



## **Connecting Owners and Managers of Iowa Important Bird Areas (IBAs) to the Global Network of IBAs**

*Habitat Management Recommendations for 37 of Iowa's Most Seriously Declining Birds*

### **Part 2: Bird Populations**

#### **Obvious Environmental Indicators with Positive Trends Emerging**

There is a growing realization across the planet that genuinely sustainable development depends on conserving the Earth's biodiversity. Biodiversity underpins all of our lives, by providing numerous vital goods and services to people. There are also many strong ethical and aesthetic arguments for why humanity should protect, restore and enhance biodiversity. Given the pervasiveness and fundamental importance of biodiversity, humans know surprisingly little about it. We are sure that it is disappearing fast, yet measuring changes, especially at large scales, has been quite difficult in the past.

For many reasons, birds have a very special place as environmental indicators, not the least of which is their enormous public appeal. Birds are by far the best-known animal group. They can tell us (if we listen) a great deal about the status of all biodiversity, the pressures on it, and solutions that should be put in place. Because birds are highly visible and highly vocal, they have been providing a benchmark against which we can assess our efforts to conserve all of biodiversity in the future. In addition, a network of birders and ornithologists, investigating and providing data at every level – from backyard feeder watchers to global scientific expeditions – are providing a huge amount of bird population data (data of similar quality

and quantity that are largely lacking for other species).

In the past a typical sequence of events that lead to an effective public response (e.g. a new public mindset) was: first a crisis, followed by demands for action by citizen organizations, followed by development of new public policies, and finally, the institutionalization of these new policies to combat the crisis.

This pattern was followed when the slaughter of egrets for feather plumes to adorn women's hats at the end of the 19<sup>th</sup> Century evoked public outcry and led to the creation of the National Wildlife Refuge System and the National Audubon Society. Once more the same pattern was repeated

Consequently, as we're faced with a fourth major crisis – the steady and sometimes quickening pace of population decline in 25% of North American bird species – we should be asking, where are we today in the sequence of events that *should* lead to a major expansion of habitat recovery to benefit these species other forms of declining biodiversity? We believe the answer is that policies are now moving in a good direction, and more positive changes will soon be evident.

According to *Iowa – Portrait of the Land*, published by the Iowa Department of Natural Resources in 2000, our state has the most man-manipulated landscape, and the smallest percentage of publicly

***According to BirdLife International, in State of the World's Birds (2004), 1 in every 8 species of birds in the world (1,211 species or 12%) face extinction. In the United States, according the 2007 Watchlist prepared jointly by the American Bird Conservancy and Audubon, a full 25% of all species of birds are experiencing severe population declines, and need help to keep them from slipping toward extinction. These trends are truly alarming, and they're starting to be recognized and accepted by society as a whole, and by policy makers.***

in reaction to the dust bowl days; the near disappearance of waterfowl in the 1930's (which led to the formation Ducks Unlimited, a major expansion of the national refuge system, and new soil and water conservation programs). And another example: when the abuse of DDT and other biocides in mid-20<sup>th</sup> Century led to reliance on creative and improved testing of newly developed poisons before they were released to the public; new forms of monitoring water and air contamination; the creation of the Environmental Protection Agency; and other safeguards to public health and the integrity of natural environments.

protected land area of any state in our nation. But this is gradually improving. Statewide there are several positive developments related directly to birds as environmental indicators and recovery of the habitats that they require.

First, Iowa's IBA Program has identified numerous IBAs that need serious attention, and a prioritization process continues with many more sites throughout the state at the nomination stage for IBA status. Second, the Wildlife Diversity Program of the Iowa Department of Natural Resources has partnered closely with the IBA Program, and has provided solid leadership on

several important fronts. Among these are: completion of Iowa's Wildlife Action Plan that will likely bring more funding to the state for high priority birds and other biodiversity; identification of a series of Bird Conservation Areas (BCAs) in which BCAs and IBAs are now synonymous; and several successful restoration projects for species that were previously seriously declining.

