An Introduction to Cranes

General Background

Cranes are one of the most threatened families of birds in the world. Of 15 crane species, eleven species are threatened or endangered. Of the seven continents, only South America and Antarctica lack cranes. Over half a million Sandhills live in North America. Sandhill Cranes are considered the oldest known species of bird still alive, with fossil evidence showing Sandhills in North America almost 10 million years ago. Crane species rely on wetlands for their survival.

Cranes occupy the upper levels of the food chain. Biologists consider cranes to be a *flagship species*: the health of the crane population is often a good indicator of the health of the wetland ecosystem as a whole. By working to protect cranes, we work to protect many members of a community which may not be as conspicuous or beautiful.

Preening for Protection

Feathers give cranes both the ability to fly and to regulate their temperature. Feathers are replaced during a seasonal molt, when old feathers are pushed out by emerging new feathers. Molting results in some cranes becoming flightless.

Cranes preen their feathers by nibbling the feather base and drawing it through their bill. Sandhill cranes "paint" themselves by preening mud into their feathers prior to the breeding season. This is an important camouflage tactic that helps Sandhills hide amid the brown vegetation in a marsh.

Crane Communication: Postures and Vocalizations

Cranes can be aggressive birds. When fighting, they leap into the air to rake opponents with their sharp claws. Fighting is dangerous, so cranes have developed a complex system of warning behaviors to prevent combat. Cranes use physical postures and vocalizations to communicate with other cranes.

Physical postures include: crouch threats, ruffle threats, drop-wing threats, and flight intention postures. Most crane species use a red patch of skin on the head as a warning display. They can pump extra blood into the patch and point the patch at an invader or opponent.

Vocalizations include: a contact call, guard call, unison call and several others. The **contact call** is a soft, purring call made by the adult crane. It alerts other cranes to the caller's whereabouts. The **guard call** is a single loud call that warns other cranes of danger. The **unison call** brings cranes together to reinforce pair bonds.

Flight and Migration

Cranes typically fly into the wind to achieve the speed necessary for flight. They may fly as fast as 52 m.p.h. When soaring in thermals (updrafts of warm air), cranes will circle until they reach a desired altitude, usually between 5,000 and 15,000 feet.

During migration, both in the fall and spring, cranes stop and feed from two to several days. Several of these stopover sites are traditional stopover sites. They begin their migration in families or small groups. As the migration progresses, groups join to form flocks of up to several thousand birds.

Nesting and Reproduction

Cranes have low reproductive capabilities. A pair produces only one or two chicks each year. Reproduction continues through most of the crane's 30-year lifespan.

It takes a crane pair from one to seven days to build a nest. Once the female lays the eggs, the pair shares incubation duties. The nest exchange occurs about every two hours.

Crane Nuggets

Most cranes have a bright red patch of bare skin on their head. They show it as a warning to other cranes intruding on their **territory**.

Their long beak helps cranes find food. They can also use it to drive away other cranes or predators.

Wingspan
5-8 feet !!

What is <u>your</u> wingspan?

Cranes have a loud, shrill voice. Their calls can be heard up to two miles away!! Their secret is their long windpipe which is coiled up inside their chest. Do you know any musical instruments which are long, but coiled up?

Sandhill Cranes are grey, but in the spring they paint themselves with mud so they look brown. Why do you think they do that?

Cranes live in wet, soggy places called **wetlands**. Take a look at those legs! They make it easy for cranes to walk through tall marsh grasses and wade in shallow water.

This is a picture of a Sandhill Crane. They are found in the Midwest as well as many other places in North America. Some cranes are over five feet tall. How tall are you?

Have you ever seen this big bird in the wild?

Cranes can live up to thirty years in the wild. A pair of cranes will usually stay paired for life!

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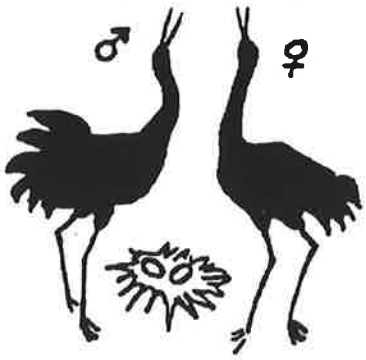
And the Seasons...

Pair establishes territory, builds a nest on the ground, and lays eggs.



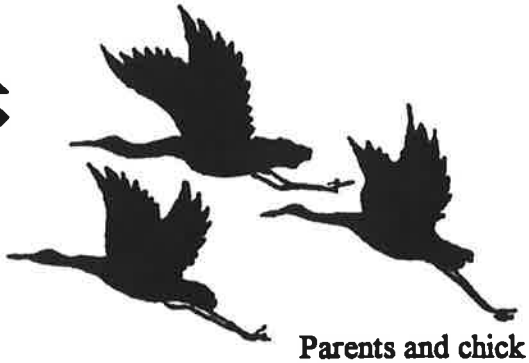
Parents usually raise one chick.

