSELL T. NORRIS. 1940. A Study of Pennsylvania Woodcocks. *Pa. Game News* **11**(11):6-7, 23, 30.