

Conserving grassland bird habitat in the Chicago wilderness

Grassland birds are declining at rates which are steeper, more consistent, and more geographically widespread than that of any other group of birds. In Illinois, for example, Breeding Bird Survey results for the period from 1966-1996 indicate that Bobolinks have declined by 95%, Grasshopper Sparrows by 86%, and Savannah Sparrows by 81%. To stem this decline, the Chicago region's Bird Conservation Network (BCN) advocates maintaining and restoring grassland habitats with a size, structure, and disturbance regime such that the birds of the original prairies will nest there.

In what is called Chicago Wilderness, 200,000 acres of land in Southeast Wisconsin, Northeast Illinois, and Northwest Indiana have been designated as "protected," that is, under the management of federal, state, local, or private natural resource organizations. Of those acres, prairies — "the original grasslands" — are but tiny remnants, with only a small fraction of a percent remaining of the millions of acres that originally covered the region.

Almost all of Illinois' original prairie has been gone for over 100 years. But for decades after the disappearance of the prairie, grassland birds continued to thrive in hayfields and pastures. With the increase in acreage of row crops and earlier mowing of the remaining hayfields, habitat for grassland birds has suffered an alarming decline. Even on preserved lands, woody species are taking over the remaining grasslands.

If grassland habitats in the region are to support healthy populations of grassland birds, additional areas are needed to supplement the remnants. Recently acquired agricultural lands such as the Midewin National Tallgrass Prairie Preserve in Northeast Illinois, along with smaller protected grassland fragments currently being restored, hold the potential to provide such habitat.

The size of grassland habitat is important when it comes to breeding habitat for grassland birds. Herkert et al. (1993: www.npwrc.usgs.gov/resource/othrdata/manbook/manbook.htm) pointed out that grasslands of at least 250 acres are often required to attract grassland bird species that are most sensitive to habitat fragmentation. Henslow's sparrows, Savannah sparrows, and bobolinks, for example, need large blocks of grassland. Although Midewin's 19,000 acres will be the centerpiece of any regional grassland bird habitat work, the BCN is looking at other protected areas in the region as suitable tracts of adequate size to support grassland birds.

Grassland restoration will require more than planting old farm fields with native grasses. Although grassland birds will breed successfully in restored prairies and in fields of Eurasian grasses, grasslands consisting of dense stands of few species of tall grasses, as opposed to a rich matrix of grassland species, seem to have little value as breeding habitat for many of the grassland specialists. An important research need, therefore, is to determine the various mixes of grasses and forbs necessary for good breeding habitat.

For thousands of years, fire was an important feature in keeping woody vegetation from colonizing grasslands. Restoration and management of Chicago Wilderness grassland preserves includes prescribed burning. The frequency of burns is yet another area of interest to the BCN, as some grassland birds have different habitat needs; some species will nest in the year of a burn, while others require a buildup of ground litter before they will nest.

In addition, the effects of burning on other species, such as invertebrates, as well as practical considerations like neighboring housing developments and roadways, are influencing grassland restoration and management protocols. BCN monitoring data and other research findings will be used to assess the impacts of fire and other restoration techniques on bird populations and adjust methods when needed (www.fmnf.org/birdcensus/).

The BCN census data are entered over the Internet into a site maintained by Chicago's Field Museum of Natural History. This ongoing monitoring program allows correlation of bird populations to other factors such as habitat. In addition, the BCN and Field Museum are working with the National Audubon Society on a study which began this year to determine what types of vegetation are best to sustain grassland bird populations.

If our preserves are to provide the habitat that is so critical to birds as well as other wildlife, public support for management is essential. The BCN believes birds, watched and admired by huge numbers of people in the Chicago Wilderness region, can provide a clear connection between wildlife in general and the need to maintain adequate habitat in a way that is both readily appreciated and scientifically valid.

Duane Heaton is a Chicago area birder and author of a recent paper on behalf of the Bird Conservation Network. The paper outlines concerns about population declines of grassland birds and recommends actions to improve habitat for them. It is available online at www.iit.edu/~cos/BCN/GPgrassland.html

Original prairie. An illustration from The Tallgrass Restoration Handbook, edited by Stephen Packard & Cornelia F. Mutel, Island Press, 1997

Do you have a story or photos you'd like to share about what's going on in your region? Contact me at julie@ser.org

Restoring the dawn chorus: The biodiversity challenge in New Zealand

New Zealand's unique biodiversity is internationally important. We boast the world's only flightless parrot (kakapo); a bird with nostrils at the end of its beak (kiwi); a primitive frog that bears live young (*Leiopelma* sp); a large insect that fills the role played by small rodents in other countries (giant weta); and many other exceptional species. Remarkably high numbers of New Zealand's own species are found nowhere else. Such endemism is a testament to our long geographical isolation. Half a dozen islands in New Zealand's Hauraki Gulf, north of Auckland, have greater levels of endemism than the whole of Britain.

