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World Center for the Study and Preservation of Cranes

Preserving the Platte

By John Van DerWalker,
Executive Director,
Platte River Whooping Crane
Maintenance Trust

From late February through late March, central Nebraska is the scene for one of earth's greatest wildlife spectacles. More than half a million Sandhill Cranes congregate to rest and feed along about 40 miles of the Platte River between the cities of Kearney and Grand Island. It is the largest known concentration of cranes in the world. The fragile riparian habitat is now threatened, as the Platte's waters are diverted for human uses upriver.

In its pristine state, the Platte River was as important to the Central Flyway as Chesapeake Bay was to the Atlantic Flyway, and the Sacramento Delta was to the Pacific Flyway. Each spring, millions of migratory birds congregated on the Platte during their northward migration. The Platte, however, was not just an ordinary stopping place for these birds. A unique combination of geological events, climate, and location made the Platte a particularly attractive and productive habitat for migratory birds.

From the confluence of the North and South Platte Rivers in western Nebraska, the Platte flows east across a broad floodplain. The Platte is a braided river. Braided rivers are created where the valley slope is relatively steep, the bed material is unconsolidated sediment, and the flow regime is characterized by annual floods which are several times greater than the average annual flows. These conditions create a very wide, shallow channel with thousands of sandbars. During flood periods, enormous quantities of sediment are transported along the bed. The entire bed may be overturned to a depth of several feet and redistributed into large sandbars that are several hundred feet wide. As the floods recede, the flows are divided into several channels which erode these large sandbars, transforming them into a multitude of smaller bars.

During the summer when many of these sandbars are exposed, they are used as nesting and feeding sites for Least Terns, Piping Plovers, other shorebirds, and wading birds. In the early spring and fall, when flows are higher, the same sandbars are shallowly submerged and provide roosting sites for Whooping Cranes, Sandhill Cranes, ducks, geese, and many other migrating birds.

The braided channel of the Platte is only one of a combination of factors that make it so valuable to migratory birds. There are other braided rivers that cross the Central Flyway but none of them are so strategically located. The Platte lies halfway between the Gulf Coast and the Dakota and Canadian wetlands, a convenient stopover site on migration. In addition, the Platte was bordered by hundreds of square miles of grasslands interspersed with wetlands.

The floodplain of the Platte River was several miles wide and contained thousands of remnant channels cut by the river as it moved back

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Over half a million Sandhill Cranes visit Nebraska's Platte River in early spring. The river's high waters flood thousands of sandbars, where the cranes find shallow water and safely roost at night. Early morning and late afternoon are the best times to see the spectacular flights of cranes. Photo courtesy of the Nebraska Game and Parks Commission.

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The Platte River Trust maintains an observation blind where visitors gain a close look at a crane roost site, on a stretch of river now managed by the Trust. Each year, an estimated 10,000-15,000 people come to central Nebraska to watch the cranes. Photos courtesy of the Grand Island Daily Independent.

and forth across the plain. Since the entire floodplain was made up of sand and gravel covered by a shallow soil mantle, these remnant channels were hydraulically connected to the river. In the spring when the river rose, the groundwater would also rise, filling these channels and creating vast wetlands. In the summer, when the river flows were low, these wetlands were dry; sedges, grasses, and other plants would grow in them. In the winter these plants were matted down by the winds and snows. In the spring flood, the wetlands again fill with water inundating the dead plant material and initiating decomposition. This process was the base of a food chain vitally important to migratory birds. The combination of river grasslands and wetlands provided an abundant supply and variety of food and shelter. Between North Platte and Grand Island, a distance of 150 miles, there was more than a half million acres of such habitat.

River Habitats Degraded

Today most of that habitat is gone. Many species that depended on the river and its wetlands have seriously declined. Five are officially listed as endangered or threatened: the Whooping Crane, Interior Least Tern, Piping Plover, Eskimo Curlew, and Bald Eagle.

The loss of habitat on the Platte is the result of water development for irrigation and hydropower. Over 7 million acre feet of reservoir storage have been built on the North and South Platte Rivers. The average annual pristine flow in the Platte was about 3.5 million acre feet. Two full years of flow can now be stored. As a result of this development, 70% of the river flow is diverted and consumed before it ever reaches the central Platte. Spring flood flows have declined from an average of 20,000 cubic feet per second to 4,000. Average flows have declined from 4,000 to 1,000 cfs. Occasionally, summer flows fall to near zero.

