

Proceedings of the Iowa Academy of Science

Volume 77 | Number

Article 13

1970

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Recommended Citation

Klonglan, Eugene D.; Hlavka, Gene; and Gladfelter, H. Lee (1970) "Recent Wild Turkey Introductions into Iowa," *Proceedings of the Iowa Academy of Science*: Vol. 77: No. 1 , Article 13.

Available at: <https://scholarworks.uni.edu/pias/vol77/iss1/13>

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Recent Wild Turkey Introductions into Iowa

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Abstract. Efforts by the Iowa Conservation Commission to reintroduce wild turkeys into their former range in Iowa have been expanded considerably in recent years. Since the initial release of Rio Grande wild turkeys in the Yellow River State Forest in northeastern Iowa in 1960-61, additional releases have been made at five other sites. Merriam's wild turkeys were liberated in the eastern part of Stephens State Forest in south central Iowa and in Monona County in western Iowa in early 1966. Eastern wild turkeys were stocked in Shimek State Forest in southeastern Iowa in 1965-66, in the western part of Stephens State Forest in early 1968, and along the Upper Iowa River, Allamakee County, in 1969. Results to date indicate that the Eastern subspecies is best suited to Iowa conditions, as evidenced by their good survival, production, and increase in numbers. The Rio Grande and Merriam's are not increasing their numbers to any significant degree, however.

The wild turkey, *Meleagris gallopavo*, is not new to the Iowa scene. Early reports of Iowa history are rich in turkey lore. These magnificent birds were found in forested areas throughout the state, with the possible exception of the northern edge, at the time settlers began encroaching in number upon the Indian's domain. From the white man's standpoint the hey-day of wild turkeys in Iowa occurred during the mid-1800's, with the remarkable gobbler being well on the way out of the picture by the late 1800's. Complete extinction took place soon after the turn of the century. Since the 1920's several attempts have been made by organizations and individuals to restock wild turkeys in the state. Except for the present efforts of the State Conservation Commission, these have always involved pen-reared birds and have been failures from the standpoint of establishing self-supporting wild populations. (For a detailed account of the early history and restocking attempts of the turkey in Iowa, see Haugen 1961 and Wigal 1968.)

The first attempt to re-establish turkeys with wild-trapped stock was the liberating of birds from Texas in the Yellow River State Forest in Allamakee County in the winter of 1960-61. Since then, five other areas have been stocked with wild-trapped birds from Missouri, Nebraska and North Dakota. These six releases involve birds of three subspecies—the Eastern (*M. g. silvestris*), Merriam's (*M. g. merriami*), and the Rio Grande (*M. g. intermedia*). Iowa is one of only a few states experimenting with all three subspecies

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in an attempt to re-establish huntable populations. The progress of the separate stockings is being followed closely to determine which is the best adapted to the limited habitat and climatic conditions found in Iowa (Klonglan, 1968).

EASTERN SUBSPECIES

Shimek State Forest. When no remarkable increase occurred within 5 years after the release of the Rio Grande turkeys in the Yellow River Forest, the question again arose as to whether that particular subspecies was the best suited to Iowa conditions. In an attempt to begin evaluating other subspecies of turkeys, a total of 11 wild turkeys (3 toms and 8 hens) of the Eastern subspecies was released in the Lick Creek Unit of the Shimek State Forest in Lee County, southeastern Iowa. In October, 1965, the initial release of two adult toms and three juvenile hens was made, with a final release at the same site of one adult tom and five hens in March, 1966. All birds were wild-trapped in Missouri by the Missouri Department of Conservation and traded for ruffed grouse from Iowa at the rate of four grouse per turkey.

This stocking venture is the best success story in the restoration of wild turkeys in Iowa to date. At least 2 broods of turkeys were reared in 1966, 4 in 1967, at least 4 in 1968, and possibly as many as 12 in 1969. Many residents of the area have reported seeing or hearing these turkeys. Large winter flocks have been seen each year since 1966 with some flocks of 30-35 birds being sighted during the winter of 1969-70. There have been many reports of smaller groups, but the possibility of duplications makes it difficult to evaluate these.

Population estimates as determined from all types of records available indicate that the number of birds in the Shimek State Forest has been continually increasing. Winter estimates for the turkey population are: 1966-67, 40-50 birds; 1967-68, 80-90 birds; 1968-69, 100-125 birds; 1969-70, 150-175 birds. Aerial surveys during the winter (when there was good snowfall) have not been very successful in estimating the turkey population because of the difficulty of spotting turkeys in forested areas, though many turkeys have been spotted. The birds have started to move into new areas as evidenced by sightings of birds up to 6 miles from the release site. This makes any type of comprehensive ground survey difficult and time consuming. Therefore, residents in the release site area must be contacted to obtain additional reports of turkey sightings. The final population estimate obtained will not necessarily give an exact count of the turkeys, but will at least indicate the population trend from one year to the next.

