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DISTRIBUTION AND POPULATION ESTIMATES OF OHIO WILD TURKEYS (*MELEAGRIS GALLOPAVO*), 1981-82¹

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ABSTRACT. This survey assembles all of the occupied range data on the wild turkey (*Meleagris gallopavo*) in Ohio and places population estimates on this distribution. Population estimates for the 1982 winter-spring period ranged from 5,374 to 15,354 over 7,677 km² of range. The survey showed turkeys in 12 counties that were not open for spring hunting (Ashland, Ashtabula, Belmont, Columbiana, Coshocton, Fairfield, Harrison, Knox, Licking, Muskingum, Trumbull, and Tuscarawas). Harvest recommendations for future seasons should consider these counties. Further, wild turkey transplants to unoccupied range should continue and be restricted to areas devoid of game farm turkeys.

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INTRODUCTION

Successful reestablishment of the wild turkey (*Meleagris gallopavo*) in Ohio has been described by Donohoe and McKibben (1970, 1971, 1973a, 1973b).

Since their reports, field surveys have shown a substantial increase in abundance of the wild turkey, due in part to a continued live-trapping and transplanting program by the Ohio Department of Natural Resources, Division of Wildlife. From February 1956 to February 1982, 777 wild turkeys were released in 44 wooded sites of eastern Ohio.

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Nine counties were open in 1966 for Ohio's first wild turkey hunting season in 64 years; 12 turkey gobblers were harvested. In the 1982 season, 651 gobblers were harvested in 20 open counties. Altogether, 2,803 birds have been bagged in 17 spring hunts (Donohoe et al. 1982).

Because of the apparent increase in wild turkeys, a statewide survey was initiated to update their distribution and density. This paper reports on the results of the survey.

METHODS AND MATERIALS

State game protectors and wildlife management personnel of the Division of Wildlife were asked to identify the occupied range of wild turkeys in their areas during the fall and winter of 1981-82. Occupied range was determined on the basis of turkeys heard, seen, turkey sign, trapping and harvest data, and reliable reports from interested citizens. The occupied range identified was outlined on county maps and sent to project headquarters where acreages were determined with a compensating polar planimeter and modified acreage grid and then converted into square kilometers.

Occupied wild turkey range in Ohio includes large areas of upland hardwood forests, smaller tracts of timber in woodlots and travel lanes, reverting fields, pastures, and croplands. In many places, these cover types are interspersed over sizable areas and apparently are providing the wild turkey with the proper food and cover needed to maintain a viable population.

Population density estimates of the occupied eastern wild turkey range in Ohio were derived from snow track counts, observations, and gobbling counts on a 19.7 km² study area in Vinton County. The Ohio estimates were then compared with those reported for surrounding states with similar range (Lewis 1980, J. Lewis of Missouri, T. Little of Iowa, J. Garver of Illinois, D. Major of Indiana, J. Pack of West Virginia, and J. Wunz of Pennsylvania 1982 pers. comm.).

RESULTS AND DISCUSSION

Present wild turkey distribution in Ohio is limited to the eastern and south-central portions of the state. Turkeys occupy parts or all of 229 townships in 32 counties totaling 7,677 km² of range (table 1 and fig. 1). Vinton County has the most occupied turkey range, more than 1,041 km²; Fairfield County has the least, less than 13 km².

Counting wild animals accurately is difficult; counting wild turkeys is no excep-

TABLE 1
Areas of occupied wild turkey range in Ohio, 1981-82.

County	Km ²	County	Km ²
Adams*	466.5	Jefferson*	162.4
Ashland	35.0	Knox	23.8
Ashtabula	180.5	Lawrence*	427.1
Athens*	380.2	Licking	18.1
Belmont	36.0	Meigs*	279.2
Carroll*	120.2	Monroe*	216.3
Columbiana	285.4	Morgan*	268.6
Coshocton	46.9	Muskingum	25.4
Fairfield	12.4	Perry*	202.3
Gallia*	136.2	Pike*	362.3
Guernsey*	93.5	Ross*	484.3
Harrison	38.9	Scioto*	905.5
Highland*	73.6	Trumbull	62.7
Hocking*	510.2	Tuscarawas	198.9
Holmes*	189.8	Vinton*	1,041.7
Jackson*	285.7	Washington*	107.2
		State total	7,676.8

*Counties open for 1982 spring hunting

tion. Exact counts of the bird over large, diverse cover types is impossible. The best one can hope for are reliable population samples.

