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WE'VE COME A LONG WAY. WHERE DO WE GO FROM HERE? THE NORTH AMERICAN WILD TURKEY MANAGEMENT PLAN

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Abstract: Wild turkeys (*Meleagris gallopavo*) in North America made a significant recovery in the 20th century due to the dedicated efforts of federal, state and provincial wildlife agencies. The changing status of this species has resulted in a shifting of management needs. A survey of wild turkey biologists in 2004 yielded results indicating that a North American Wild Turkey Management Plan is needed to assist agencies in coordinating their efforts. This plan would act as a framework to allow jurisdictions to more readily share data, resources, and expertise. The North American Wild Turkey Management Plan structure, timeline to collect data and coordinate partners, and the planning and implementation process are delineated.

Proceedings of the National Wild Turkey Symposium 9:000

Key words: conservation, gamebird, habitat, North American, partnership, plan, population, research, trap and transplant, wild turkey.

Though no extensive censuses were undertaken during the early settlement of North America by Europeans, numerous first-hand reports mention seeing flocks of hundreds of wild turkeys (Wright 1914a). Many of these early reports describe the ease with which turkeys could be harvested to provide a vital source of sustenance for early European settlers and pioneers. Reports from the 18th and 19th centuries documented that the decimation of flocks on roosts may not have been uncommon while other reports discuss the utilization of traps to capture entire flocks. This led to the initial act of wild turkey conservation when these traps were prohibited in Canada in the mid-1800s (Wright 1914b).

By the early 1800s, observers in New England were starting to notice the absence of wild turkeys in areas where they once had been abundant (Wright 1915). This trend became more evident throughout the eastern United States during the mid-1800s (Wright 1915), and by the late 1800s the wild turkey was con-

sidered extirpated from Massachusetts, and possibly throughout New England (Slade 1888). In 1853 or 1854, the last wild turkeys in Iowa were thought to have been killed (Sherman 1913).

By the early 1900s, wild turkey populations were declining significantly throughout the United States (Mosby and Handley 1943). In the 1930s, the commitment to restore and manage wild turkey populations intensified. The Virginia Cooperative Wildlife Research Unit initiated a research effort on turkey propagation in 1935, and several other states started to develop wild turkey research projects in the late 1930s (Lewis 2001). The passage of the Federal Aid in Wildlife Restoration (Pittman-Robertson) Act in 1937 fueled this progression. Early restoration efforts were centered on raising and releasing pen-raised birds. These efforts were a disappointment since the pen-raised birds were deprived of normal parental influ-

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ences and thus never developed wild social behaviors. The survival of these birds was very poor. The pen-raised approach hampered the wild turkey comeback for nearly two decades. It was not until the advent of the cannon net that agencies were able to trap large flocks of wild turkeys to relocate and populate new habitats. The cannon net was a major factor in the wild turkey restoration efforts, but research and management played an important role in identifying and creating suitable habitat (Kenamer et al. 1992).

The comeback of the wild turkey in North America is arguably the greatest conservation success story in history. In 2004, the population in the United States and Canada was estimated at over 6.6 million wild turkeys (Tapley et al. *this volume*). This increase is primarily due to the success of state and provincial restoration programs, improved habitat conditions, and increased conservation efforts that have focused primarily on population status assessment and harvest regulation promulgation. Due to these historic and ongoing efforts, and the adaptability of the wild turkey, the bulk of suitable habitat currently supports wild turkey populations. In 2004, an estimated 750 million acres of habitat had viable populations of wild turkeys while only 5 million acres (<1%) of suitable habitat remained uninhabited (Tapley et al. *this volume*). Currently, habitat once considered marginal across North America is being populated by the wild turkey.

These successes demonstrate the vital and challenging task of determining “where do we go from here?” Currently there is no formal strategy in place to coordinate efforts to ensure the perpetuation and evolution of our wild turkey legacy. The value of coordinated research efforts for wild turkey conservation was recognized a decade ago (Weinstein et al. 1996), including the need to develop standardized protocols and metrics for data collection. As management priorities for wild turkeys shift from the basic survival of the species, a more holistic, international, broad-based management strategy is needed to address evolving contemporary issues including but not limited to:

1. Identifying future factors that will inhibit growth and maintenance of wild turkey populations.
2. Identifying habitat projects and partnerships to complement the North American Bird Conservation Initiative (NABCI).
3. Identifying future research priorities across North America.
4. Spatially representing the status of wild turkey populations and potential habitat across North America.
5. Identifying strategies to increase hunter access, recruitment, and retention.