In addition, many county conservation boards around the state have begun giving increased attention to habitat management for high conservation priority species; and managers of state forests, state parks, state wildlife management areas, federal wildlife refuges, federal reservoirs, and privately owned properties have each given higher priority to management for birds and other biodiversity. A great deal of work remains to be done of course, but these are all positive trends for future habitat recovery and sustained biodiversity.

### **Context for Recovery of Natural Habitats**

Within the Prairie Avifaunal Biome, of which Iowa is part, almost 40% of the land bird species that breed here are on the Partners in Flight (PIF) Continental Watch List as a result of declining trends or high threats. While some nesting species that once were extirpated from the state have returned to nest here, (examples are: Peregrine Falcon, Trumpeter Swan, Greater Prairie-Chicken, and Sandhill Crane), the return of most of these species is largely related to successful (and expensive) individual species restoration efforts. While it is good that the single species approach to recovery has worked in these cases, there now are far too many species declining at too great a rate for single species recovery programs alone to be an adequate solution to the accelerating problem. It appears certain that without a unified partnership focus on use of ecosystem-based habitat

protection, restoration, and enhancement approaches to bird population recovery, that the future for many declining bird species looks quite dark and troubling.

Historically, Iowa's landscape supported a rich assortment of wildlife and plants, and early accounts indicate that bird abundance was extraordinary. In the early 1800s, Iowa was covered by a rich mixture of tall-grass prairie, deciduous woodlands, rich wetlands, and closely associated sub-habitats. The dominant land-cover was tallgrass prairie, which comprised approximately 70% of the state. *Today more than 99.9% of the original prairie has been converted to agricultural use and only about 30,000 acres of the original 25 million acres of prairie remain – mostly as very small isolated remnants.*

Records indicate that forests or woodland communities once blanketed some 6.7 million acres and made up about 19% of Iowa's landscape. *Today many of these communities are highly fragmented and/or severely degraded. And two-thirds of these acres have been converted to other landuses. Thus, only about one-third of Iowa's original woodland habitat still remains.*

Wetlands are another important community type and once comprised at least 4 million acres, or 11% of the Iowa landscape. Surface water is extremely important to both aquatic and terrestrial organisms. Historically, prairie potholes and natural lakes dominated north-central and northwest Iowa, while backwaters and oxbows were common along the major rivers in the rest of the state. *Human activity has taken an amazing toll, and today only about 5% of our original wetlands have not been destroyed.*

With such massive changes to its landscape, Iowa's natural communities have been severely reduced and extremely altered. In 1990, 94% of Iowa was

considered farmland, with 70% of the landscape in row-crops (mostly corn and soybeans). Iowa now holds the dubious distinction of having the most dramatically and completely altered landscape of any state in the United States. Clearly the loss of natural habitats has affected many of our wildlife species. While at least 29 vertebrate species, including 12 bird species, already have disappeared as breeding populations from Iowa, many more species now are much rarer than they once were.

## **Major Threats to Birds and Other Biodiversity**

### **Loss of natural habitats of all types**

This has been the single most acute force working against Iowa's bird populations. For many of the 37 endangered, threatened, and high conservation priority bird species addressed here, the number of individuals that once nested in Iowa was certainly hundreds, if not thousands of times greater than the populations that exist today. This is especially true for grassland species such as Greater Prairie Chicken, Northern Harrier, Short-eared Owl, Henslow's Sparrow, Grasshopper Sparrow and Bobolink. Each of these is an IBA Criteria Species, and none are close to being as common in Iowa today as they previously were, or could be. Along with agriculture, and rural homes being carved into and fragmenting natural habitats, continuous urban sprawl – via housing developments, shopping centers, new road and highways, etc. – are important causes of habitat loss in many areas of the state. This can be witnessed most easily within commuting distance of cities and upon the wooded bluffs in northeastern Iowa, where upland forest areas are cleared to make room for houses "with a view."