These declines in flow have caused drastic changes in the character of the river. Without spring floods, sandbars are not eroded. They become stabilized with annual grasses and forbs. Over time, cottonwood and willow trees dominate the annual vegetation. In some areas, the Platte channel which was more than a mile wide, has become a cottonwood and red cedar forest with only narrow rivulets flowing through it. While the new forest provides habitat for deer and song birds, those species adapted to the wide, open Platte have lost habitat. Reduced spring flows have also reduced the ground water levels on the adjacent wetlands and grasslands, enabling conversion to cropland. Approximately 70% of the river channel and 73% of the wetland/grassland complex have been destroyed.

The loss of Platte River habitat has received increasing attention in the last decade. Private conservation organizations, the Nebraska Game and Parks Commission, and the U.S. Fish and Wildlife Service (FWS) have all helped protect the remaining habitat. The National Audubon Society purchased the Lillian Annette Rowe Sanctuary located on the river near Kearney, Nebraska in 1974. Audubon continues to be a major player in efforts to protect the river. The FWS, U.S. Bureau of Reclamation, and Nebraska Game and Parks Commission have studied the river extensively, helping to define the values of the Platte to wildlife, and to quantify flows needed to maintain the remaining habitat.

As a result of these early studies, FWS declared a portion of the Platte critical habitat for the Whooping Crane. FWS has also reviewed proposals for additional diversions in accordance with the Endangered Species Act. Until recently, FWS issued jeopardy opinions for all projects that would further deplete Platte River flows. In the last case, however, FWS did not give a jeopardy opinion, a significant departure from previous positions. The Service's intent, insofar as protecting instream flows in the Platte, is now uncertain.

The Nebraska Game and Parks Commission has also conducted studies for quantifying the flows required to maintain the habitat. Using the best available data, they have described a flow regime against which they measure the effects of proposed diversions. Water development proposals that would reduce flows below this regime have received jeopardy opinions.

Platte River Trust Protects Crane Habitat

A relatively new private organization is the Platte River Whooping Crane Habitat Maintenance Trust, Inc. This non-profit corporation was formed in 1979 as part of a court approved settlement of the Grayrocks Dam controversy. In this case, the State of Nebraska and the National Wildlife Federation objected to the construction of the Grayrocks Dam on the Laramie River, a Wyoming tributary to the North Platte River. The project was sponsored by six consumer owned utilities in the Upper Missouri Basin. Basin Electric Power Cooperative, the project manager for the group, had begun to build Grayrocks to store water for cooling a large coal-fired power plant. The reservoir was located 270 miles upstream from the Big Bend reach of the Platte which was designated critical habitat after construction had begun.

The State and the Federation argued that this project would deplete the flows of the Platte and damage irrigation and wildlife resources in Nebraska. The court issued an injunction prohibiting further construction of the dam and enjoined certain Federal loan guarantees for portions of the rest of the project. The injunction caused the parties to enter into negotiations which led to a settlement agreement approved by the court.

The agreement included the formation of a Trust with the purpose of restoring and managing migratory bird habitat in the Big Bend reach of the Platte. The Trust is administered by three trustees, one from each party to the suit. The six consumer-owned utilities funded the Trust with a one time payment of $7.5 million. The purpose of the Trust is to "protect and maintain the physical, hydrological, and biological integrity of the Big Bend area so that it may con-

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tinue to function as a life-support system for the Whooping Crane and other migratory species which utilize it. The projects and activities which the Trust may fund include . . . management of the critical crane habitat, the acquisition of land or interests in land, the conduct of scientific studies . . . as well as the acquisition of all types of rights in or to water or water storage."

The initial work of the Trust focused on describing the present habitat conditions and the dynamics of the system. This work is described in the book *Migratory Bird Habitat of the North Platte and Platte Rivers in Nebraska*, published in 1985. Using this information, the Trust developed two programs.