Spring

Summer

Chick grows rapidly and gets first complete set of feathers (**fledges**) and learns to fly.

Fall



Parents and chick migrate south.

Winter

Feed and loaf. Cranes will **forage** for food in wetlands, prairies, and even farm fields.

Family migrates north. Chick separates from adults.

...They Go Round & Round!

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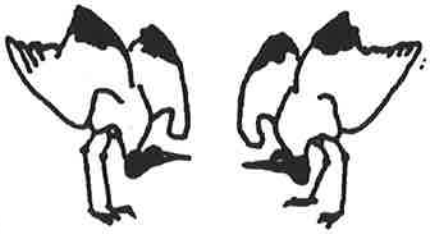
Cranes Dance Too!

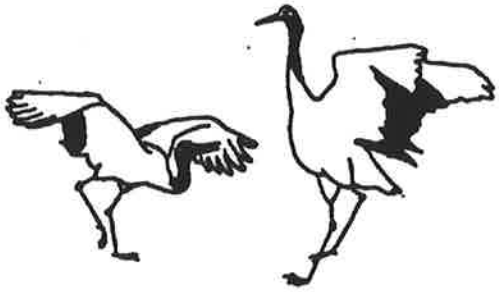
Dancing is fun! People do it and so do cranes. Although these dances may seem funny to us, they serve important purposes for the cranes. Just like people, cranes use dances as a part of courtship. A pair of cranes will dance in the spring. The dance is a signal that the pair is ready to breed and lay eggs. Young cranes will often dance, too. It helps them build muscles and develop coordination. They also use dancing as a way to meet other cranes in the flock.

These dances are fascinating to watch. Many African and Australian peoples have copied these dances and use them in their ceremonies. Would you like to try? Choose a partner!

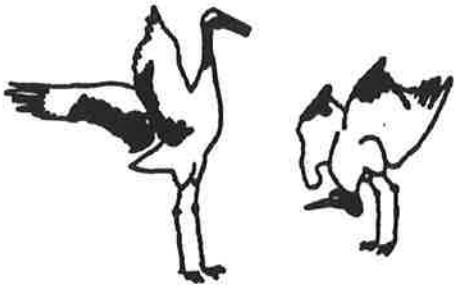
How does it look?



bowing

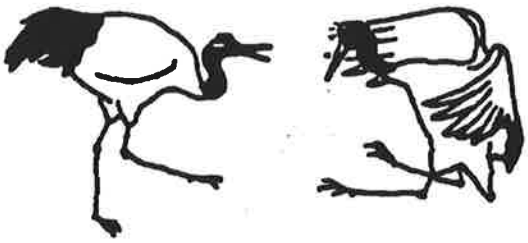


head bobbing

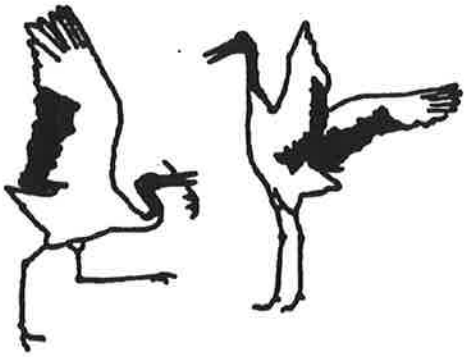


head bobbing

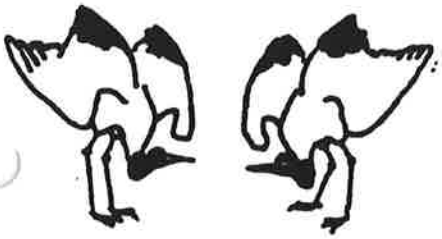
wing flapping



jumping



twig tossing



bowing

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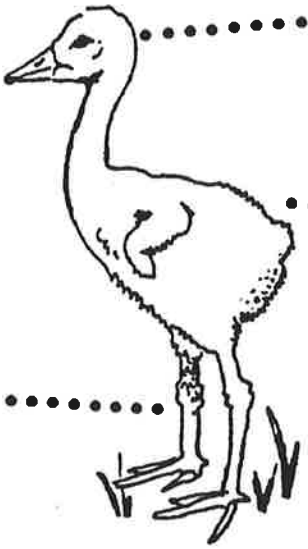
Chick Chat and...

Baby cranes are called chicks. Even though it takes a lot of energy to hatch, crane chicks can do many things within just a few hours:

Crane chicks have a strong beak, and start taking food from their parents when they are one day old.

Chicks can see from the moment they hatch. This helps them know who their parents are.



They have fluffy, cinnamon-colored feathers that keep them warm. You probably know how warm a down jacket can be! Their reddish-brown color helps them hide among the grasses from enemies.