Yet while we have much to celebrate and treasure, in terms of what makes New Zealand distinct, we also have one of the worst records of biodiversity loss. The arrival of humans, over the last 700-800 years, has been linked to the extinction of around one-third of indigenous land and freshwater bird species, one in six sea bird species, three of seven frog species, at least twelve invertebrate species, one fish, one bat, perhaps three reptiles and possibly eleven plant species. A further 1000 or so animal, plant and fungal species are considered threatened. Much of the loss is attributed to habitat clearance, especially by fire, and to the ravages of introduced plants and animals. Many characteristic ecosystem types have been reduced to fragments, especially in lowland areas. In ecological terms, our cornucopia of biodiversity is still reeling from the shock of mankind's arrival.

That is the challenge, what is the response? The New Zealand Government has recently launched a National Biodiversity Strategy. The resources it has to call upon are around 8 million

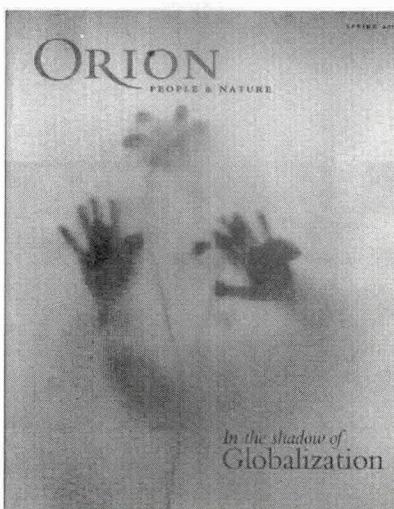
hectares of habitat protected within public conservation lands, under the management of the Department of Conservation (DoC), and the initiatives of private land-owners, often supported, sometimes cajoled, by local government, in the protection of natural habitats. Promotion of conservation on private land is a major part of the biodiversity strategy. Implementation of roles and responsibilities, incentive mechanisms and procedures, is a major challenge.

The battle is on. Stoats (ermine) have become "biodiversity enemy #1" and the focus of significant government spending. Possums remain a target for control because they spread tuberculosis to cattle, decimate native forests, and take eggs of threatened bird species. Weeds pose a major biosecurity risk, with new species being introduced every week, often through the home garden market. Formation of the Environmental Risk Management Authority is part of the strategy to tighten border controls, but indigenous species are already outnumbered by introduced flowering plants and conifers — about 250 of which are known or judged to have significant weed potential in natural habitats.

There have been successes. The Nature Heritage Fund and Nga Whenua Rahui have together helped protect over 200,000 hectares of forest on private land from being cleared. New Zealand's island restoration programmes have become known internationally for their success in both predator elimination and re-establishment of bird species, moved from other locations. The approach has been extended to "mainland islands" — what David Bellamy has called "islands of survival" and what DoC calls "islands of hope". Surrounded by highly modified land or partially isolated on peninsulas, mainland islands are chosen as areas where weed and pest management and species reintroduction are realistic prospects. DoC now manages six mainland islands, such as Rotoiti in the Nelson Lakes National Park. But there are many others under community care, such as the Karori Sanctuary in the capital, Wellington, which is deploying a high-tech fence to keep out the predators.

Visitors to these "island" projects are amazed by the way in which indigenous biodiversity is bouncing back. We may have lost the moa and many other species, but those still with us can touch the human spirit and spur us on to "restore the dawn chorus" across New Zealand.

Richard Gordon is an At-large Representative of the SER Board. Since 1995, he has led the premier research programme on ecological restoration in New Zealand — Manaaki Whenua Landcare Research — a multidisciplinary team of scientists, community groups and government staff. For more information on this topic, visit www.landcare.cri.nz or www.biodiv.govt.nz.



SER is pleased to participate in The Orion Society's Grassroots Initiative — for your \$30 annual membership in Orion, not only will you receive four issues of *Orion* and *Orion Afield*, but \$10 of that fee will go to SER! As acclaimed as its publications are, The Orion Society is so much more than the cultural/

philosophical voice of *Orion* and the "act locally" spirit of *Orion Afield*; it is a glowing receptacle for the stories we share about the places we call home. For more info, visit www.orionsociety.org or call toll-free at 888.909.6568.