The first program was a plan for land acquisition. This plan envisions 10 habitat complexes or mini-refuges located at eight-mile intervals along the Big Bend reach of the river. Each complex would have a minimum of 1,000 contiguous acres of grassland, wetland,and river channel. The river channel would be at least 1,000 feet wide and a mile long. This basic unit would be surrounded by a ½-mile buffer zone where human activities incompatible with the wildlife habitat goals would be prohibited. In addition to the 1,000 acres in the basic unit, there would be at least 1,500 additional acres of grassland and wetland located within three miles of the river channel. These grassland/wetland units would each be at least 160 acres in size. In total, the plan calls for a minimum of 25,000 acres of habitat in the Big Bend reach.

To date, the Trust has purchased land in 5 of the 10 units it hopes to develop. The largest unit, located near Grand Island, Nebraska, contains five miles of river and approximately 4,500 acres of grasslands and wetlands. The Trust has also cleared the vegetation from approximately six miles of river. These areas are now major roost sites for cranes.

The second major effort initiated by the Trust was the quantification of flows required to maintain the desired river channel morphology and habitat conditions. Working in cooperation with government agencies, the trust has helped develop computer programs that predict the amount of habitat available at any given flow. Habitat models for cranes, terns, plovers, and forage fish have been developed. Using this information, it is possible to develop annual flow regimes that will provide the habitat needed for these species. The Trust has also conducted research on tern and plover reproduction, vegetation management of grasslands and wetlands, and conversion of croplands to grasslands.

The completion of the Trust's land acquisition program will ensure the physical availability of habitat. The viability of this habitat, however, depends on the maintenance of instream flows. Under Nebraska state law, the Trust is not allowed to apply for an instream flow right. It is possible to obtain a right to store water in a reservoir for later release into the stream. The Trust has joined with two other parties in an application to build a 300,000 acre-feet off-stream storage reservoir. Irrigation and hydropower return flows would be stored in this reservoir and released into the river when the natural flows were below the levels needed to maintain the habitat. Without a state agency holding an instream water right, however, there is no guarantee that this stored water would stay in the stream.

The Trust has taken two further actions to maintain adequate instream flows in the Platte. A petition has been filed with the Federal Energy Regulatory Commission (FERC) asking them to implement new operating criteria for the Kingsley Dam on the North Platte River upstream from the confluence of the North and South Platte Rivers. This 1.7 million-acre-foot storage reservoir controls 80% of the flow of the Platte. Its operation largely determines the flow regime in the Big Bend reach of the river. At present, the reservoir is operated exclusively to benefit irrigation and hydropower. No consideration is given to maintaining instream flows. The petition is appropriate at this time because the existing license for this facility expired in 1987, and FERC is currently considering the terms for a new license.

The Trust has also filed a motion in the Supreme Court of the United States for leave to intervene as a plaintiff in a suit Nebraska brought against Wyoming. In this suit Nebraska claims that Wyoming has developed water and proposed to develop additional water allocated to Nebraska under the terms of a 1953 Supreme Court decree. Nebraska alleges this development will damage wildlife values in the North Platte drainage and irrigation and other economic uses in Nebraska in general. The Trust's motion was made to insure the Court is aware of the need for instream flows in the Big Bend reach of the river.

The Platte has been seriously degraded. Proper management of the remaining water flows and habitat reclamation, however, can provide adequate habitat for the migratory birds of the Central Flyway. The land resources can be reclaimed and managed by private conservation organizations. Management of instream flows is controlled by the states of Colorado, Wyoming, and Nebraska. To date, these states have taken no action to protect instream flows. In fact, each state has recently approved or undertaken the diversion of more water from the river. If this trend continues, the Platte will soon be lost.

Early in the morning, hundreds of thousands of Sandhill Cranes leave their river roost sites to feed in nearby wetlands, grasslands, and farmlands. Here the cranes glean corn from fields harvested the previous autumn.

Visitor Information Available

If you wish to visit the Platte River during the spring or want more information, you can contact the Trust at (308) 384-4633 or Audubon at (308) 236-7574. For local maps and a brochure describing the spectacular migration, contact the Buffalo County Convention and Visitors Bureau, P.O. Box 607, 2001 Avenue "A", Kearney, Nebraska 68848 [(308) 237-3101] or the Hall County Convention and Visitors Bureau, P.O. Box 1486, 309 West 2nd, Grand Island, Nebraska 68802-1486 [(308) 382-9210]. Ask for the "Crane Watch" brochure.

