Sandhill Crane

Ecology & Damage Management

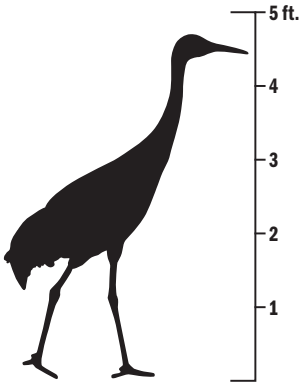
Jeffrey J. Strobel

Sandhill cranes *(Grus canadensis)* are one of two crane species found in North America. The other is the whooping crane, an endangered species, which has been reintroduced to Wisconsin as an experimental flock. Unlike its white whooping crane cousin, the Sandhill crane is a gray bird and is much more common. There are no accurate estimates for the Sandhill crane population in Wisconsin, but it is estimated that the Mississippi Flyway population (which includes Wisconsin) is over 40,000 individuals and is steadily increasing.* As crane populations continue to grow every year, so does crop damage to planted corn and wheat, property damage to homeowners, and risk of strikes with aircraft.

Throughout the 1800s, Sandhill crane populations were greatly reduced due to habitat loss and unregulated hunting. In 1918, the Migratory Bird Treaty Act was signed, protecting the remaining cranes. Today, the crane population is healthy, benefiting from habitat restoration projects and protection from hunting throughout Wisconsin. You can help cranes, and the biologists who manage them, by getting involved with the statewide, annual "Crane Count," held in April and sponsored by the International Crane Foundation in Baraboo, Wisconsin.

DESCRIPTION

Within North America there are six different sub-species of Sandhill crane that vary in size and weight. Lesser Sandhills breed at more northern latitudes such as the Arctic and are the smallest sub-species, weighing on average 6 to 7 pounds and standing 3 to 3.5 feet tall. At the other extreme, the Greater Sandhills are the largest sub-species and average 4.5 to 5 feet tall and 10 to 14 pounds. Of the six sub-species, only the Greater Sandhill crane is found in Wisconsin.



"Greater Sandhills are the largest sub-species and average 4.5 to 5 ft. tall and 10 to 14 lbs."

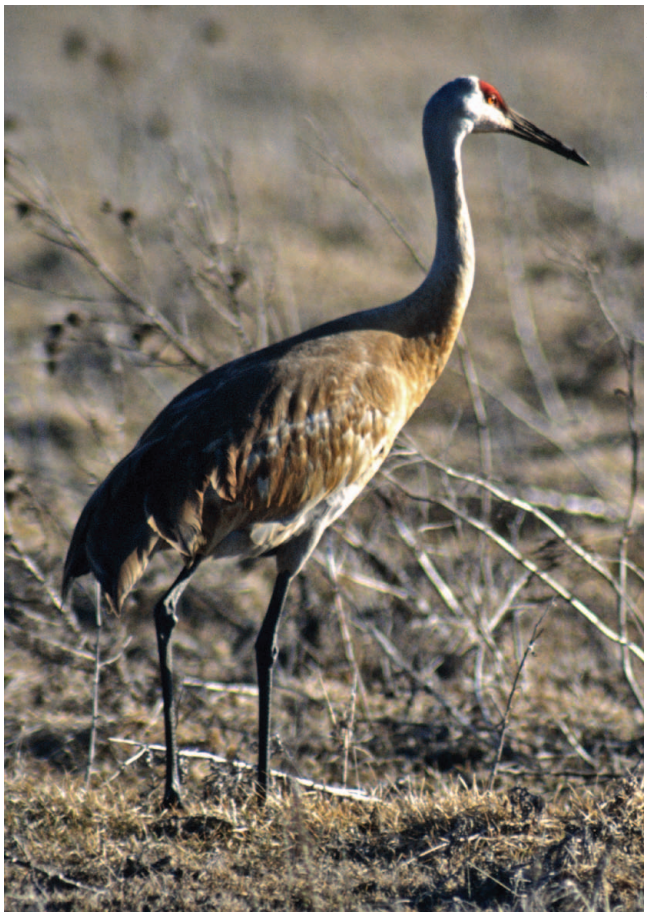
Body plumage is characterized by varying shades of gray. In many areas, wild Sandhills preen iron-rich mud into their

(continued on page 2)

* (Kent Van Horn, WDNR Waterfowl Biologist, personal communication)

DESCRIPTION (continued)

feathers creating a deep rusty brown hue which lasts during spring and summer. As fall advances, these rusty feathers molt and the birds return to their grayish appearance. In some regions, however, iron-rich mud is absent and the birds appear grey all year. The forehead and crown are red and the face, chin, upper throat, and nape are white to pale gray. Adults have a white cheek patch and their legs and toes are black. In general, males and females are virtually indistinguishable but within a breeding pair, males tend to be larger than females. Juvenile plumage changes from cinnamon brown to gray as the bird matures during the first year.