### **Habitat fragmentation and loss of connectivity between habitats**

These are two closely related and often unrecognized, but still major threats, to

Iowa birdlife. Many species of birds require large blocks of habitat for successful nesting and survival. Large blocks of habitat provide a larger "interior" area offering greater protection from predators, more protection from nest parasitic species such as Brown-headed Cowbirds, and more buffer against human disturbance. When native vegetation is cleared for agriculture, rural homes or urban sprawl, habitats that once were contiguous become divided into separate fragments. After intensive clearing, the separate fragments tend to be very small islands isolated from each other by cropland or other blocks of property, which are not viable habitat. As wetlands, woodlands, and grasslands, become smaller and more disconnected, fewer species of birds can successfully use them for nesting, feeding or escape cover.

Many bird researchers believe that a minimum of 250 acres of forested land is necessary to maintain most forest-interior bird species, and this concept especially applies to warblers, and thrushes and other species that are IBA Criteria Species. Area-sensitive forest nesting birds are another category, and examples like Cerulean Warbler and Veery, (both IBA Criteria Species) also need large tracts of habitat. The loss of connectivity between required habitats is a stressor for each of these species. Isolated habitats that have even a narrow connecting corridor between them are more likely to be used by birds than habitats that are not linked.

### **Habitat degradation**

Iowa's natural habitats frequently undergo gradual, unnoticed degradation; and this is yet another major threat to Iowa's birdlife. The result is a habitat lacking sufficient biological health, integrity, or quality to sustain the species of birds and other wildlife that once depended on the original habitat.



Invasive non-native species and detrimental grazing are two important forms of degradation that reduce habitat quality for native birds. Another example is invasive garlic mustard, an increasing concern in moist forests and woodlands, where it chokes out native ground cover plants and reduces available habitat for many woodland nesting birds. Another example is leafy spurge which has invaded prairie remnants and pastures in the Loess Hills of western Iowa, where it creates less desirable habitat for nesting grassland birds. A third example is purple loostrike which replaces desirable native plants of wetlands and drastically alters the community structure needed by birds associated with that habitat.

Grazing of woodlands by cattle and other livestock reduces valuable ground cover that would otherwise provide foraging and nesting habitat for birds, and severely degrades woodlands and forests. Overgrazing of grassland pastures eliminates the necessary structure for ground-nesting or low-nesting birds that use those habitats. Over abundance of White-tailed Deer in some parks and areas that are off limits to hunting is also taking a toll on birdlife. As browsers, deer in high populations tend to eliminate shrubbery and low vegetation from forests, leaving much less cover and fewer food resources available for woodland birds that frequent those areas.

Proper habitat management practices can help restore degraded habitats and prevent future degradation. In fact, alleviating habitat degradation is a key component of effective wildlife management programs.

#### **Greatest threats to wild bird populations derive from unsustainable uses of land**

If owners and managers of IBAs and other valuable habitats can keep this central fact in mind, we should be able to work together to give back significant parcels of the

habitat that has been lost, fragmented or degraded.

There is still time to halt the rapid rate of population declines for the native species of birds recognized for having high conservation priority, and then reversing the trend toward one of a positive population growth. But to do so will take a cooperative effort between owners and managers, partnerships between public agencies and private conservation organizations at every level, plus the business community and citizen-conservationists.

Effective dialogue and cooperation will be a key to the future of Iowa's IBAs and the birds and biodiversity that those essential habitats nurture and sustain. Iowa Audubon's IBA Program stands ready to assist with this effort as explained within the following sections.

### **Overview of Iowa's IBA Program**

Iowa's Important Bird Areas (IBA) Program is a statewide, citizen-led, science-based, and data-driven initiative that is led by a State IBA Technical Committee. This committee, first chaired by Dr. Jim Dinsmore, Iowa's leading ornithologist, is made up of bird researchers, wildlife biologists, experienced birders and others who represent many of Iowa's public conservation agencies and private conservation organizations. The IBA Program wishes to extend this partnership to any agency, organization, corporation, or individual who owns or manages an IBA, or who has an interest in conserving Iowa's wild birds and natural habitats.

