New *Cranes of the World* Poster!

ICF introduces a new poster of cranes for our 35th anniversary. This beautiful 11.75" x 36" poster features the photographs of Wisconsin photographer Richard Armstrong and the artistry of Next Level Communication's Designer Carrie Spankowski of Baraboo. The poster is available at **www.craneshop.org** or by calling our Gift Shop at 608-356-9462 ext. 121 for $19.99 + shipping.

ICF Annual Meeting

Saturday, September 27, 2008
Information and Reservation form on Page 11

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INTERNATIONAL CRANE FOUNDATION

The ICF **Bugle**

Celebrating ICF's 35th Anniversary

Inspiring a Global Community

Volume 34, Number 3 *August 2008*

Cranes Respond to Climate Change

By Jim Harris, Vice President

A friend once told me how extraordinary ICF's accumulation of knowledge and experience had become, focused on a single, magnificent strand of our world. Such depth and long-term relationships give us the understanding, the capacity to act as no others can.

Continued on page 2

High altitude landscapes of central Asia, where the Black-necked Cranes nest, have experienced some of the most dramatic warming due to climate change. Black-necked Cranes appear to benefit in the short-term due to lowered mortality with milder weather. But long-term, the melting of glaciers will greatly reduce the extent of lakes and marshes where the cranes nest and feed. Photo by Carl-Albrecht von Treuenfels.

ANNUAL REPORT ISSUE

Continued from page 1

Amur Region, Russia. Sergei and I took a bus to Arkhara. We passed miles of burnt land, miles and miles, and often we could see active fires…yet never any people with the fires. People walking on the road, and sitting beside us seemed not to notice flames slipping in long, irregular lines across forest or licking the tall brown grasses. From Arkhara, we drove toward Khinganski Nature Reserve. This landscape without people was burned as well, or burning. As daylight dimmed, the flames we saw on either side of the road grew brighter, snapping the air.

We passed a long lake on the left, partly frozen, and I began to wonder how we could cross our little Kleshenskoe Lake to the island. At the end of the road, I realized that Sergei had no idea either. Sergei and the driver conversed in Russian, and we looked over the frozen, shadowy lake, dirty ice with smooth spots that were holes into the water, reflecting the sky. Too much ice for the boat. Long rubber boots started appearing out of the van, leggy boots with little room for feet. Soon, we were carrying little suitcases and water bottles, groceries, and Sergei held eggs swinging in their own plastic bag as we set out around the marshy shore in the dark.

I felt scared about crossing half-iced marsh in darkness, and joked that it was useful someone had burned here too, we could see the ground better. Sergei chuckled. But not long later when I quipped that we were lucky to have drought too, I heard no response. The drought is terrible here, and many wetlands dry, cranes cannot nest.

Later, safe on the island, I asked if it was normal for the ice to be going out on April 19. No. Most years, we could have walked over the ice in mid April. It seemed fitting that we had come here for a meeting about climate change, what warmth and dry years one after another are doing and will do to wetlands and cranes, and how we can respond to save our conservation gains won over the past thirty years at Khinganski and so many other protected places.

The evening was balmy. We lingered outside, listening to the high piping of Far Eastern Curlew courting in the moonlight. Later, White-naped Cranes unison called.

Climate is already changing the crane world. Now is the time we need to be learning and adapting our conservation strategies. Environmental change on a global scale can be so daunting as to paralyze individual action, or hope. Yet our fifteen species of cranes, responding to changes around them on the five continents, bring the issues down to, well an almost human scale. We can bring a focused response, the necessary adaptations seem easier to conceive and to manage.

Sandhill Cranes on migration. Photo by Tom Lynn

Here in eastern North America, changes for the Sandhill Cranes are dramatic. Thirty-five years ago, when ICF began, the midwest population of Greater Sandhill Cranes wintered almost entirely in Florida, with a few outliers in the Okefenokee Swamp of Georgia. Now, depending on the year, a third of these birds winter in Tennessee. In two winters with little snow, roughly 10,000 cranes remained in northern Indiana feeding on the waste grain in farm fields.

Climate is not the only change in the past 35 years. This crane population has tripled, so it is natural the birds have become more dispersed. And they have learned increasingly to rely upon waste grain, a food source that entirely changes their relationship to landscapes. In Aldo Leopold's time (just 70 years ago), Sandhills inhabited as close to pristine, lonely wetlands as they could find. Now the greatest numbers inhabit mosaics of farms and wetlands. Impacts of climate change interact with the deepening human imprint on the land, and the responses of a myriad of species.