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Adult sandhill crane with feathers stained rusty-colored.

Sandhill cranes are the most abundant of the world's cranes. Collectively, the six subspecies are widely (though intermittently) distributed throughout North America, extending from Cuba to northeastern Siberia. The three migratory subspecies (Lesser, Greater and Canadian) are distributed across a broad breeding range in the northern United States and Canada as well as eastern Siberia, with wintering grounds in the southern United States and northern Mexico. The three non-migratory subspecies (Mississippi, Cuban, and Florida) have restricted ranges in the southern United States and Cuba. Sandhill cranes are found throughout all counties of Wisconsin during the spring, summer, and fall months and spend the winter months primarily in Florida.

"Adults have a white cheek patch and their legs and toes are black."

FOOD

Sandhill cranes are generalists and feed on a wide variety of plant tubers, grains, small vertebrates (e.g. mice and snakes), and invertebrates such as insects or worms. Sandhills find these foods in upland habitats, crop fields, and shallow wetlands. Like most cranes, flightless chicks forage primarily on a diet of insects and other protein-rich foods during their early stages of rapid growth.

Charles D. Lovell

A large flock of sandhill cranes gathers during fall migration.

HABITS & HABITAT

Sandhill cranes are primarily birds of open, freshwater wetlands, but the different subspecies utilize habitats that range from bogs, sedge meadows, and fens to open grasslands, pine savannas, and cultivated lands. Breeding Sandhill Cranes prefer habitats that contain open sedge meadows in wetlands adjacent to short, upland vegetation.

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A sandhill pair with chick.

In the fall, cranes gather together in groups of several thousand in large wetland areas in Wisconsin like Crex Meadows, White River Marsh, Sandhill State Wildlife Area, Necedah National Wildlife Refuge and Comstock Marsh. They also can be observed feeding in large numbers in harvested crop fields throughout the state. Cold mid-November winds will carry the cranes, sometimes circling up to heights of 5,000 feet, to their southern wintering grounds.

REPRODUCTION

Cranes select a mate when they are 4-years old and can live as many as 25 to 30 years with the same mate. Sandhill Crane nests are usually low mounds built out of dominant vegetation. Typically nests are located in wetlands, but Sandhill Cranes will occasionally nest in uplands. Females usually lay two eggs and incubation (by both sexes) lasts 29 to 32 days. The male takes the primary role in defending the nest against predators. Chicks fledge (first flight) at 67 to 75 days.

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Sandhill cranes in a field of young corn.

IDENTIFYING SANDHILL CRANE DAMAGE

Agricultural Crop Damage

The Sandhill crane's tendency to feed on plant tubers creates conflicts with farming. Sandhill cranes are adept at probing in the ground with their long beaks and finding planted agricultural seeds such as corn. When large flocks of cranes feed on planted fields, the damage they cause to an unprotected crop can be severe enough to force the farmer to replant the entire field.

The most commonly reported crop damage by Sandhill cranes from farmers in Wisconsin is feeding on recently planted corn seed. Cranes will probe the ground and remove individual corn seeds within the first few weeks after planting. Sandhill cranes will continue to feed on the germinating seed until the corn plant reaches 4 to 8 inches in height. Winter wheat damage by Sandhill cranes is less common. Similar to the damage caused to planted corn seed, Sandhill Cranes feed on winter wheat seeds, but damage to the mature plants has also been documented. Once the wheat is fully mature, Sandhill cranes have been observed stripping the wheat head off the plant. In addition to removal of the seed head, some of the plants are knocked over, making harvest of those plants difficult.

In some cases identification of the damage may be difficult. Although Sandhill cranes are found in various crop fields, their presence does not necessarily make them guilty of causing damage. For example, Sandhill cranes are often found feeding in soybean fields; however, feeding on soybean plants or seeds has not been documented. In this situation, Sandhill cranes may be providing a benefit to the farmer by eating insects and other crop pests. In corn crops, Crane damage is usually identified by the small probing holes left in the ground where the corn seed was planted. It is also common to find the newly sprouted corn plant cut off just above ground while the germinating kernel is gone.

