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Prairie chickens
dance
at dawn

Sturgeon patrol: On guard!

Getting more when dams renew

The drummer of love

Peggy A. Farrell



LEN BACKUS

Prairie chickens jump, dance and boom to attract females to the small territory that each defends on the grassland breeding grounds.

Every spring, nature lovers from across the country come to the Buena Vista Grasslands of central Wisconsin to experience a most unusual early morning show. They get to review a song-and-dance performance that is equal parts entertainment and science. They also help gather data on a state-threatened species, the greater prairie chicken. The annual mating rituals of the male prairie chicken, known as "booming," are an equal treat for the eye and ear that includes behaviors, moves and the distinctive male call, a low and resonant "who doo zhoo. Males will cackle

and whine and raise their pinnae, or "ear feathers" to catch a potential mate's eye. A foot-stomping display is said to have inspired the species' scientific name, *Tympanuchus cupido pinnatus*, meaning "drummer of love."

Prairie chickens court spring and a future on vast grasslands of central Wisconsin.

Ear feathers or pinnae are raised like a bonnet. Wing feathers are splayed to the side, tail feathers are fanned erect and orange sacs inflated on either side of the neck. Then the birds beat feet and emit a low, resonant booming call. It's quite a show of stylized dance and calls.





Cattle and other livestock have to be fenced off the grassland areas.

DNR PHOTO



Tractors with big lateral cutters called bat wings mow back shrubs and brush.

DNR PHOTO



Prescribed burns are an important tool for controlling weeds and encouraging fresh growth of young grasses that provide food and cover.

DNR PHOTO



Prairie chickens here in the Upper Midwest live in flocks of a few to 200 birds, except during breeding and nesting season when they are more solitary. There is safety in numbers, and gathering in groups helps keep the flock alert and protected from predators like coyotes and raptors as the coveys feed and roost in tall grassy areas. They are non-migratory residents of Wisconsin, and are well adapted to the cold. Like their more familiar relatives, ruffed grouse, prairie chickens will roost in snow burrows when it becomes extremely cold. Their winter diet consists of crop and weed seeds exposed by harsh winds in open areas, as well as aspen buds. Summer fare includes insects and seeds supplemented by feeding on green leafy vegetation.

Over the last century, prairie chicken populations declined because they were tasty table fare. Also their habitat continued to shrink as the tallgrass prairie was cultivated into prime farmlands. In Wisconsin, prairie chickens were once found in every county. As recently as 1930, their state population was estimated at more than 54,000 birds. Today, bi-

ologists estimate about 1,500 prairie chickens remain in the state.

It takes a lot of land to support even this small number of birds, and approximately 12,000 acres of land on the Buena Vista Grasslands of southwestern Portage County are managed by the Wisconsin Department of Natural Resources to provide the needed wide horizons and habitat for prairie chickens. In addition, prairie chickens can be found in outlying grasslands from the Medford area of Taylor County southeast to the Leola grasslands in Adams County particularly on the state wildlife areas known as Mead, Dewey, Paul J. Olson and Buena Vista.

Due to the dwindling numbers of prairie chickens, a count is taken each spring to track the population trends and evaluate management effectiveness. The census consists of finding all booming grounds and recording the number of males present during the month-long mating season. Biologists infer that if the total number of males increases from year to year, the entire population has grown proportionately.

Taking a "chicken census" isn't just a simple matter of counting birds. Staff and volunteers from the University of Wisconsin-Stevens Point and the Wisconsin Department of Natural Resources as well as private volunteers spend hours in March and early April scouting out booming grounds, or leks, where male prairie chickens will put on their show during the April breeding season. When booming grounds have been identified, these surveyors, along with the public viewers, spend time in blinds each morning gathering the data used in population estimates. It takes a stalwart bird lover to sit in a wooden box in the cold dark, recording the number of dancing birds on a tally sheet!

According to Lyle Nauman, UW-Stevens Point wildlife professor emeritus and census coordinator, 444 male chickens were observed in April of 2005, a 26 percent decrease overall from the previous year.