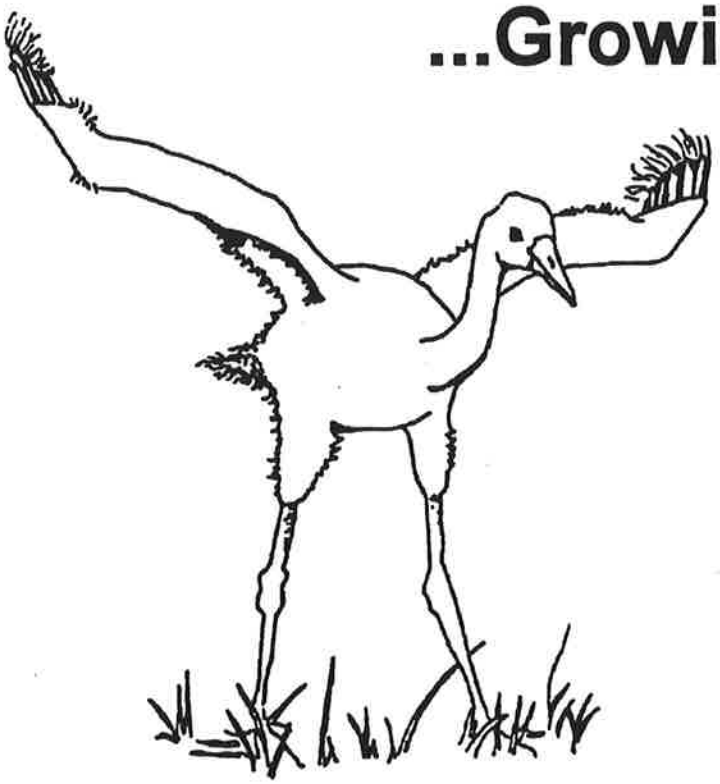
Crane chicks can stand up and walk with their parents within a few hours of hatching.

Can you name five birds whose chicks hatch **without** strong beaks, strong legs, fluffy feathers, and open eyes?

Where do these birds usually build their nests?

Cranes build their nests on the ground. Why is it important that crane chicks are different from the chicks you listed above?

...Growing Up



Crane chicks grow very fast! For the first two months after they hatch, they grow about an inch every day! After only three months, they are almost full grown. They are four or five feet tall and learning how to fly.

How big were you when you were three months old?

How big would you be now if you grew an inch every day?

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The Migratory Story

What is migration?

Migration is any movement between two areas. Generally, animals migrate in response to periodic changes in their environment. Two basic types of migration occur: daily and seasonal.

What is daily migration?

Daily migration consists of the movement of an individual or group between daytime feeding areas and nighttime roosting and sleeping areas.

What is seasonal migration?

Seasonal migration consists of Spring movement to summer nesting locations and reverse fall movement to winter resting and feeding areas. Sandhill Cranes utilize both types of migration. However, seasonal migration will be the primary topic here.

Why do birds migrate?

Birds have a high metabolism. They need a lot of food to get the energy to survive. The availability of food is dependent on weather conditions. Birds, therefore, go where the weather is favorable for food production at different times of the year. An advantage of migrating north for the breeding season is that this allows birds to take advantage of more daylight hours in order to find food.

Why do Sandhill Cranes migrate north in the Spring?

Spring brings an explosion of living things in the far North. Cranes take advantage of this "food explosion" to produce eggs and raise their young. Also, the harsh winters in the North cause local predators and parasites, who live there year-round, to have a difficult time increasing their numbers. This gives cranes a relatively safe environment, way up north, in which to have and raise young .

Why do Sandhill Cranes migrate south in the Fall?

Winters in the north are more harsh than in the south. It's simply easier to make a living in Lodi in the winter than in Canada, Alaska, or Siberia. Also, spending parts of the year in widely separated locations allows the cranes to exploit two different habitats for food.

Isn't migration dangerous?

Many hazards face migrating birds. A great amount of energy is expended and numerous dangers must be avoided or dealt with. However, migration offers one positive selective advantage - the fittest survive the flight. This twice-yearly "weeding" acts to keep the population, as a whole, strong.

Where do the Cranes that winter around Lodi spend their summers?

There are two subspecies of Sandhill Crane that spend their winters in the central valley. The Greater Sandhill nests in south-central Oregon, and northeastern California. Most Lesser Sandhill Cranes nest in the lonely tundra, marsh, and coastal areas from Alaska thorough northwest Canada. Some Lessers nest across the Bering Sea on the eastern coast of Siberia.

How far do they fly in migration at a time?

Sandhills migrate during the day at an altitude of 1 to 4 miles. They will fly up to 600 miles in a given day at a speed of 25 - 38 mph. Given favorable condiditions, they may fly as fast as 52 m.p.h.

When can Sandhill Cranes be seen in the Lodi area?

Greater Sandhills are here from early September through early March. Most stay in the area. Lesser Sandhills can be seen here between early October and early March. Most continue south.