These and many other factors support the need for a coordinated plan to chart the future of turkey conservation into the 21st century. This brief introduction is the impetus for the historic planning endeavor to craft a North American Wild Turkey Management Plan.

CURRENT STATUS

During the summer of 2004, members of the National Wild Turkey Federation (NWTF) technical committee, composed of state and provincial biologists responsible for wild turkey programs in their respective areas, were asked to provide information regarding the status of wild turkeys and wild turkey management. While 55% of respondents indicated that a turkey management plan existed for their jurisdiction, less than half of those plans included habitat enhancement, habitat protection, or hunter recruitment sections. Technical representatives identified impediments to establishing, maintaining, and expanding wild turkey populations. Significant among these were the reduction of agency budgets, urbanization, and a reduction of forestry management. Traditionally, the conservation ethic of sportsmen drove the interest in and funding of restoration and management efforts. Recent declines in the numbers of sportsman-conservationists, evident in decreasing license sales to active hunters, imperil agencies' ability to continue or expand turkey management efforts. Respondents identified a number of factors which are eroding this base of support, including anti-hunting sentiment, privatization of hunting, lack of access and opportunity, and the inability to recruit young hunters.

Respondents described their state or provincial status regarding wild turkey range mapping and population estimation. The most popular estimation methods were harvest and hunter surveys. Very few states used direct census or observational indices to estimate populations. The most important wild turkey research needs identified included gobbler harvest and mortality estimation, improving survey and census methods, and research to measure the effect of specific habitat management practices on wild turkey populations. Other research topics included improved habitat assessment techniques, nuisance issues, winter habitat utilization, the effects of wild turkeys on sensitive species, general life science information in areas outside historic wild turkey range, and ways to improve hunter access and recruitment.

While many jurisdictions already participate with conservation groups, other government agencies, and tribal organizations in partnerships for wild turkey management, a lack of breadth and diversity in these efforts is noticeable in the survey results. Obvious gaps also exist where some respondents indicated that they lacked one or more type of partnering relationship; a majority of respondents do not have working relationships with Native American Reservations regarding wild turkey projects.

The Need for a Plan

The evolving challenges facing wild turkey managers, and the desires voiced by these same professionals to provide a high level of stewardship for this intrinsic North American resource, highlight the need for coordinated planning into the future and the inherent need for all interested groups to partner in assuring the health and viability of the species for generations

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yet to come. Today, almost half of the jurisdictions containing wild turkeys lack a turkey management plan. Less than half of existing turkey plans incorporate habitat management or land protection considerations though wild turkey biologists overwhelmingly agreed that conservation easements, land acquisition, and habitat improvement on federal and private lands would provide a vital benefit to wild turkeys in their respective areas.

Loss of habitat, inability to effectively identify habitat, privatization of hunting, and lack of management were all subjects that were identified as threats to wild turkey populations and hunting. These similarities of opinion and tactical planning deficiencies clearly indicate a need for a facilitated effort to identify regional and local strategies to confront these problems. By coordinating efforts across jurisdictional and organizational boundaries, habitat tools can be extended for range-wide use, and management agencies can gain access to both financial resources and the vital human capital which conservation organizations possess.

There is an obvious need for a standardized method of habitat analysis and the development of a quantitative method to identify focus areas. Additionally, most wild turkey programs do not have formal population estimation or mapping procedures in place. Development of guidance on these issues would bring a cohesive aspect to North American wild turkey management that currently does not exist.

A mid-scale Geographic Information System depicting wild turkey range, current and potential habitat, restoration priorities and critical habitat protection areas will be an integral component of the plan. The primary objective of this effort will be to provide a North American perspective on wild turkey habitat across political boundaries, depict baseline wild turkey data, and provide an intuitive tool to plan and compare habitat management and restoration efforts with important regional needs.

Across all boundaries, there is a lack of funding and a subsequent shortage of personnel for managing North America's wildlife resources. This makes it imperative to look for every potential source of support for wildlife programs and to identify long-term funding sources to ensure the continued success of this natural resource.

Several state and provincial programs are already in the process of incorporating non-governmental organization (NGO) volunteers to census and survey wild turkeys. With a majority of jurisdictions partnering with multiple groups on wild turkey projects, it is clear that many opportunities exist and are being capitalized upon. Agencies need to assess and fully utilize their ability to partner with conservation volunteers to aid in gathering needed data. While the potential and inherent problems with this type of data collection are well known, it may be vital to the initiation and maintenance of these important data collection procedures on a continental scale. A plan to identify partnering opportunities and maximize cooperation among groups is vital to this process.