United States Department of Agriculture (USDA), Animal and Plant Health Inspection Service (APHIS), Wildlife Services personnel are available to assist farmers and landowners with identifying Sandhill crane damage.

Property Damage

Although rare, Sandhill cranes may damage property in Wisconsin. Damages are typically in the form of feeding on vegetable gardens and aggressive attacks on reflective surfaces such as windows or solar panels.

Because damages may vary, visual observation of damage occurring is best for identification. The attacks are usually a result of seeing their reflections and probably related to territorial behavior. These damages usually occur during the breeding season in spring and summer and typically cease in late summer.

USDA, APHIS, Wildlife Services

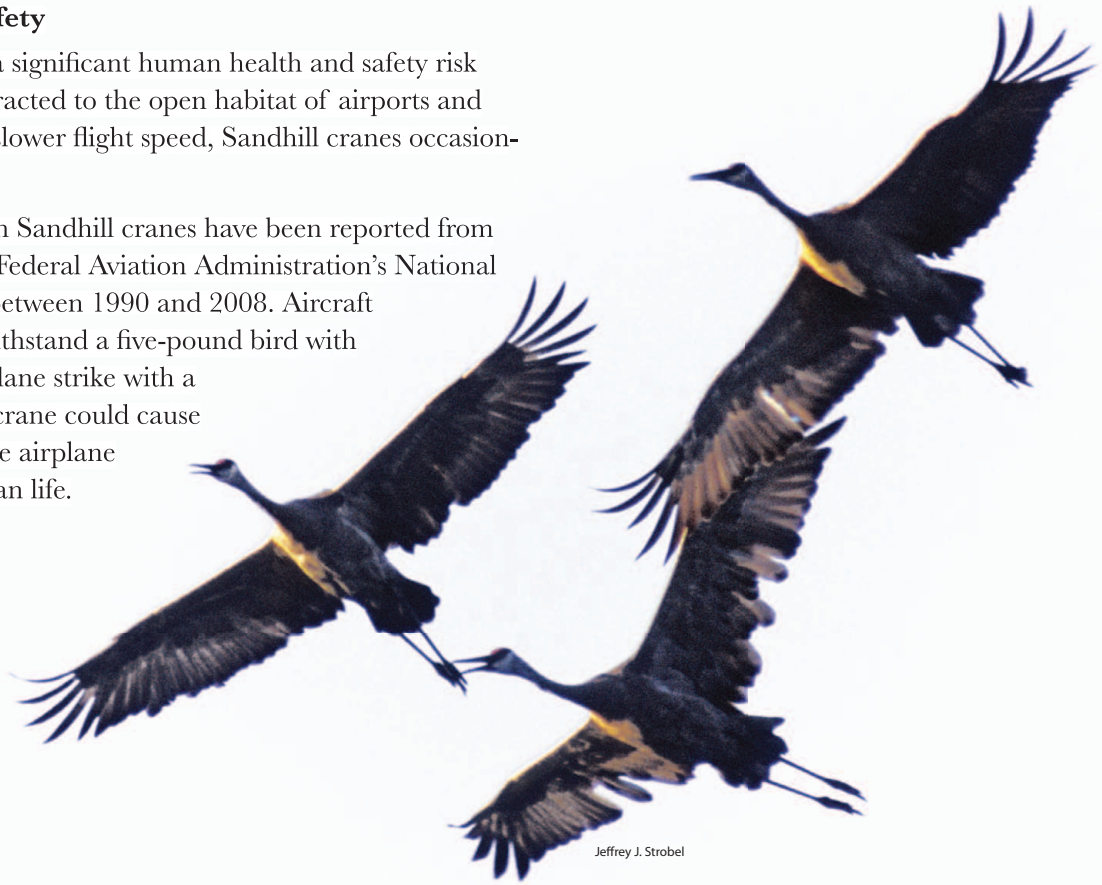
Door screen damaged by a sandhill crane.

Human Health and Safety

Sandhill cranes can pose a significant human health and safety risk at Wisconsin airports. Attracted to the open habitat of airports and because of their size and slower flight speed, Sandhill cranes occasionally collide with aircraft.