"This was the lowest count since our census beginning in 1989," Nauman indicates. "In addition, last year was bad for prairie chicken reproduction be-



Wildlife managers and private landowners maintain thousands of acres of grasslands scattered over more than a million acres of central Wisconsin to provide for prairie chickens.

STEVEN SERVANTEZ

Your ticket to the dance

Make your reservation now to observe prairie chickens on the Buena Vista Marsh in April. Plan on an early morning visit, REALLY early. Visitors need to arrive two hours before sunrise. Once in the blind, you'll be given clipboards and data sheets to note the number of birds present, note their behavior and record any other observations of potential interest to wildlife managers. Your volunteer observations are essential to the continued success of the prairie chicken program.

Once you have a reservation, you'll be mailed information about when and where to meet, and what to wear and bring. You'll also receive background briefings on prairie chickens and observation procedures. There is a small fee (\$15 for adults, \$10

students and seniors) to defray the cost of guiding observers as well as maintaining, placing and retrieving blinds. Veteran chicken viewer Becky Martin recommends: "Be prepared to wake up really early, wear layered clothing — it can be cold in April. Bring a good flashlight because you'll be walking out to a blind in the dark following a trail of reflectors. If you want to be really comfortable, you may want to bring along a seat cushion!" To make a reservation, call Katie Brashear, 715-346-3259. Visit the UW-Stevens Point prairie chicken website at uwsp.edu/wildlife/pchicken for more information and to see pictures and video of prairie chickens on the booming grounds.



ROBERT QUEEN

Your observations are important to track prairie chicken populations and activity during the spring breeding season.

cause it was cold and wet. Young chicks are susceptible to cold and pneumonia. It looks pretty grim in some areas."

He noted lower numbers of birds throughout the fringe areas of the prairie chicken range though populations were more stable and hadn't fluctuated as much in areas specifically managed as grassland habitat like the Buena Vista property.

Drawing from a deeper genetic pool

Wildlife professionals and conservationists agree that a sound management plan is key to sustaining healthy resources. In October 2004, the Wisconsin Natural Resources Board approved the Central Wisconsin Grassland Conservation Project, a management plan that grew out of research to address habitat concerns and genetic viability of prairie chickens, according to DNR Wildlife Biologist Jim Keir.

"Wisconsin has an isolated population of prairie chickens," Keir explains. "Historically, they were scattered over much of the central part of North Amer-

ica, but the landscape has changed and continues to change today. If we want to maintain this species we have to manage the habitat or these birds would soon be gone from the state."

Professor Christine Thomas, Dean of the College of Natural Resources at UW-Stevens Point, and a Wisconsin Natural Resources Board member, says the current management plan uses a landscape-level approach. "We're looking at the entire biological region, not just the Buena Vista marsh. What we don't want to see are islands of isolation in the chicken population."

When small numbers of a given species become isolated from other populations of the same species, inbreeding can occur, leading to a loss of genetic diversity and declining population health. Wildlife professionals were seeing some evidence of Wisconsin's prairie chickens going down that path. In January of 2005, the Department of Natural Resources asked a committee of seven geneticists from around the country to look at research that suggested "inbreeding depression"

might soon occur. After reviewing historical and contemporary genetic data, the group found evidence that subpopulations of prairie chickens in Wisconsin have lost significant levels of genetic diversity, according to committee member Brian Sloss of the Wisconsin Cooperative Fisheries Research Unit at UW-Stevens Point.

"We all agreed that the genetic component is a problem," Sloss says, "but without adequate habitat, the chickens won't survive either, and habitat is a concern too."

To begin to address genetic weaknesses, the committee formally recommended relocating 30-40 hen prairie chickens from Minnesota to the Buena Vista Marsh in Wisconsin. That process may begin as early as this summer.

In addition, the long-term success of prairie chickens depends on sustaining adequate amounts of permanent grassland habitat. Managing grasslands in the prairie chicken range is the single most important component of the Central Wisconsin Grassland Conservation Project, Keir says. The Department of



Dairy farmer Dale Daggett of Rusk County shows a bus tour of visitors how rotational grazing and a rest period keeps grasslands lush, slows erosion and benefits wildlife that depend on grassland habitats.

TEAL FYKSEN

Natural Resources' approach to achieve that goal includes a blend of science and public education.