The technical committee began its work by choosing 37 species of birds in our state, which were experiencing seriously declining populations (e.g. Iowa's 37 IBA Criteria Species). By IBA procedure, this group had to include endangered species (9), threatened species (2) and additional species of high conservation priority to be selected by the Technical Committee (the

committee chose 26). The Technical Committee then established science-based IBA criteria that local habitats are evaluated against and must meet, before being recognized as an official IBA. When our state's priority bird species are documented as being supported by a specific habitat – particularly during the nesting season – that habitat may gain IBA status by vote of the IBA Technical Committee.

By producing or sustaining Iowa's IBA Criteria Species, a local habitat that meets the IBA criteria is deemed to be one of Iowa's most essential bird habitats, or a State-level IBA. Iowa's IBA criteria can be viewed using the buttons found at this link: [http://iowaaudubon.org/IBA/criteria\\_def.asp](http://iowaaudubon.org/IBA/criteria_def.asp).

When criteria with very high thresholds are met, an Iowa IBA may be recognized as a Continental IBA, or even a Global IBA within BirdLife International's worldwide bird conservation program. Some of Iowa's habitats meet these high standards.

In 2002 an IBA Coordinator was hired and technical committee members, professional wildlife biologists, and numerous volunteer recreational birders from across the state began nominating the habitats that they thought were supporting our state's 37 IBA Criteria Species, or were meeting other IBA criteria. An excellent online tool for submitting new observation data facilitated data evaluation and voting on a site-by-site basis by members of the Technical Committee. The process of obtaining new observation data via the only data management system is ongoing, and birders are encouraged to actively participate. Evaluating new observation data that are needed to nominate additional sites, and voting to move previously nominated site to full IBA status is one function of the IBA Technical Committee and is ongoing.

Thanks to the volunteer efforts of numerous individuals across the entire state, Iowa has

had excellent success in identifying IBAs. Initially 70 IBAs, well distributed in 55 counties, were officially recognized, but that number has grown to 92 IBAs in about 60 different counties. More than 100 additional habitats, in approximately 25 additional counties were nominated for IBA status, and more are expected in the future.

Gathering and submitting essential bird observation data in this manner is often called birding with a purpose, or citizen-science. This is definitely a valuable and enjoyable activity, and it's growing quickly in popularity. Citizen science is the backbone of the IBA identification process, as well as the IBA monitoring program, and we invite more citizens to actively participate.

### **Local IBAs: Key Components in A Global Network of Essential Habitats**

Iowa's IBAs are part of a *global network* of the habitats – each essential to the birds with seriously declining populations within any one particular state or a nation. Because a great many birds are long-distance migrants and depend on specific types of habitats along the routes of their annual travels – such as the Neotropical Migrants that nest in Iowa but reside in Latin America for the majority of each year – a whole *network* of nesting sites and stop-over and re-fueling habitats, is essential to their continued existence.

Fortunately, a large partnership of forward-thinking bird conservation organizations working together as BirdLife International initiated the IBA Program in Europe in 1985. The global network of IBAs has been developing steadily ever since. According to the exceptionally informative booklet, *State of the World's Birds – 2004*, published by BirdLife International, in 2004 there were more than 7,500 recognized IBAs receiving priority conservation treatment in more than 170 different nations. Each IBA was identified using a data-driven process and

locally established science-based criteria, similar to that being used in Iowa.

National Audubon is the partner designate for BirdLife International in the United States, and has administered state-level IBA work in our nation since 1995. BirdLife International continues as overall administrator of this critically important global program – thought by many authorities to be the premiere worldwide bird conservation initiative ever developed.

Currently 46 states in the U.S. are expanding and strengthening their individual IBA Programs. Within our state, the Iowa Audubon Board of Directors provides guidance and funding for the statewide IBA Program. And the IBA initiative is the primary activity by which Iowa Audubon achieves its bird, wildlife and habitat mission.