“Pristine” environment may be man-made

The flowing tallgrass prairies and stately stands of ponderosa pines, long revered by environmentalists and other nature-lovers, may not be the pristine refuges they were once thought to be. Scientists are beginning to believe what many people think of as natural environments may not actually be natural at all. Evidence increasingly suggests that what were thought to be unspoiled tracts of land were actually heavily influenced by people who inhabited the land thousands of years ago.

These researchers are now examining ways in which people have influenced their environments historically, and what this means for the future of relationships between humans and the ecosystems in which they live. This evidence may have a huge impact on the way restoration ecologists approach projects, and has led researchers to consider new ways of defining the relationship between humans and the environment.

Ecological restoration seeks to reestablish degraded ecosystems. In addition to considering the physical snapshot of a given ecosystem, restorationists must also take into account the processes which helped create that picture. Often the picture of an ecosystem is labeled “pristine” or “natural,” traditionally implying a lack of human interference. However, new studies are suggesting that some of these “pristine” ecosystems are no more undisturbed than the garden in your backyard.

Not only that, say researchers, some ecosystems — such as tallgrass prairies — couldn’t survive or even exist without human intervention. M. Kat Anderson, a researcher with the Natural Resources Conservation Service, studies ethnoecology. She contends some ecosystems need intervention, such as prescribed burns, to maintain biodiversity and survive as a distinct ecosystem. For instance, if a tallgrass prairie doesn’t burn regularly, tree saplings would likely overtake the prairie and turn it into a forest.

Anderson’s findings, recently published in *Ecological Restoration* (vol.17 no. 1), maintain that human alterations are vital processes for restorationists to consider. “New evidence from interdisciplinary research,” she writes, “has substantiated that human manipulations, such as burning and tillage, were regular, constant, and long term.”

Her study focuses on the influences of Native American, or pre-Columbian, populations on their environments, and suggests that humans had lasting effects on small landscapes, ecosystems, and even bioregions. Anderson points to the development of the midwestern prairies as a key example of an anthropogenic ecosystem — one shaped by humans. “While natural forces,” Anderson states, “including both climate change and fires caused by lightning, played a role in the creation of the prairies, it was probably Indian-set fires that were the *coup de grace* that made [the prairies] so vast.” Anderson adds that, in addition to burning, indigenous people shaped their environments through irrigation, pruning, transplanting and redistributing plant species.

Thomas Alcoze, an Associate Professor of Forestry at Northern Arizona University, is a pioneer in the field of “ethnobotany”.

Ethnobotany, defines Alcoze, “is the study of the relationship between plants and human beings.” Alcoze’s study of Native American culture has demonstrated that Native Americans foster a deep understanding of and respect for the earth through their ceremonies, rituals, and world views. The Ojibway Nation uses a sweetgrass ceremony, in which blades of grass are braided together, to symbolize the connection between people and the environment.

Anderson, concurring with Alcoze, establishes three cornerstones of Native Americans’ relationship to nature: judicious harvesting, crafting, and using of products. By defining these three activities as parts of a whole, Native Americans maintain a respectful and sustainable relationship with their environment.

All that changed when Europeans crossed the Atlantic. William Deneven, a researcher in the Department of Geography at the University of Wisconsin-Madison, states that the European population in North America increased dramatically after 1750, placing a strain on existing resources. “European modification of the environment accelerated, continuing to the present,” he writes in *Annals of the Association of American Geographers*.

Many researchers agree with Deneven’s assessment. “Today, we’ve taken these three connected practices and made them into three distinct economic activities,” Anderson writes. “Ecologists know plants in their natural setting, craftsmen prepare plants for human use, and homeowners buy and use the finished products.” Anderson believes this separation has distanced Euro-Americans from the earth and has consequently diluted their relationship with it. Alcoze concurs. “Human society has become so disassociated with the ethno and botany of our lives that we overharvest the same plants we need to maintain us, heal us, and restore our relationship with the earth,” he states.

It is this overuse which has led to the idea of a “wilderness ethic.” In *A Forest of Voices*, Michael Pollan writes that the wilderness ethic — the view of man versus nature — has been the underlying principle fueling environmental debates for much of the past century. Pollan says subscribers to the wilderness ethic see it as an all-or-nothing prospect — because humans have severely degraded the environment, the only logical solution is to refrain from interacting with the environment altogether. In Connecticut, officials with The Nature Conservancy successfully blocked efforts to clean up a stand of pines devastated by tornadoes. “If you’re going to clean it up,” Pollan quotes one purist as saying, “you might as well put up condos.” But, Pollan argues, the stand of pines, encouraged by logging and fire suppression, was “in some part a man-made landscape, and it could reasonably be argued that to exclude man at this point in its history would constitute a break with its past.”