"Our work over the past few decades on Buena Vista serves as the template for what we'd like to accomplish," says Keir. "But the state owns the lands we are managing now and it's not the state's intent to own all the prairie chicken habitat out there." He goes on to explain that suitable grassland occurs in clusters. Grasslands are scattered over a landscape of more than one million acres from Leola in Adams County sweeping northward towards Medford in Taylor County, a distance of 75 miles that contains distinct core areas where chicken activity is concentrated. Between core areas there is currently little chicken activity. "We'd like to connect these core areas with a landscape through which the birds would be comfortable traveling," Keir says. "You might visualize them as connecting stepping stones that encourage more intermixing in the breeding population."

To create this "scatter pattern" that integrates productive farm practices with suitable grassland habitat, the Department of Natural Resources is working with the Natural Resources Conservation Service, the U.S. Fish and Wildlife Service, county land conservation departments and private landown-

ers to maintain grassland on agricultural landscapes. This effort includes providing incentives for farmers to use rotational grazing and to apply for Farm Bill programs like the Conservation Reserve Enhancement Program (CREP) that will share costs with landowners to maintain grasslands.

"The flagship species of this project is obviously the prairie chicken, but many other species will benefit from maintaining more grassland," Keir notes. "For example, songbirds like the Henslow's sparrow

(a state-threatened species), the regal fritillary butterfly (a state-endangered species), as well as short-eared owls would be helped," Keir says.

A solid 75 years of prairie chicken work here

Concern for Wisconsin's prairie chickens is not new. The first wildlife research project in the state focused on this colorful bird with the fast feet when A.O. Gross, a grouse expert from Maine, was contracted to do research from 1928-1930. Pioneering work by biologists Frederick and Frances Hamerstrom began in the 1930s. The last legal prairie chicken hunting season in Wisconsin took place in 1955. The Hamerstroms published a guide to prairie chicken management in 1957. By then, their urgent call for habitat protection prompted private groups like the Dane County Conservation League and the Society of Tympanuchus Cupido Pinnaeus to purchase over 12,000 acres of land that was subsequently leased to the Wisconsin Conservation Department to establish a grassland management program. Today, the state manages 15,000 acres of grassland.

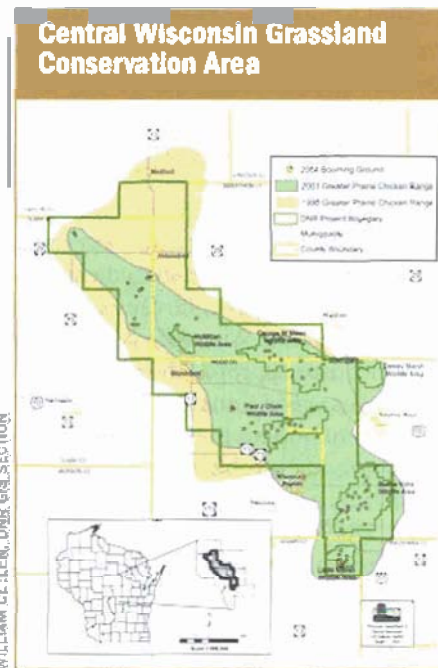
The University of Wisconsin-Stevens Point College of Natural Resources (CNR) became another key partner in prairie chicken research. The Hamer-

stroms were inducted as honorary associates in the college and the late professor Ray Anderson had a close personal friendship and professional relationship with the couple. Several CNR wildlife students had the fortunate opportunity to work with them.

In the late 1990s, university funds dried up for faculty to coordinate the annual spring prairie chicken viewing. "We thought it would be a shame to see this great public service eliminated," says CNR Dean Thomas, so the Becoming an Outdoors-Woman (BOW) program stepped in to schedule public opportunities to view chickens during their mating season. BOW staff members and graduate students take viewing reservations, handle correspondence and guide the early morning visitors to the blinds.

With so many people and organizations rooting for the prairie chicken, the fate of the threatened bird looks a little brighter in the future. Agencies and landowners can work together to manage habitat that benefits all grassland species, which in turn will benefit the people who rely on the land for a living and call it home.