Finally, a study in Washington (Duda et al. 2004) indicated that many hunters feel that access to private lands is poor and has gotten worse over the past 5 years. This is especially significant because a majority of these hunters hunted exclusively on private land and 86% hunted at least some time on private land. Improved private land access and habitat protection should be a primary consideration in conservation projects and programs.

The Role of the Plan

The North American Wild Turkey Management Plan will provide a framework to support long-term habitat improvement efforts, localized population restoration, conservation education, wild turkey research, conservation easements, and land acquisition projects. It must identify habitat protection and enhancement focus areas, recognize potential conservation partnerships, improve hunting opportunities, and formulate monitoring objectives. The completed plan will be utilized by wildlife professionals throughout North America to form habitat acquisition and management partnerships, gain support for wild turkey programs, direct wildlife research, and strategically plan landscape-based wildlife projects. The plan is a working document that will be updated as new information becomes available to better serve those who use it.

The plan will build on the model developed in existing, successful continental conservation efforts like the North American Waterfowl Management Plan (NAWMP) and the North American Bird Conservation Initiative (NABCI). The Turkey Plan will provide a defensible continental strategy with concrete goals and objectives that can be supported by potential partners and funding sources. The compilation of a fluid document containing all of the necessary information for the North American Wild Turkey Management Plan will require a unified effort among all interested parties. It is imperative that the goals, objectives and subject matter for the plan originate from a broad constituency to ensure consolidation and guarantee acceptance across all boundaries.

The Role of the NWTF

The NWTF recognizes the need for a North American Wild Turkey Management Plan and is willing to act as a coordinator to provide managers and researchers a framework and venue in which to complete this planning effort. Involvement and input from all interested parties is critical to the success and acceptance of the plan.

The federation is uniquely suited to this role as it has worked with many states and provinces over the past 20 years to assist with their wild turkey planning efforts. Most recently, several states have teamed with the NWTF to put together wild turkey habitat suitability maps to help complete trap and transplant efforts. Many states have also worked with the federation to target strategic habitat areas that benefit not only wild turkeys, but also native



plants, threatened and endangered species, and neotropical migrant birds.

This document outlines the steps necessary to identify important aspects of the proposed North American Wild Turkey Management Plan. The challenging task of compiling the plan will require input from many sources. Fortunately, the NWTF Wild Turkey Technical Committee (wild turkey biologists from every state and province) already exists and can act as the core resource in the development of this plan. It is from their expert knowledge of the issues within their states and provinces that we hope to gain insight into what is important for wild turkeys both regionally and internationally.

The Role of Agencies

The planning process will require state, provincial and federal agency personnel to provide insight and recommendations for their respective agencies. This is critical to ensure agency needs and concerns are addressed in the plan. This process will require buy-in at all agency levels since its scope will cross jurisdictions, but its implementation and function will occur at the local level through existing and future partnerships. This input should reflect a compilation of state goals and needs that will make substantial contributions toward the conservation of not just wild turkeys, but all wildlife throughout North America.

NEXT STEPS

The following phases are necessary to ensure development of a unified, flexible, and dynamic plan for management and continued success of wild turkeys in North America:

1. Phase I will be completed by NWTF regional biologists in partnership with state and provincial Wild Turkey Technical Committee biologists. NWTF biologists will collect background information regarding the current status of wild turkey programs and future priorities for habitat management and protection on a state and provincial basis. This will be general information and will provide a foundation to build upon. This step will be achieved primarily through a comprehensive questionnaire and personal interviews. The NWTF staff will consolidate all pertinent information, goals, objectives, and timelines into a cohesive document. Phase I will then be disseminated to all interested and applicable parties. The projected completion date for Phase I is 1 August 2007.
2. Phase II will include the development of online tools to share technical expertise, research results, geographic data, and management experience with all committee members and turkey conservation partners. This system will allow individuals to utilize mapping tools and data to develop their own plans and map products.
3. Phase III will coordinate coalitions to implement and foster wildlife enhancement programs and projects with wild turkey components. Wild turkeys

will be integrated into other formal planning efforts at the state (e.g., Wildlife Action Plans), regional (e.g., Bird Conservation Regions, Joint Ventures), national, or international (e.g., NABCI) level.