WHOOPING CRANE UPDATE

by George Archibald,
ICF Director

The Whooping Crane continues to be earth's rarest species of crane. In 1941, only 16 birds made the 2,500 mile migration between nesting grounds in subarctic Canada to wintering haunts in coastal Texas. In 1987, 33 pairs nested in the muskeg wilderness along the border between the Northwest Territories and Alberta, and 25 chicks fledged. All the families arrived intact at Aransas National Wildlife Refuge in Texas, except for one chick that became separated from its parents, and ended up in the Texas panhandle. The record total for the flock was 134 cranes. North America's foremost conservation symbol continues to make a dramatic comeback from the brink of extinction.

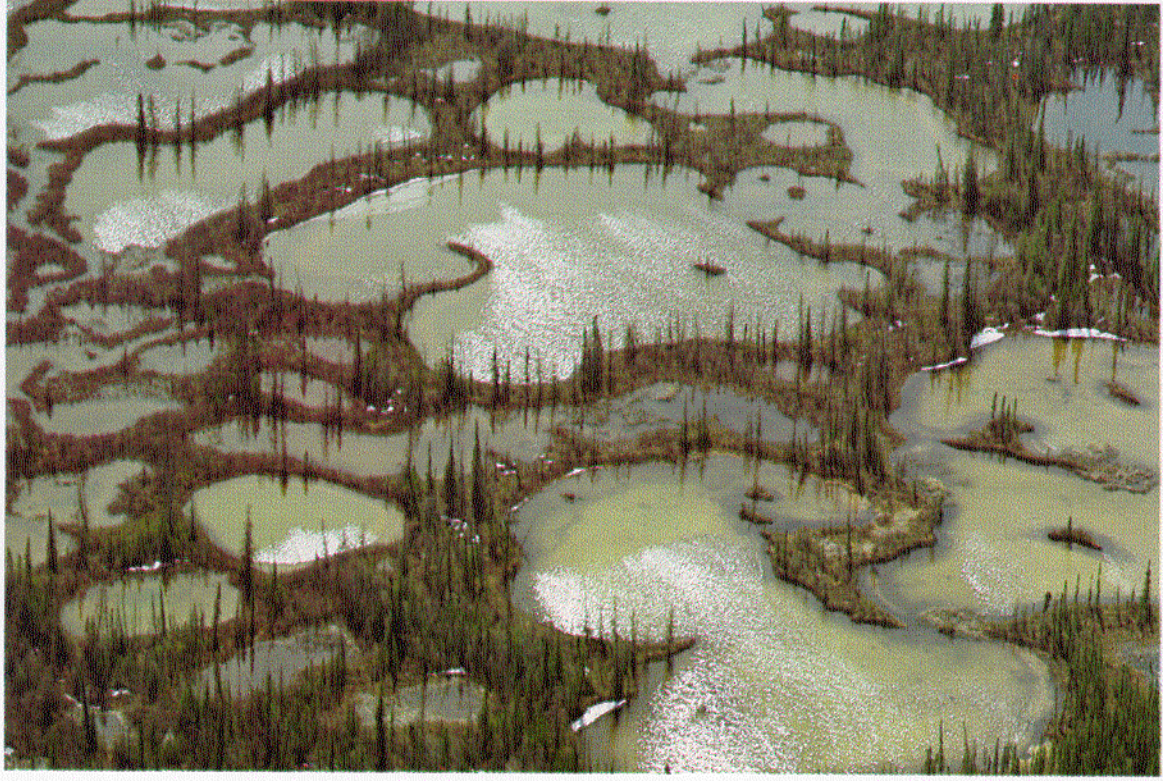
In presettlement times, the Whooper's prime nesting habitat included the grasslands and wetlands that stretched from Illinois to southern Canada and included residents such as the Great Plains wolf, the enormous plains grizzly, and the bison. The cranes wintered from the Carolinas to Mexico and a small flock were year-round residents in southern Louisiana. In the 1800s as Europeans homesteaded the prairies, the large mammals fell to hunters and the landscape was transformed into one of the world's most productive agricultural regions. The Whooper and the bison disappeared as prairie residents but they both managed to survive in the muskeg wilderness 1,000 miles northwest of the grasslands in a vast region now protected as earth's second largest national park—Wood Buffalo National Park.