Iowa's IBA Criteria were developed to fit within criteria at continental, western hemisphere and global levels. The fact that the criteria telescopes together, provides a seamless method for prioritizing conservation projects and facilitating coordinated management of IBAs at state, national, hemisphere and global levels. Furthermore, when very high criteria thresholds are met, an Iowa IBA may also be recognized as a Continental IBA, or even a Global IBA, getting even higher conservation priority. And several Iowa IBAs have been recognized as such.

### **Three Phases of Iowa's IBA Work**

Each of the three primary phases of IBA work is a necessary step along the path to effective bird and habitat conservation. For every IBA or potential IBA in Iowa, each of the following 3 phases of conservation work represents an opportunity for collaboration among public agencies, private organizations, businesses and private citizens. IBA staff will pursue grants, secure technical assistance, and organize other

forms of support to facilitate each of the following collaborative phases.

#### ***Phase I***

*Identification, recognition and prioritization of habitats within our borders that support Iowa's 37 IBA Criteria Species, or meet other established IBA criteria. A vote from the state IBA Technical Committee is required before a habitat becomes officially recognized as one of Iowa's IBAs. Strong success has been achieved in this phase. There are now 70 officially recognized IBAs in about 60 counties. And there is considerable potential to recognize additional IBAs in the near future, if appropriate supporting on-site data is submitted to the IBA website. This is the critical first step in the entire process; and site identification and prioritization will continue, even as the other phases receive greater attention.*

#### ***Phase II***

*Conducting long-term surveys and monitoring of bird populations and habitat conditions, and organizing education programs at officially recognized IBAs, where such public activities are appropriate. A transition into this phase is currently underway. There are a variety of opportunities for direct involvement in field investigations by bird-oriented professionals and volunteers at nearly all IBAs and sites nominated for IBA status. Partnerships with naturalists and other environmental educators for on-site bird and habitat education programming will be important at a number of IBAs. And these efforts will be important for decades to come.*

#### ***Phase III***

*Working closely with property owners and managers to develop and then implement, long-term conservation plans to protect, restore, enhance and manage individual IBAs according to their environmental threats and conservation needs. Initiating and strengthening a variety of public-private*

*conservation partnerships will be vital to success in Phase III.*

A primary concern is halting declines in the key bird populations that qualified a habitat as an IBA initially, and then hopefully increasing the populations of those species. This phase of work will become more and more critical as years pass. The habitat management recommendations that are found in Part 3 of this text are intended to be a new step in this critically important process.

A common thread running through each of these phases of the IBA Program is the great need to expand the quantity and quality of pro-active, grassroots, habitat-focused conservation action. To meet this challenge, a progressive sequence of follow-up and conservation assistance from the IBA partnership is being planned.

### **Iowa's IBA Progress Report**

Well over 200 individuals, consisting of professional bird researchers and biologists, and skilled volunteer birders, have been involved in Iowa's IBA site identification effort since 2002. In the early stages of work, some 230 local habitats, very well distributed in 86 counties, were nominated for IBA recognition.

citizen in Iowa lives relatively close to at least one of these IBAs or potential IBAs; and therefore can easily become involved in any number of positive bird conservation activities.

A secondary but very positive aspect of Iowa's IBA Program is that it delivers on-the-ground implementation of several major continental and national bird conservation plans. These include: the Partners In Flight North American Landbird Conservation Plan, the North American Waterbird Conservation Plan, the North American Waterfowl Management Plan, and the United States Shorebird Conservation Plan. All agencies, organizations, businesses, and individuals who participate with the global network of IBAs, will also be helping to implement portions of these major plans.

The Iowa IBA program is science-based in that it adheres to an established IBA Criteria to maintain program integrity at state, national and global levels. The program is data-driven, as only when observers submit data of appropriate quality and quantity will a site become nominated, or if nominated will that habitat become an official Iowa IBA. The program is citizen-led in that members of the Technical Committee

***As this text is being prepared, nearly 92 habitats located in about 60 different counties, have received official IBA status by vote of Iowa's IBA Technical Committee. Another 100+ sites, in approximately 25 additional counties, have been nominated for IBA status, and only require additional data – particularly during the nesting season – in order to be voted to IBA status.***

All IBAs and sites nominated for IBA recognition are listed alphabetically by county within the 10 regions of the Iowa state map shown at this link: [www.iowaaudubon.org/IBA/sites.asp](http://www.iowaaudubon.org/IBA/sites.asp). Every

and many other interested individuals are providing the leadership behind this initiative.