Recent data (unpubl. Division of Wildlife 1980, 1981, 1982) from a 19.7 km² study area in Vinton County gave the following results: A snow track census by division field personnel on 25 January 1980 located 13 turkeys, or 0.7 birds per km²; between 2 March and 20 March 1981, project personnel identified 3 different flocks totaling 37 turkeys, or 1.9 birds per km², and project personnel heard 20 gobblers in the early morning of 10 April 1982. Assuming an even sex ratio, this count provided a minimum population estimate of 40 turkeys, or 2.0 birds per km².

Wild turkey densities probably differ in different parts of the range. The reasons are not clear. The winter-spring population estimates presented here show a range of 0.7-2.0 birds per km² or a statewide population estimate of 5,374-15,354.

The Missouri Department of Conservation recently completed a 15-year (1965-1979) trapping, banding, and recovery data study on the eastern wild turkey in

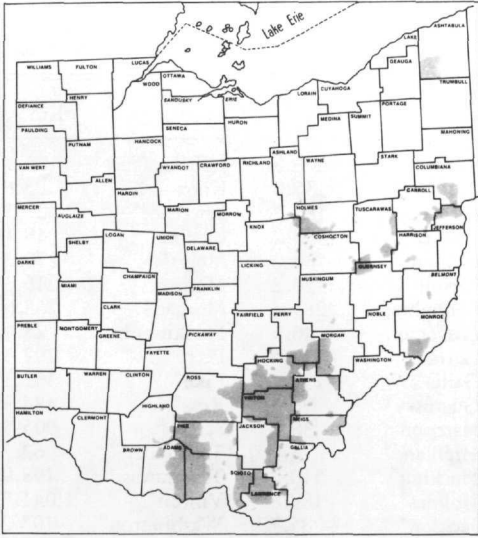


FIGURE 1. Occupied wild turkey range in Ohio, 1981-82.

range comparable to that in Ohio (Lewis 1980). The results showed that an average of approximately 10% of the total observed population was removed annually by spring gobbler hunting. Application of this 10% figure to Ohio's 1982 gobbler harvest of 651 provided an estimate of 6,510 turkeys over the 6,713 km² of occupied range open to hunting that spring. This is a density of 1.0 bird per km², which when projected to total occupied range (range both open and not open to hunting in 1982, table 1) gives a statewide estimate of 7,677 birds.

There is a wide range of spring population estimates for the eastern wild turkey. West Virginia and Pennsylvania report an average of 0.8-1.2 birds per km² of occupied range. In the Midwest, turkey densities range from 0.4 to 1.9 per km² in Indiana to over 7.7 per km² in Iowa.

Survey results show large areas of eastern Ohio may be suitable for stocking with wild turkeys, but are presently unoccupied. Although stocking may prove unsuccessful in some areas, the wild turkey appears to be adapting to habitats which, just a few years ago, were thought unsuitable. Therefore, the Division will continue to stock areas with less wooded acreage than in the past, including a farm-

ing site interspersed with sparse woods in western Ohio.

Table 1 shows there were 12 counties with occupied wild turkey range, but not open for hunting in 1982 (Ashland, Ashtabula, Belmont, Columbiana, Coshocton, Fairfield, Harrison, Knox, Licking, Muskingum, Trumbull, and Tuscarawas). The presence of turkeys in these counties was due to recent stocking efforts by the Division and immigration from adjacent counties. Harvest recommendations for future seasons should consider these counties.

One note of caution needs to be raised on the wild turkey stocking program. The Division has evidence that some well-meaning people are releasing game farm turkeys into the wild. Future releases of wild trapped turkeys will be carefully planned to avoid any areas where there is evidence that game farm turkeys have been released.

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