Mr. Ernie Kuyt of the Canadian Wildlife Service has monitored the cranes on their breeding grounds since 1966 and he, Dr. Rod Drewien and others have color marked almost all prefledged chicks since 1977. Kuyt has determined that in years of high water levels, most Whooper pairs successfully rear their young while in drier years few pairs are successful. Both male and female cranes occasionally breed in their third year, although first breeding in the fourth to sixth years is more common.

Whooping Crane pairs produce two eggs each spring, but the successful pairs usually fledge only a single offspring. Inter-sibling aggression in cranes is pronounced, particularly if there is a food scarcity. Perhaps the failure of Whooping Crane pairs to rear two chicks is a reflection of food scarcity and thus less than optimal habitat at Wood Buffalo National Park.

In 1967 the Canadian and US governments embarked on an ambitious program to establish a "species bank" of captive Whoopers by collecting one "surplus" egg from each nest with a two-egg clutch. Since then, dozens of eggs have been successfully transported to the Patuxent Wildlife Research Center in Maryland. Today 41 Whoopers are resident at Patuxent and in addition, there are single males at San Antonio Zoo and at ICF.

The captive flock provides an option for survival should a natural catastrophe destroy the wild flock. It is also a resource from which new wild flocks can be started. This hope was realized in 1976 when eggs from the captive birds in Maryland were transported to Grays Lake National Wildlife Refuge in Idaho, and substituted into the nests of Greater Sandhill Cranes (starting in 1975, eggs from wild cranes in Canada have also been placed in Sandhill nests



Upper right: breeding habitat of the Whooping Crane lies within Wood Buffalo National Park, one of the remotest parts of North America. Photo by R. D. Muir.

Upper left: migrating Whooping Cranes rest in Saskatchewan. Photo by Tom Mangelsen.

Lower left: a young Whooping Crane feeds between its parents. This year, all 25 young Whoopers survived the migration to Texas. Photo by Lorne Scott.

Lower right: a Whooper flies at Aransas National Wildlife Refuge in Texas. Photo by ENTHEOS/Steven C. Wilson.

Whooper update

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in Idaho). The Sandhills were successful in hatching and rearing the Whoopers and leading them along a new migration route to New Mexico. The Whoopers learned to forage in the Sandhill's more upland habitats and in spring they returned to their natal and other alpine wetlands.

Unfortunately the foster-reared Whooping Cranes have not paired, perhaps as a consequence of wide dispersal of the individual cranes, lower than hoped for survival, an imbalanced sex-ratio, and early learning—the chicks may have come to identify more with Sandhills than with Whoopers. The program director, Dr. Rod Drewien, continues his excellent efforts to start a second wild flock of Whoopers, which now number about 20 birds.

Whooping Crane management is directed by two Recovery Teams. In the United States, Dr. James Lewis of the U.S. Fish and Wildlife Service leads the U.S. team while in Canada Dr. Graham Cooch of the Canadian Wildlife Service directs the Canadian team.

The general public can keep abreast of the Whooping Crane drama by becoming a member of the Whooping Crane Conservation Association ($5 annually to Mr. Jerome Pratt, Editor, 3000 Meadowlark Drive, Sierra Vista, Arizona 85635, U.S.A.). Members receive an informative newsletter, *Grus Americana*.

Plans are afoot to start a second flock of Whoopers, either a migratory flock in the Lake States area of Canada and the U.S.A., or a non-migratory group in southeastern U.S.A. Efforts to save the Whooper have been one of the longest and most dramatic conservation undertakings in the world. The program is now emulated on other continents where the Whooper's cousins are also threatened.

THE ICF BUGLE is the quarterly newsletter for members of the International Crane Foundation (ICF). Production and mailing costs are being met by a special grant from Clairson International of Ocala, Florida. Articles review ICF programs as well as crane research around the world.

Co-Founders: George Archibald, Ron Sauey

Editor: Jim Harris

ICF offers memberships at the following annual rates:

Individual	**$20**	**Foreign**	**$25**
Family	**$30**	**Sponsor**	**$500**
Associate	**$100**	**Patron**	**$1,000**

SPRING FIELD TRIPS

by Jeb Barzen
Wetland Ecologist

ICF members and their guests are invited to participate in two field trips:

Saturday, May 14—Grand River Marsh along with side trips to French Creek and possibly John Muir Park in central Wisconsin.