There is also a possibility that more turkeys will spread into southeastern Iowa from a group of 18 wild turkeys (6 toms and 12

hens) which were released in the winter of 1966-67 by the Missouri Department of Conservation at a site about 10 miles south of the Iowa line southwest of Shimek State Forest.

Stephens State Forest (Whitebreast Unit). During January, March, and October, 1968, 20 Eastern wild turkeys were released in the Whitebreast Unit of Stephens State Forest in Lucas County, south central Iowa. Eight adult toms, 7 juvenile hens, and 5 adult hens were wild-trapped by the Missouri Department of Conservation and traded to Iowa for wild-trapped pheasants at the rate of about 15 pheasants per turkey. All turkeys had leg bands and most were equipped with wing streamers of different colors. This permits the identification of the movements of individual birds. The release site is approximately 25 miles southwest of the Merriam's release site in northeastern Lucas County.

Brood production was apparently low the first year with only one, possibly two, broods reported during the summer of 1968. However, production was very good during 1969 with at least five broods reported in the release area. The population has been increasing with winter estimates for 1968-69 at 20-30 birds and for 1969-70, 60-70 birds. Large flocks of 25-30 turkeys have been sighted several times in the release area during the winter of 1969-70. These initial reports indicate that we can expect to build up a good population of birds in this part of south central Iowa in the manner experienced in the Shimek Forest area. An added impetus in this direction may come from a March 1967 release by the Missouri Department of Conservation of 18 wild-trapped Eastern turkeys (5 gobblers and 13 hens) in the Chariton River bottoms only about 4 miles south of the Iowa line.

Upper Iowa River. The most recent attempt to re-establish turkeys in Iowa was the release of 10 Eastern wild turkeys on January 18, 1969, along the Upper Iowa River in Allamakee County, northeastern Iowa. One juvenile tom, 2 adults toms, 2 juvenile hens, and 5 adult hens were wild-trapped by the North Dakota Game Department and traded to Iowa for excess pheasant chicks raised at the Wildlife Research Station near Boone, Iowa. One of the adult toms was found dead on January 25 (carcass frozen, knawed on by mammal) a short distance from the release site. It had apparently died not long after it was liberated.

Results of this release have been encouraging to date. All nine remaining birds survived the first winter. At least three broods, possibly four, were reared in 1969, but brood size was small with four poults being the largest brood reported. The hatching season was late, presumably because of a very wet spring and the stress to the birds of being released in a new environment just before the breeding season. A nest of seven eggs was discovered in August,

1969, and six young were successfully hatched, but poult mortality was high and only one poult was seen with the hen 2 weeks later. (Brood information from unpublished report by Carl Whitney, Iowa State University, NSF Undergraduate Research Program participant.) A sighting of 15 turkeys was made in March, 1970, in the Upper Iowa River Area. This would indicate that some poults did survive the winter and that the flock has increased during the first year in the new environment.

MERRIAM'S SUBSPECIES

Stephens State Forest (Thousand-Acre Unit). In late January, 1966, 11 wild turkeys of the Merriam's subspecies were stocked in the Thousand-Acre Unit of the Stephens State Forest in the north-eastern corner of Lucas County, south central Iowa. This release consisted of four juvenile toms, two adult hens and five juvenile hens. These birds were trapped in the wild in western Nebraska by the Nebraska Game Commission. Laboratory tests of blood serum taken from these birds (and the later ones released in Monona County) were negative for antibodies to pullorum, paratyphoid, and mycoplasmosis. No pathogenic microorganisms were found in one tom that died during shipment. There were a few embryonated and non-embryonated nematode ova in the feces of this tom.

Reports of brood production since the release have not been very encouraging. At least 2 broods, possibly 3, were reared in 1966, only 1 verified in 1967, 2 in 1968, and none in 1969. One nest containing 10 eggs was found in the spring of 1967 but the nest was destroyed by an unknown predator before hatching. There have been several reports of sightings of small number of birds (up to eight in one flock) but nothing compared to the flocks of 30 to 35 reported from the Shimek State Forest. The population has not changed much since 1966 and the current winter estimate puts the flock of Merriam's at around 20 birds.

Monona County. In February 1966, eight Merriam's wild turkeys were released in the heavily wooded hills 3 miles west of Castana in Monona County, west central Iowa. These two adult toms and six juvenile hens were also wild-trapped by the Nebraska Game Commission in the western part of that state. The weight of the hens was about 9 pounds while the adults toms weighted about 17 pounds.

Brood production from this release of Merriam's has also been poor, and duplicates the poor success of the Merriam's in the Stephens State Forest. There were no verified reports of broods in 1966 or 1969 with one brood reported in both 1967 and 1968. The population has not shown any rapid increase during the past 4 years, with winter estimates ranging from 12 birds in 1966-67 to

15-20 birds through 1969-70. The largest single flock reported was 12 turkeys sighted about 1 mile from the release site in 1967. Some sightings of smaller flocks have been received during the 4 years since the release but little noticeable increase in population or distribution has been detected. This particular release has not had as much time devoted to follow-up evaluation as the others as yet, so there may be bits of information that have not come to light as of this date.