Three airplane strikes with Sandhill cranes have been reported from Wisconsin airports to the Federal Aviation Administration's National Wildlife Strike Database between 1990 and 2008. Aircraft engines are designed to withstand a five-pound bird with minimal damage. An airplane strike with a 10-to-14-pound Sandhill crane could cause catastrophic damage to the airplane and potential loss of human life.

"An airplane strike with a 10-to-14-pound Sandhill crane could cause catastrophic damage..."



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Sandhill cranes are protected under the Federal Migratory Bird Act of 1918.

LEGAL STATUS

Sandhill cranes are classified as migratory birds and are protected by the Migratory Bird Treaty Act of 1918 (16 USC, 703-712). The Migratory Bird Treaty Act strictly prohibits the capture, killing, or possession of Sandhill Cranes without a federal permit.

In Wisconsin, Sandhill cranes may only be taken with a permit issued by the U.S. Fish and Wildlife Service and with concurrence from the Wisconsin Department of Natural Resources. Permits are issued only after frightening techniques, exclusion, repellents, or a combination of these non-lethal methods have been used correctly and qualified personnel verify that these methods have been ineffective in reducing the damages. No federal permit is required to use non-lethal practices to mitigate damage caused by Sandhill cranes.

If a regulated hunting season for Sandhill cranes ever occurs in Wisconsin, damages to crops may be covered under the Wisconsin Wildlife Damage Abatement and Claims Program (WDACP). The WDACP would then reimburse crop owners for verified damages caused by Sandhill cranes. The WDACP is funded by hunting license sales, thus enrollment requires allowing public hunting access to the cropland throughout the hunting season for the enrolled species. More information about the WDACP can be found by contacting your local Wisconsin Department of Natural Resources office.

Exclusion

Exclusion techniques are intended to prevent cranes from entering an area, and most commonly includes fencing, overhead grids, or some other type of barrier. Exclusion techniques for Sandhill cranes are not effective in most cases unless a small area is being affected. In most cases fencing or a barrier of some type would be most effective for protecting property damage to windows or family gardens. Fencing of four- to six-feet high would likely exclude cranes from such areas. Due to the large expanse of area, exclusion would be cost prohibitive for crops and airports where Sandhill crane damage is occurring.

Harassment

The use of frightening devices can be extremely effective in manipulating bird concentrations. If harassment methods are employed on a regular schedule, Sandhill cranes will likely adjust to their use and become habituated to those devices rendering them ineffective. The keys to a successful operation are randomness, timing, persistence, organization, and diversity. Use of harassment methods should be irregular, employed when the cranes are present, continue until all cranes have left the area, and multiple devices used. Useful harassment devices include pyrotechnics, propane exploders, and other visual and auditory harassment devices (i.e., flagging, mylar ribbon or balloons, Scarey Man™). No single technique will usually solve the problem. Instead, numerous techniques should be integrated into a harassment program.

Repellents

A new repellent product, commercially sold as Avipel (formerly Avitec), became available in 2006 as a seed treatment for corn. This product is applied as a powder or liquid to corn seed prior to planting. Corn seed treated with Avipel is distasteful to Sandhill cranes and in most cases cranes stop foraging on the planted corn seed. Arkion Life Sciences is the manufacturer of Avipel and can be contacted for further information at 1-800-468-6324 or www.ArkionLS.com.

Shooting

Shooting Sandhill cranes with shotguns or rifles can be a highly selective and useful form of management under certain conditions. A federal permit with state authorization is required to shoot Sandhill cranes. Shooting has been effective in removing individual Sandhill cranes which are posing a human health and safety risk at airports and causing property damage. Shooting of Sandhill cranes causing crop damage over a wide area is less effective because typically there are many individuals causing the damage; however, shooting one individual in crop damage situations can be effective in reinforcing harassment activities.

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This fact sheet is part of a series designed to help you successfully manage wildlife damage problems on your property. The series includes additional publications which focus on controlling damage from specific animals, plus an introduction to wildlife damage management.

ADDITIONAL INFORMATION

The International Crane Foundation can provide additional information about Sandhill cranes in Wisconsin and can be contacted at 608-356-9462 or www.savingcranes.org.

For general questions or damages caused by Sandhill cranes contact USDA APHIS Wildlife Services at 866-4USDAWS (487-3297).

For permitting information contact USDA APHIS Wildlife Services at 866-4USDAWS (487-3297) or the U.S. Fish and Wildlife Service, Migratory Bird Permit Office at 612-713-5436.

This publication is available in pdf format at: wildlifedamage.uwex.edu

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