Saturday, May 21—Horicon Marsh in central Wisconsin: wetland management and ecology.

Grand River Marsh: our trip to the Grand River Marsh and adjoining areas will focus upon two major topics: (1) wetland drainage and restoration; and (2) Sandhill Crane nesting ecology. In the middle of this century, many of Wisconsin's large wetlands were drained and farmed. Most of these ventures were unprofitable and soon these farms were abandoned, turned over to the government, and eventually returned to marshland. At Grand River, we will explore one of these marshes and discuss why wetlands are drained today and how they can be restored.

From the hills overlooking this marsh, we will have the opportunity to look back into recent geological history and discover events that helped create this marsh in the first place and therefore learn why marsh creation techniques were successful here. From this lookout, we will also spot nesting Sandhill Cranes and discuss how these birds utilize their marsh homes at this time of the year. Of course, marshes in May are teeming with life and we should have the opportunity to see many other species of marsh-nesting birds and mammals.

Horicon Marsh: On May 21, we will again venture into the marshes of central Wisconsin to explore marsh management in greater detail. At Horicon, amid a symphony of courtship calls from wrens, redhead ducks, yellow-headed blackbirds, and others, we will tackle two major concepts in wetland ecology: (1) what makes wetland systems so productive?; and (2) what techniques are available to maintain high productivity in habitats that have been degraded?

Horicon Marsh is intensively managed to meet needs of nesting and migrating waterfowl. We will be able to see the effects of dry periods in a marsh (drawdowns), how fish populations can influence the plant, insect, bird, and mammal populations of a marsh, and perhaps what procedures marsh managers must go through in order to achieve their goals for a healthy marsh. All of these concepts are relevant to the needs of cranes during various portions of their annual cycle (nesting, molting, migration, and wintering). This is true whether the cranes are using wetlands in Wisconsin, China, or any other region of the world.

A donation of $20 per person is requested to help support ICF's international training programs. We hope to have visiting conservationists from abroad on each excursion so you will have a chance to meet them and experience, first hand, ICF's programs at work.

Participants are responsible for their own travel and food. I will notify registrants about times and places to meet, what to bring, and information regarding carpooling. We will go rain or shine.

To reserve a place, send your name, address, phone number, number in your party, and full payment to ICF. Please specify what trip you wish to take. Signing up for both excursions is fine (please indicate your preference), but each trip is limited to 15 total participants so please get your reservations in soon. If there are not enough available slots, we will try to give everyone a chance to participate in one field trip. Reservations are due April 15.

As ICF's newest staff member, I look forward to meeting you on these field trips. What better way is there to meet someone than by stomping through marshes together and looking for cranes?!

Membership Dues Increase

The Board of Trustees of ICF approved an increase of $5 per year for individual, foreign, and family membership categories. The increase reflects our changing needs since the last dues increase in 1979. So much has happened in the last 9 years. We have moved to our new facilities, expanded our outreach and educational programs, upgraded the *ICF Bugle*, and implemented our foreign training program. Aviculture has made great strides in captive breeding, artificial insemination, semen freezing, isolation rearing of crane chicks, and refining reintroduction techniques.

This modest dues increase will substantially help ICF meet its greater expenses, and take advantage of the opportunities we now have for conserving cranes and promoting wise use of our wetland resources.