CONCLUSION

There are tremendous challenges facing wildlife and wildlife managers across the continent. These challenges include habitat degradation and conversion, privatization of wildlife and hunting, locally overabundant wildlife populations, expanding lists of species at risk, and the unending need for additional species monitoring data, to the loss of rural traditions that foster appreciation of wildlife. Our history of turkey management and restoration demonstrate that we are capable of rising to the challenges that we face in the future. Through coordinated efforts across jurisdictional boundaries, we can fully utilize our common resources to assure the continued success of wild turkey conservation. A plan can guide us in selecting population goals; it can assist us in prioritizing land acquisition and habitat management; it can enhance our ability to seek out and acquire funding and leverage existing funding across jurisdictional boundaries; and it can provide us with a framework to establish and maintain successful partnerships. It is for these reasons that a North American Wild Turkey Management Plan is of utmost importance.

We recognize and appreciate the tremendous efforts that have been made by thousands of individuals from state, provincial, and federal agencies and private conservation organizations. This dedication and commitment saved the wild turkey from the brink of extinction. An unrivaled effort of trap and transfer, regulatory enforcement, and land use changes has helped make the wild turkey an overwhelming conservation victory for North America.

Despite this success, it is our responsibility to look to the future and set the stage for new wildlife success stories. The North American Wild Turkey Management Plan will present wildlife managers across the continent with wild turkey management goals and the actions needed to achieve them.

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← *Managing Wild Turkey Populations*

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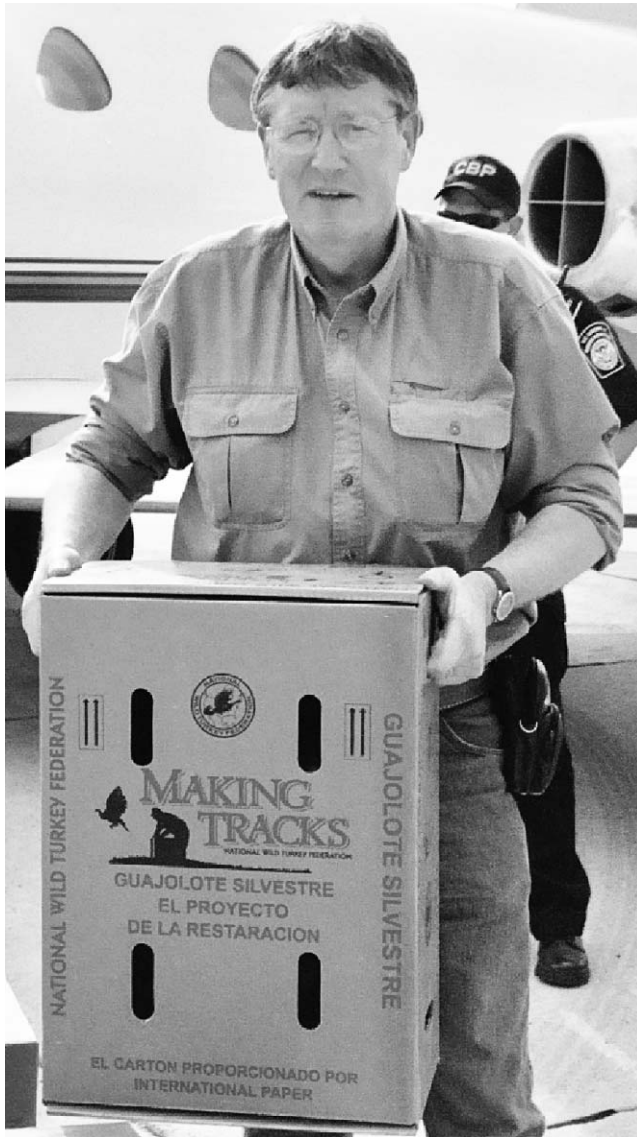
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Al Stewart (left) is the Upland Game Bird Specialist for the Michigan Department of Natural Resources and is responsible for statewide conservation and management programs for ruffed grouse, American woodcock, sharp-tailed grouse, quail, pheasants, and wild turkey. He has worked on turkeys for more than 30 years. He has been actively involved with rocket-net safety training and wild turkey restoration in Michigan. He has participated in wild turkey capture activities beyond Michigan and has trapped the five subspecies of wild turkeys. He is currently serving as the Editor of the Ninth National Wild Turkey Symposium and Tenth American Woodcock Symposium. *Karen Cleveland* (not pictured) received a B.S. and M.S. in Fisheries & Wildlife and an M.S. in Computer Science from Michigan State University. She was the Data Manager for the Wildlife Division of the New Hampshire Fish & Game Department. She is currently the All-Bird Biologist with the Michigan Department of Natural Resources. She recently received the Special Conservation Award from the Michigan United Conservation Clubs for her role in the development of the Michigan Wildlife Action Plan.