Down the road from ICF, Leopold's daughter Nina and the Aldo Leopold Foundation are tracking the sequence of natural events each spring, as Aldo did in the 1930s. Some birds like the Fox Sparrow and Eastern Towhee arrive in spring at the same time as in Aldo Leopold's day, while others like the Eastern Phoebe and Rose-breasted Grosbeak now arrive days or weeks earlier. The former bird species appear to time their migrations by the change in day length, while others by the accumulating warmth of the season. Insects and plants are no longer in synchrony with some of the birds that feed on them. Research in Europe has shown that some forest birds formerly hatched their young at the time that primary food sources, such as caterpillars, were also abundant. Now the timing doesn't match. Cranes belong to the latter group of wildlife that has adjusted their movements to temperature. We look for the first cranes in spring in Wisconsin in mid to late February, not in March as before.

Our cranes linger late when autumn is mild. Two years ago, in 2006, a large and growing flock roosted on the Wisconsin River, not far from the Leopold shack, and fed in fields two miles down Shady Lane Road from ICF. I felt so curious. What will they do as winter comes? Weeks passed. Every day I visited but at last felt anxious for the flock to go. Cranes do not belong in Wisconsin in January, something seems fundamentally wrong when traditional patterns are broken. I felt a growing dread of climate change.

A snowstorm hurled through the night of January 14, and by early morning the last individuals were fleeing south. Cranes are hardy birds, but this flock must have had a chill and arduous flight. The storm system extended all the way south into Tennessee.

Eurasian Cranes show similar responses in Germany, where some cranes never left in winter 2006-07, and in Beijing, where the species now winters on the city outskirts. But changing climate brings weather that is more varied and extreme. Eurasian Cranes have wintered far north of their previous winter range along a river separating southern Uzbekistan from Afghanistan. Sudden severe wintry conditions killed hundreds, perhaps thousands this past winter.

Each of the 15 species has its own set of changing conditions, and its own vulnerabilities. Whooping Cranes, for example, winter in salt marshes along the Texas coast. A rising ocean would drown all their habitats. The Brolga of Australia faces unprecedented drought that is shrinking wetlands across temperate parts of its range. It is on Asian cranes, however, that climate change is having the most pronounced impact.

Siberian Cranes lose breeding marshes

The threat of climate change, independent of other human influences, is most evident with the critically endangered Siberian Crane. Polar regions have seen great changes in temperatures and weather patterns, that in turn are affecting habitats critical for birds and other wildlife.

Scientists from the Institute of Biological Problems of the Cryolithozone in Yakutia are studying the tundra environment, nesting grounds of the Siberian Crane, and finding many indicators of change, such as a drop in the surface of the permafrost layer. The lakes are expanding where cranes nest, so that open water is replacing islands, peninsulas, and low-lying shores. It is too early to know how far this process will go, but already Siberian Cranes are losing nesting habitat. Sandhill Cranes, that breed in the same areas, tend to use higher ground and so are likely to be less affected.

For changes such as these, across vast tundra landscapes, there is little that conservationists can now do except monitor what is happening. Some nesting species may adjust, others may not. With deterioration of breeding habitat, however, it becomes all the more important to minimize the threats to Siberian Cranes during other parts of their annual migration cycle, including short-term human activities such as hunting or the diversion of water from their wetland habitats.

Black-necked Cranes thrive in the short-term

Where climate is changing landscapes, we need to set high priority on research to understand the impacts on cranes and other wildlife so that we can devise conservation responses. The Black-necked Crane inhabits high altitudes in central Asia, primarily the Tibetan-Qinghai Plateau. ICF has made this species a research priority, and we have good world population estimates from around 1990-92, as well as for the most recent years. Numbers have increased across its entire range, from about 5,500 to 10,900.

We believe this dramatic increase results from three factors. First, some part of the apparent near doubling of the population may be due to more thorough counts now, and perhaps the concentration of birds at fewer sites in winter than previously. But there is no evidence that sizable numbers of birds were missed in the early 1990s.

Second, shooting of cranes and other wildlife in the region has been substantially reduced due to control of firearms, better enforcement of wildlife protection laws and greater awareness among the population. During this period, numerous nature reserves have been established, and the older reserves now provide better protection from disturbance and encroachment. This enhanced protection is a significant reason for the increase.

