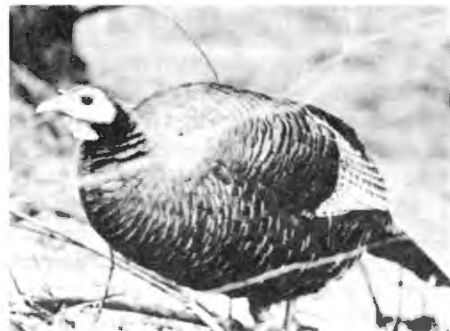


Wild Turkey Restoration at Indiana Dunes

By Eddie Childers



Young male ("jakes") wild turkeys (left) strutting and preparing for the spring breeding season. (Photo by Randy Childers)



Wild Turkey Hen (right) is intrigued by the camera. (Photo by Eddie Childers)

The eastern wild turkey originally inhabited much of the presettlement land east of the Mississippi River and was a valued resource for settlers and native Americans. Northwestern Indiana supported wild turkey populations throughout the 1800s; however, wild turkeys were extirpated thereafter, following loss of habitat due to intensive logging operations and exploitation by settlers, native Americans, trappers and hunters.

By the early 1940s wild turkeys did not exist in Indiana (USFWS 1987); however, since then, Indiana has restored the wild turkey to much of its original range where suitable habitat exists.

Wild turkey restoration is a successful management technique that involves live trapping the birds and transporting them to suitable habitat areas where no turkeys are. Midwestern states that have reported success with such programs include Missouri, Wisconsin, Michigan, Ohio and Illinois. In fact, wild turkeys now are known to occupy oak-savanna type habitats in Illinois, similar to the oak-savanna habitat found at Indiana Dunes National Lakeshore (Sullivan and Robinson, 1993). Suitable habitat appears to be one of the key limiting factors to successful wild turkey restoration.

Indiana's restoration efforts began in the mid 1950s and have accelerated rapidly during the 1980s, with an estimated 1,923 released birds at 127 sites throughout Indiana (Backs and Eisfelder, 1990). Wild turkeys now are present in more than 60 counties in Indiana and their numbers and range continue to grow (Ind. Div. of Fish and Wildlife, 1993). Successful statewide reintroduction of the wild turkey by the Indiana Department of Natural Resources (IDNR) suggested that restoration could begin at Indiana Dunes NL. GIS analysis was used to evaluate the habitat suitability for wild turkey restoration in the East Unit of Indiana Dunes NL based on IDNR's guidelines.

Wild turkey population growth and dispersal in newly restored areas is influenced by land use, human population levels, and physiography, among other factors. Selec-

tion of suitable release areas became an important topic of investigation for IDNR wildlife biologists as public pressure to consider marginal quality turkey habitats increased throughout Indiana (Backs and Eisfelder, 1990). Consequently, criteria and guidelines for wild turkey release priorities in Indiana were developed by IDNR to help agency personnel and the public better understand how restoration priorities are determined in Indiana. IDNR's guidelines for wild turkey restoration criteria are given for three levels: Level 1 (optimum), Level 2 (less than optimum), and Level 3 (poorest), based on the estimated potential for wild turkey establishment and growth at a proposed release site (Backs and Eisfelder, 1990).

The GIS analysis used the 68 previously classified plant communities for the East Unit of the National Lakeshore and reclassified them into the IDNR Level 1 habitat category types, that included forested (hard/soft mast-producing species; scrub/brush seral stages; openland (meadows, pastures, fields); human development (paved areas); and other habitat types (e.g. open water). The total area for each of the habitat types was generated for the East Unit of Indiana Dunes NL and compared with the IDNR guidelines to evaluate habitat suitability, using *r.reclass* and *r.report* (GRASS 4.0, 1991).

The wild turkey habitat in the East Unit meets most of the area requirements mandated by the IDNR. Forest cover, including hard and soft mast-producing species, shrub and brush seral stages, openland, and human development are all within 5 percent of the recommended ranges of Level 1 (optimum) habitat recommended for wild turkey restoration.

The East Unit does not meet the human development criteria, defined as <12 people and <0.8 km rural roads/km². Human populations also are much higher than IDNR guidelines specify, due to the Dune Acres and Beverly Shores communities located within the boundaries of the National Lakeshore; however, barriers to wild turkey population

expansion within the East Unit are minimal or nonexistent if these criteria are not considered.

The East Unit does meet other primary Level 1 criteria established by the IDNR, including requirements that the proposed release areas are between 25 and 50 km² in size and are currently unoccupied by wild turkeys. Total area of the East Unit is approximately 43 km² and no wild turkeys exist there today.

Reintroducing wild turkeys to the East Unit of the National Lakeshore would provide the added benefit of protection of a small, newly established population from hunting and poaching. Hunting is not permitted at Indiana Dunes. Furthermore, the population could increase in size within the National Lakeshore from an initial stocking, expanding and migrating to areas outside park boundaries, thereby providing hunting opportunities to residents on private lands in northwestern Indiana were none exist today.

The influence of wild turkeys on plant and animal communities within the National Lakeshore will be assessed before an active wild turkey restoration project is implemented. While impacts on plant and animal communities may be minimal, the effects wild turkeys have on endangered plant species and other communities are presently unknown.

Childers is with the National Park Service, Indiana Dunes NL.

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