In addition to excellent input from a large number of Iowa's recreational birders who



have volunteered many hours in the field, the other key aspect of this program is the user-friendly online data management system that can be viewed here: [www.iowaaudubon.org/IBA](http://www.iowaaudubon.org/IBA). Developed by Ann Johnson of Norwalk, Iowa, this statewide system is easily one of the most functional and useful in the United States.

Everyone who is interested in conserving Iowa's most seriously declining birdlife is invited to join the inventory and monitoring process at an IBA or a site that might become an IBA. To begin, go to this link: <http://www.iowabirds.org/birds/Iowa-Checklist.asp>. Read the user-friendly directions and download a field checklist to aid in gathering the proper on-site bird observation data. Then, working at a computer, transfer the data from the checklist to the IBA website. You are also invited to use any information that the website contains for conservation or recreation purposes.

The prioritization process inherent within the IBA Program will help direct funds and staff that are in limited supply to those habitats having the greatest need for habitat protection and other conservation actions. Importantly, Iowa's IBAs will soon become significant factors in local land-use planning decisions, watershed protection projects, and landscape preservation initiatives; and will help local citizens get "more bang for their buck" from present and future conservation projects and initiatives.

Two components of Iowa's IBA Program are vital to progress in bird and habitat conservation. First, *citizens and communities can be effectively engaged in all aspects of the program*. Second, *each IBA becomes part of a network of critical IBA habitats across North America, the western hemisphere, and the entire planet*.

The IBA Program ties Iowa's heartland communities directly to a whole world of bird conservation action and natural

habitats protection, restoration and enhancement.

More input is always needed and welcomed as the entire IBA process continues.

### **Five Goals of the IBA Program Education Initiative**

**ONE:** Provide summarized resource information that will assist the owners and the local managers of Iowa's IBAs and sites nominated for IBA status, in improving management of these essential habitats that support 37 bird species of high conservation priority.

**TWO:** Provide assistance initially via CD, and then on the Iowa IBA website, which will be updated on a regular basis. And to promote effective use of these educational tools by the individuals who are directly or indirectly involved in managing Iowa's IBAs and sites nominated for IBAs status.

**THREE:** Facilitate statewide person-to-person sharing of the most effective wetland, woodland and grassland management practices that evolve over time from this initiative; and to ensure that the IBA website is revised and updated as necessary for maximum public understanding and support for these management techniques.

**FOUR:** Use effective outreach services related to these educational tools, including one-on-one follow-up, to achieve the primary long-term goal of the Iowa IBA Program: on-site development or revision of habitat management plans *in partnership with* landowners and land managers; and preparing grants or organizing and securing appropriate forms of technical assistance to effectively implement those plans.

**FIVE:** Help the IBA Program of Iowa Audubon become recognized statewide as the primary provider of educational tools addressing our state's high conservation priority birds and recommendations for

management of the habitats that each of those species depend upon.

### **Three Goals for the Target Audience**

**ONE:** Increase understanding of how severely some bird populations are declining; how serious the problems of habitat loss, fragmentation, and degradation are; and how the *global network of IBAs* connects Iowa and Iowans to positive bird conservation activities on an international scale.

**TWO:** Gain commitments from those who are responsible for Iowa's IBAs – for using positive habitat management recommendations to ensure that each of Iowa's IBAs reaches its full ecological potential and supports an appropriate suite of bird species and other biodiversity.

**THREE:** Maximize effective participation by the owners and managers of Iowa's IBAs, as well as by volunteer Stewardship Teams and others, in Phases I, II and III of the IBA Program.