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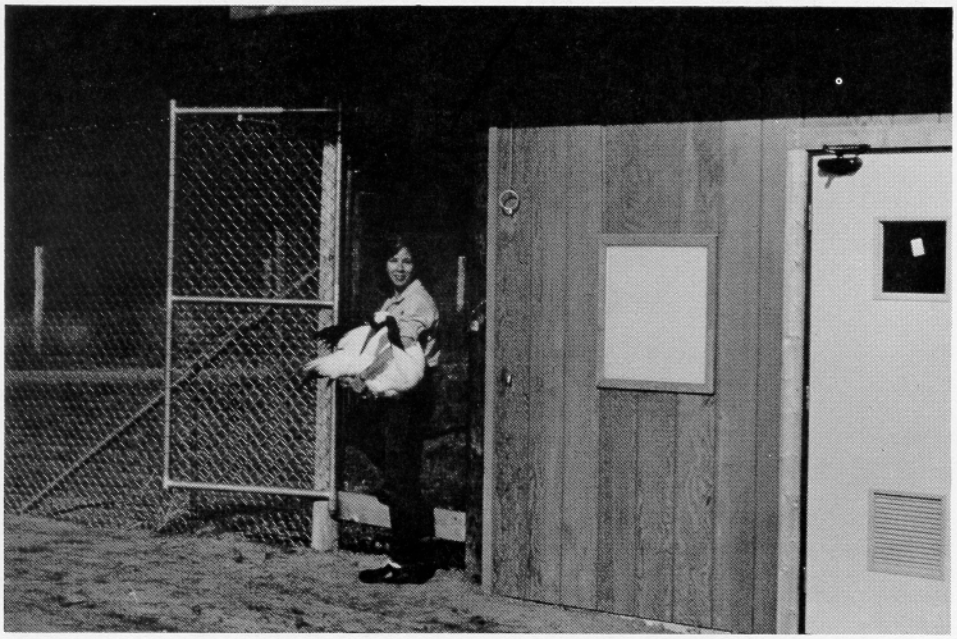
ICF wishes to thank Clairson International of Ocala, Florida and Donald P. Sauey, Chief Executive Officer, for sponsoring the production, printing, and mailing of *The ICF Bugle* for 1988.



ICF's Curator of Birds, Claire Mirande, carries a Red-crowned Crane into its new pen in Crane City. The first phase of Crane City was completed in fall 1987. We hope that the challenge grant from The Kresge Foundation will enable us to complete the second phase in 1988. Photo by Marion Hill.

CRANE FOUNDATION AWARDED CHALLENGE GRANT

by Bob Hallam and Claire Mirande

ICF's "A Gift to the World" capital campaign has been awarded a challenge grant of $100,000 from The Kresge Foundation of Troy, Michigan. Payment of the grant is conditioned upon raising an additional $200,000 required for full funding by July 1, 1988. We will then construct the remaining 26 pens for Crane City. This crane breeding facility will provide much needed housing for the world's most endangered family of birds.

At the time of the October grant announcements, The Kresge Foundation had awarded 138 grants in 1987 for a total of $44,160,000. Grants are made to institutions operating in the areas of higher education, health care, arts and humanities, social service, science and conservation, religion, and public policy.

"As wetland destruction spreads, as human numbers climb, and as the political arena becomes more complex and dangerous, who can predict what the next decades hold for this ancient family of birds?" says George Archibald, ICF Director. "For ICF, it becomes increasingly important to maintain the 'species bank' of priceless crane genes in Crane City."

To date, 37 birds have been settled into their new pens. Romance is already in the air for several Siberian Cranes being introduced to their new mates. Many of the birds are already very aggressive—a good indication that they are pleased with their new breeding territories.

We do need your support to help ICF achieve the $200,000 goal! We also wish to thank all of you again who have supported this effort and we hope you'll consider an extra gift to help ICF make its goal. We have enclosed an envelope in *The Bugle* for your convenience.