RIO GRANDE SUBSPECIES

The story of survival, reproductive success and spread of the Rio Grande turkeys from the original stocking by the Conservation Commission of 10 gobblers and 29 hens in the Yellow River State Forest in Allamakee County has been documented through 1967 by Wigal and Haugen (1968). In essence, the survival of the birds from the original release, and of adult birds in general, has been good. Reproduction however, has been inconsistent over the years, and has not been at a high enough rate to result in a sustained upward trend in numbers. The population has remained relatively stable and has probably never exceeded 100 birds in any year. In other states, if a stocking is going to be successful and provide a huntable surplus, experience has shown such will ordinarily be accomplished well before 10 years has elapsed. The Rio Grande birds, nevertheless, have continued to expand their range in northeastern Iowa with each passing year, and are now found over a sizeable area.

With the stocking of eastern wild turkeys in northern Allamakee County, the question now arises as to what will be the outcome of the inevitable intermixing of these two subspecies. Consideration was at one time given to trying to eliminate the Rio Grande birds entirely from northeast Iowa before introducing eastern stock. However, the continuing spread of the Rio Grandes and the nature of the country they inhabited soon rendered this an impossibility. Thus nature will have to take its own course. Whether the infusion of eastern blood will produce a turkey better adapted to this part of the state, assuming the same good response as from easterns elsewhere in the state, or whether the Rio Grande influence will be overwhelmingly detrimental and keep the overall population in roughly the same situation it is now, will only be proven by the test of time. This genetic picture may well become even more complicated because of releases of Eastern and Merriam's turkeys by both Wisconsin and Minnesota in areas not far from the Iowa border.

DISCUSSION

Biologists have now had the opportunity to study the release of three different subspecies of wild turkeys in six locations around the state. Results indicate that the Eastern wild turkey is best adapted to the climate and habitat in Iowa, which is to be expected since it is native to this state. The releases of Eastern turkeys in southeastern and south central Iowa have been the most successful to date since production has been good and the populations are increasing and dispersing. The Easterns released along the Upper Iowa River have done well in their first year but it is still too early to evaluate their success. The two releases of Merriam's turkeys have not done as well as expected, which indicates that they are not very adaptable to conditions in Iowa. Production of the Merriam's has been poor and the populations have remained stable. The Rio Grande turkeys in northeast Iowa has been present for 10 years and have not shown any appreciable increase in population, though they have widened their distribution considerably. In future restoration attempts only the Eastern subspecies should be considered. There is a growing population in the Shimek State Forest and vicinity which it is hoped can act as a reservoir for future stocking attempts. A similar situation may develop at the Whitebreast Unit of the Stephens State Forest. The birds can be baited into trapping sites to be captured and then transported to suitable turkey habitat elsewhere in the state.

More intensive studies of the Eastern wild turkey in Iowa will be conducted to determine population growth and dispersal as well as specific habitat requirements. The greatest limiting factor for turkeys in Iowa is the lack of extensive hardwood forests. Because of this, turkeys will probably never again be considered numerous in this state. However, in the future, populations may increase enough to enable a limited hunting season on these trophy game birds. Besides the value as a game bird, there is the aesthetic value of watching a flock of wild turkeys feed along a forest edge or of hearing the gobbling of a tom break through the spring morning. The permanent restoration of wild turkeys in Iowa appears possible and the efforts of the past 10 years are beginning to show some worthwhile results. The wild turkey has returned to the Iowa scene, hopefully to stay.

ACKNOWLEDGEMENTS

The authors wish to acknowledge the contributions of the many people who have provided information on wild turkeys from the various release areas in the state. Particular recognition should go to Keith Larson and Paul Kline, former Game Biologists for the State Conservation Commission, who were assigned responsibility

for the wild turkey project during parts of its tenure. State Conservation Commission Foresters, particularly C. R. Witmer (Shimek State Forest), Jack McSweeney (Yellow River State Forest) and J. R. Bulman (Stephens State Forest), have been very helpful. Local residents from the several release areas deserve thanks for their interest and the countless sighting records furnished by them. Conservation Officers in those territories also were instrumental in securing turkey information.

Literature Cited

- HAUGEN, A. O. 1961. *Iowa Conserv.* 20:100-101.
KLONGLAN, E. D. 1968. *Iowa Conserv.* 27:61,64.
WIGAL, D. D. 1968. *Status of the wild turkey in northeast Iowa*. Unpublished M.S. thesis. Iowa State University, Ames, Iowa.
----- and A. O. Haugen. 1968. *Iowa Acad. Sci. Proc.* 75: 130-141.