Indeed, Anderson asserts, “The biggest challenge for our species is to find ways to use nature without destroying it. We will not learn to live compatibly with nature simply by locking up lands in large tracts of restored wilderness.”

Gretchen Richter Teich is a student at Northern Arizona University

SER Board News Board Development Committee

SER 2000 Election Results

In the last issue of *SER News*, members received their ballots for the SER 2000 Election. The results are in and the winners are: Dave Borland, Southeast Representative; George Gann, At Large Representative; Deborah Lev, North Pacific Representative; and Ted Shear, Secretary. The current Board of Directors elected Eric Higgs to serve as SER's Vice-Chair/Chair Elect (see box below).

Nominations for 2001

The Board positions up for election in 2001 are Treasurer, Midwest US Representative, Rocky Mountains/Great Plains Representative, Asia-Pacific Representative, Euro Mediterranean Representative, and At-Large Representative. As you can see, SER's 2001 Election will have a full slate and an opportunity for new leadership. Please consider suggesting individuals with leadership skills and interests to the Board Development Committee. While nominations can be received throughout the year, the deadline for the SER 2001 Election is 15 January 2001.

Committee Service

A good way to gain experience with SER before diving into board service on the international level is to participate on a SER committee or working group, and opportunities abound! Volunteer applications and full descriptions are available by contacting the Board Development Committee Chair at kwest01@earthlink.net. Below is a synopsis of some of the primary functions of SER's committees and working groups:

Awards Working Group implements the Society's awards program, including nominations, evaluations, selection of recipients, and presentations.

The **Board Development** Committee oversees Board nominations, Board orientation and training, Board member evaluation and organizational assessment, recognition and awards for Board service, and strategic planning and Board retreats.

The **Conference** Working Group solicits and reviews proposals for annual international conferences, special meetings,

and symposia; works with the Executive Director in reviewing themes, programs, and speakers for meetings; and ensures institutional memory and coordination from one conference to the next.

The **Education** Working Group oversees the restoration training program and the process of establishing certification in the field of ecological restoration as well as exploring the Society's role in other educational initiatives.

The **Membership** Committee recommends to the Board strategies for increasing membership and for forming new chapters and guilds and makes recommendations for serving the needs of members and chapters.

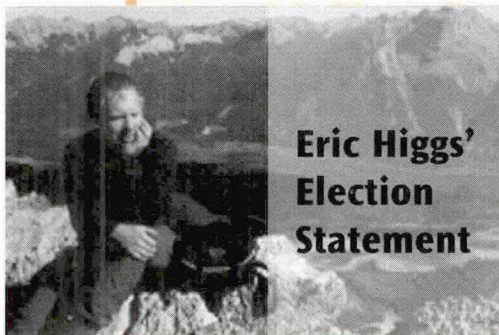
The **Science & Policy** Working Group develops and considers policy and scientific matters of direct relevance to the membership of SER and the theory and practice of ecological restoration.

The **Publications** Working Group oversees the publication of journals, proceedings, monographs, and other publications, including recommendations for the selection of editors and publishers.

Will you be in Liverpool? Don't miss our Membership Meeting

Tuesday's the day, 5 September from 1:15 to 2:00pm (during the lunch break). In addition to staff and board reports and getting your feedback, we'll be recognizing Steven Handel for his three-year term as At-large Representative on SER's Board. Steven first served in a leadership capacity as Co-Chair of the 1996 SER Conference at Rutgers. As At-Large Representative, Steven served on the Board Development Committee and continues to serve on the Education Working Group. When you see Steven, let him know his efforts are appreciated. Also, see an article on some of his current efforts on page 15.

Kellie Westervelt, Board Development Committee Chair



Eric Higgs' Election Statement

I have served SER in a leadership capacity during a time of formation and reformation. It is gratifying to see how strong the organization is now, having faced growing pains and in the last year accomplishing a difficult transition to new administrative headquarters under the leadership of a new executive director. SER is poised to surge ahead and realize the ambitions of so many of its members: to be the lead international organization in promoting and developing ecological restoration. Three priorities stand out for me:

- Building the membership base and improving member services;
- Developing a successful fund development campaign;
- Increasing the international outreach of SER to build a truly international organization

I bring considerable experience to the position of Vice-Chair/ Chair-elect: as Secretary to the Board of Directors and member of the Executive Committee (1995-present), co-chair of the Science & Policy Working Group (1995-97), and a member of the Ad Hoc Transition Committee (1999). It is an honor to serve the membership of SER.