Third, this region is especially affected by global warming. While there is no direct evidence, we believe that crane mortality has been reduced on both breeding and wintering grounds due to milder weather. ICF will undertake additional research to learn more about

Continued on page 14

New Horizons for Cranes in DPRK

By George Archibald, ICF Co-Founder and Senior Conservationist

The Ga Hak Lu (Crane Watching Pavilion) was built between 1735-1742 and was a part of the Anbyon Guest House where travelers could find lodging. The architecture is simple and the building is one of the oldest in Democratic People's Republic of Korea (DPRK). Can you imagine sitting on the elevated platform and watching Red-crowned Cranes on nearby wetlands while warmed by spicy kimchee and thick blankets?

Two hundred and fifty years ago near the base of a pine-covered mountain, some enormous trees were felled to create pillars standing on a stone base and supporting an elevated platform beneath a sweeping tiled roof intended to resemble the outstretched wings of a crane. Sitting under the canopy, one gazed north across a wide plain to a line of high hills behind which more forested mountains towered. The plain was dotted with small lakes, fringed by spongy wetlands and transected by an east flowing river, the Namdae – with a sandy bottom and many grassy islands. The pavilion was called Ga Hak Lu, Crane Watching Pavilion. From late November through mid March, the calls of Red-crowned Cranes resounded across their winter home on the Anbyon Plain.

Treasured by the people of Korea, Cultural Monument Number 103, Ga Hak Lu continues to stand in admirable condition. But its surroundings have been transformed. From the pavilion one gazes into a large playground of a primary school and from there to the concrete buildings of downtown Anbyon above which the peaks of northern mountains are just visible. In winter the dawn is not broken by the primeval calls of cranes, but by patriotic songs and announcements from loudspeakers. A few blocks away from the pavilion, Natural Monument Number 203, an enormous two hundred year old elm, rises from a small patch of earth surrounded by the central town square. Perhaps this tree once sheltered other Natural Monuments – Tristram's Woodpecker, the Crested Ibis, and the Oriental White Stork, all of which have vanished from the Anbyon Valley and perhaps from the Korean peninsula. On two other sides of the square, human-created cranes fly over concrete.

Continued on page 4

High dikes prevent the Namdae River from inundating the rice fields that once provided waste grain for wintering Red-crowned Cranes.

Continued from page 3.

The Red-crowned Cranes of the Anbyon Plain are Natural Monument Number 241. Since times untold hundreds wintered on the plain benefiting from an abundance of small aquatic animals in the wetlands. As the valley was settled by humans, some wetlands were transformed to rice paddies. The cranes arrived just after the rice was harvested and benefited throughout the winter from waste grains in the paddies. Finally, to channel flooding of the Namdae and to transform the majority of the natural wetlands into fields and villages, high dikes were constructed along both sides of the Namdae. The cranes continued to roost at night in its shallows and to feed on gleanings in the fields. Ornithologists from the Academy of Sciences DPRK in Pyongyang counted 214 in 1980.

But the cranes on the Anbyon Plain and other areas of the DPRK did not fare well during the 1990s. Following the collapse of the USSR, fertilizers once supplied in abundance from the northern neighbor were limited. Steady attrition of soil nutrients accompanied by consecutive years of droughts then floods precipitated a food crisis. All spilt grains were collected from the fields leaving little for the birds. So the cranes continued south to fields and meadows along the Demilitarized Zone (DMZ) and bordering areas in the Republic of Korea (ROK) where there was food. Counts in recent years in ROK by Professor Lee Kisup and his colleagues indicated about 850 Red-crowned Cranes. Concurrently, Dr. Pak U Il and his colleagues in the north at the Academy of Sciences searched the many wetlands where cranes once wintered. They didn't find one. And now there are plans brewing in ROK to develop many key areas near the DMZ vital to cranes.

From March 25 – April 8, with a Canadian passport and traveling on behalf of ICF's sister organization, BirdLife International, I was able to visit DPRK to discuss plans for crane conservation on the Anbyon Plain.

On the Plain

Over a steep hill from Anbyon Town, the little village of Pisan (Fortress Mountain) is tucked in a narrow valley that opens onto the wide Anbyon Plain that continue 15 miles northeast to the East Sea. The 1750 residents are members of the Pisan Cooperative Farm. Rice is the primary crop, with corn and wheat planted along the banks of the Namdae River that separates the Pisan Farm from the Hak Chon (Crane Stream) Farm. The Hak Song (Crane Formation) farm lies at the base of the hill that separates the Pisan Farm from Anbyon Town.

From left to right: Mr. Ha Jong Nam, Manager Hak Chon Farm (Crane Stream), Mrs. Pak Yon Chun, Manager Hak Song Farm (Crane Formation), Mrs. Kang Yong Ok, Chair Anbyon County People's Committee, and Mrs. Kim Yon Sim, Manager Pisan Farm (Mountain Fortress).