CONTRIBUTIONS

Received October–December, 1987

Grants and Awards: Mitchell Adamus; Aid Association for Lutherans; John & Joanne Anderson; Anonymous; George & Kyoko Archibald; Mr. & Mrs. Ira Baldwin; Genevieve Bancroft; Mr. & Mrs. Judson Bemis; Mr. & Mrs. William Boyce; Michael & Janet Brandt; Ronald Buege; Curtis & Myrtle Busse; Patricia Campbell; John E. Canfield; Mrs. Cecil Carpenter; Henry Chandler; Bill & Priscilla Chester; Chicago Metallic Corporation; Edwin & Victoria Cohen; Lynda Cornwell; John Day; Frances Dewing Foundation; Barbara DeWitt; P.J. & Dorothy Dickert; Mr. & Mrs. B.F. Edwards; Ellinger Foundation; Mr. & Mrs. Thomas Fifield; Ralph & Gertrude Findley; Frank Freese; Mildred Gill; Mr. & Mrs. Doug Haag; H.J. Hagge Foundation; Dorothy Haines; Edward & Yvonne Henze; The Hubbard Foundation; Linda Hugdahl; Institute of Museum Services; Johnson Controls Foundation; William Kieckhefer; Kopmeier Family Fund; Mr. & Mrs. Donald Koskinen; Eric Kowalczyk; Frank Larkin; Mrs. Glen A. Lloyd; Otto Mackensen; Don Mahle; Marathon Box Foundation; John Martin; Dorothy McIlroy; Valjean McLenighan; Charles W. Miller; Milwaukee Foundation–Cottrell Fund B; Milwaukee Foundation–Cottrell Fund J; Dr. Josephine Murray; National Audubon Society; Mr. & Mrs. Kenneth Nebenzahl; Neenah Foundry Foundation, Inc.; Elizabeth O'Connor; Patricia O'Neill; Phil Orth; Oshkosh B'Gosh, Inc.; Tricia Otto; Dorothy Ross Pain; Lucile & Marcel Palmaro; Judith Pavlovic; Silas & Edith Peller; Diane Pierce; Norman Quale; RTE Foundation; Ed & Jane Rikkers; Lloyd & Mary Beth Sanborn; Donald & Regina Sauey; Howard Scott; Sally Searle; Seebe Charitable Trust; Charles Sivelle; Delbert Smith; Doris Speirs; Barbara G. St. George; Mrs. John Stedman; Roxanne Steinman; Eloise Stierman; Roger & Susan Stone; Eleanor Sullivan; Doris Swartz; David V. Uihlein; Vollrath Company Foundation; Paul Wachholz; John & Cissy Ward; Washington High School; Ruth Weeden; Joan Werner; David Wisner; Winifred Woodmansee; D.C. & Carol Worel; Irvin L. Young Foundation.

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Black-necked Cranes Hatch!

by Claire Mirande
Curator of Birds

These Black-necked Cranes have a spacious pen at "Crane Island," secluded from visitor activities at the Beijing Zoo. This special breeding facility is one reason for Beijing's successful work with Black-neckeds. Photo by Jim Harris.

I'll never forget the day. George popped his head through my office door and said "Guess what?" I took a photo from his outstretched hand, and saw two Black-necked Crane chicks contentedly sunning themselves beside their parents. Here were the first Black-necked Crane chicks ever hatched in captivity, at Xining Zoo in China.

There is a growing commitment in China to the management of captive cranes, especially Black-neckeds. The work is badly needed since the Black-necked is the second most endangered and the least known of all the cranes.

An excellent progam is developing at Beijing Zoo under the leadership of Mrs. Gan Shenyun. A special crane breeding facility has been constructed on "Crane Island" within the zoo. Five males and three females on display around China were assembled here to form pairs in suitable breeding environments. Prior to 1987, Mrs. Gan had successfully formed three pairs, two of them laying infertile eggs and a young pair which was developing normal copulatory behaviors.

One of the pairs laying infertile eggs had produced 2-12 eggs per season since 1985, but no copulation was observed. ICF had sent the Beijing Zoo a literature packet on artificial insemination (AI). The staff there had worked with the technique for five years and successfully fertilized White-naped Crane eggs.

In spring 1987, I was fortunate to spend five days at the Beijing Zoo comparing techniques for breeding cranes and working closely with the AI team. The people were warm, gracious, and treated me like royalty. We carefully practiced all the details and subtleties of a successful AI program. Every action, every comment—from how to capture the birds to minimizing stress and the microscopic analysis of samples—was documented by a film crew for later review.

The team was professional and competent. AI is as much an art as a science and I was thrilled with Mrs. Gan's perceptiveness around her birds. During my visit we collected several high quality samples from Black-neckeds, and I left with warm memories and high hopes for success.

Five weeks later, the Beijing Zoo successfully hatched two Black-necked Crane chicks—the first of their species in the world to be bred through AI. A later report indicated that a total of five eggs were hatched! In addition, one of the other pairs copulated naturally and three of their young hatched. With three more chicks reared at Xining this year, the captive progam for Black-necked Cranes in China is well underway.

These techniques and others for breeding and rearing cranes will be applied to captive management of other cranes in China. Many cranes are kept in captivity here and management programs for these birds are very important. The recently formed Chinese Association of Zoological Gardens is supporting the development of regional studbooks for their five endangered cranes. In the spring of 1988 Mrs. Gan, Mr. Liao Yenfa of Xining Zoo, and three colleagues have been invited to study at ICF. We hope to train these key people who will return to China and share their knowledge. In addition, I am planning to visit several Chinese zoos this summer and distribute a new training manual. The future for captive management of the Black-necked Crane is brightening.

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