Jim Keir is optimistic that the plan will work. "A lot of the right people are putting a priority on this effort. We're gaining knowledge, using it, and I'm confident we can maintain a healthy



WILLIAM CEILEN, DNR GIS SECTION

population of prairie chickens. What happens here can provide a positive national example of how to work with landowners to manage remnant and isolated populations." Given adequate habitat and proper management, we can create a greater sense of security for our prairie chicken populations and their "dance at dawn" will be viewed by generations to come right here

in central Wisconsin.

Peggy A. Farrell is the assistant director for the International Becoming an Outdoors-Woman program. She lives in farm country with wide-open spaces in Portage County where she raises prairie plants and fancy-breed domestic chickens.

University of Wisconsin-Stevens Point graduate student Katie Brashear also contributed to this article.

To learn more about the Central Wisconsin Grassland Conservation Area, contact Sharon Schwab, grassland coordinator at the Golden Sands Resource Conservation & Development Council, Inc. 715-343-6221 or via e-mail at schwabs@co.portage.wi.us. To get details on the first Prairie Chicken Festival on Saturday, April 22nd in central Wisconsin, visit the Golden Sands RCDC website, goldensandsrcdc.org, and click on the wildlife projects icon.

Dance at dawn

Good thing we made a scouting trip the afternoon before. Looking for a roadside kiosk on the back roads of Portage County at 3 a.m. would have been no fun. We saw taillights from four cars pulled onto the road shoulder ahead of us and joined the queue. The ground was frosty, but the greeting was warm from a UW-Stevens Point student who welcomed us and handed out assignments. We drove off as a caravan and car by car were dropped off at fields and given directions to the small observation blinds that would be our front-row seats to "the big show."



Chicken rendezvous before dawn at a roadside kiosk.

"Just follow the path by the field edge and you can't miss it," the guide said. But at 4 a.m. in the pitch dark with a small flashlight, it would have been easy to stumble around the vast grasslands without finding the simple rectangular wooden blinds before sunup. Fortunately my wife and kids had a better sense of direction and we soon crawled in side-by-side box blinds that looked like homeless shelters for wayward birders. We paired off, latched the simple doors behind us, doused the lights and waited for the first low notes of the morning concert.

The accommodations are spartan — unheated, low plywood blinds with wood benches — but the location is prime. Six blinds placed in four locations on 15,000 acres of grassland put 24 people a day in the heart of the booming grounds just a few feet as male chickens display, posture, dance and call to attract a mate.

The handouts we received in advance prepared us well for the experience at hand. We knew it was important to remain really quiet, muffle our cameras and turn off the flash. We also knew that once we were in the blinds we had to stay there for two to three hours to avoid disturbing the birds or changing their behavior.

As night crept toward dawn, we heard then saw the males emerge from the dim light — the soft, rhythmic patter of their feet drummed the hard ground accompanied by an amazing array of clucks, hoots and cries mixed in with booms. In the dim light, their physical displays form a ritual dance — head down and parallel to the ground, neck feathers thrown over the head like horns, wing feathers straight back, tail feathers fanned skyward and orange neck sacs inflating and deflating in time with the low booming sound. The males repeatedly stomp the ground in slow circles defining the edges of the small territory that each defends. The birds are really close. In fact one jumped on top of our blind and tattooed his song and dance routine just two inches above my head!

We made rough sketches of the territories and kept track of the numbers of males and females we saw every half hour on the census forms provided. Truth be known, we saw lots of males but only two females in a nearly two-and-a-half-hour stint, and they strolled through the leks picking at grass without a care in the world as the males furiously beat feet trying to attract their interest.

At one point all the chickens flushed and disappeared for about 10 minutes and we assumed some cruising raptor or predator temporarily busted the boom. Slowly the males returned and resumed until stronger daylight convinced them to wander off and give it up for the morning. We crawled out of the blinds about 7:20 a.m., cracked the kinks in our backs, shook the blood flow back into our legs in our own sympathetic jig, filed our field forms and headed back to the motel for a snooze before the 11 a.m. checkout.

— David L. Sperling

LEFT: The management plan seeks to improve grassland corridors between core areas so prairie chickens will range over a wider area and the breeding populations will intermix, strengthening genetic diversity.