For three days, in company with Dr. Pak and three of his colleagues, I traveled with British conservationist and birder extraordinaire William Duckworth on visits to Pisan Farm. Our hostess was the Manager of the farm, Mrs. Kim Yon Sim, a gracious lady in her early forties and brimming with competence and enthusiasm.

Approximately 500 hectares (ha) are included in the farm, 275 of which can be farmed. The remainder are islands in the Namdae and steep hillsides carpeted on the west side by grass and on the east by pine plantations. Rice is the primary crop (260 ha), followed by corn (5.4 ha), beans (3 ha) and potatoes (2 ha). Twenty-two additional hectares of potatoes are planted in early spring and harvested in late May or early June before the same fields are planted in rice. Fodder for domestic animals from hay fields (12 ha) and natural grasslands (21.7 ha) as well as vegetable gardens (7.7 ha), orchards of apricot, pear, apple and persimmon (8.6 ha), and fish ponds (1.1 ha), make this a diverse and interesting landscape. In and near the village are fish ponds, vegetable plots, and domestic animals including cattle, pigs, goats, chickens, ducks and geese. Rebuilding from those crisis years in the 1990s, the fertility of the soil is being enhanced by manure.

Pisan Farm needs better machinery to farm more effectively. As part of an arrangement for the farm to help restore Red-crowned Cranes as winter residents, we contributed a rice milling machine that can process four tons of rice per hour, and promised other necessary equipment in the future. In exchange, the farm has agreed to feed the cranes when they land on migration, and to allow Dr. Pak and his colleagues to demonstrate new organic farming techniques on one hectare of land. The scientists will also construct a large aviary near the Namdae River for one male Red-crowned Crane on loan from Pyongyang Zoo. It is hoped this lone crane will call down the wild cranes during their migration in October and November to the DMZ.

The new project is called "One Hectare, One Crane." Its goals are clearly defined and easily measured. The Red-crowned Cranes are the bridge. They are not only a symbol of peace – they are a vehicle to help promote harmony on the divided peninsula.

The ICF Bugle is the quarterly newsletter for members of the International Crane Foundation. ICF was founded in 1973 by Ronald Sauey, Ph.D (1948 - 1987) and George Archibald, Ph.D.

Editor: Betsy Didrickson

Bugle comments or questions? Please write Betsy at Bugle@savingcranes.org or P.O. Box 447, Baraboo, WI. 53913

Memberships are vital to ICF. Please join or give a gift membership to a friend at the following annual rates:

Student or Senior Citizen	$25
Individual	$35
Family	$50
Associate	$100
Sustaining	$250
Sponsor	$500
Patron	$1,000
Benefactor	$2,000
Cranemaker	$10,000

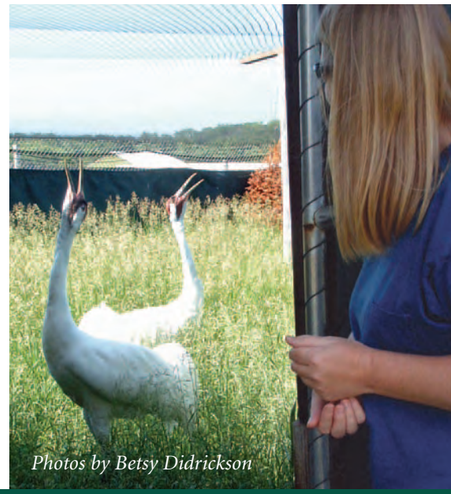
Field Research in Yakutia, Russia

Russian researchers, Alexander Sorokin and Yuri Markin, banding a juvenile Siberian Crane in 2005. Photo by Crawford Prentice, map by Dorn Moore

This summer, Russian researchers will attempt to capture and band Siberian Cranes on their breeding grounds in northeast Siberia to learn more about the species' migratory routes and summering and wintering areas. The birds will be banded with color bands and satellite transmitters (PTTs), which will enable researchers to track the birds through the summer and fall migration to the crane's wintering grounds in southeastern China. The banding will be coupled with annual breeding surveys of the species, whose total population numbers about 3,500 birds (nearly all Siberian Cranes are found in this eastern population in East Asia). Visiting Chinese researchers will also participate in the surveys to share their experiences and strengthen cooperation between the two countries along the species' flyway. For more information on Siberian Crane conservation, visit the UNEP/GEF Siberian Crane Wetland Project website at www.scwp.info. Look for an update on these activities in the November issue of The Bugle.

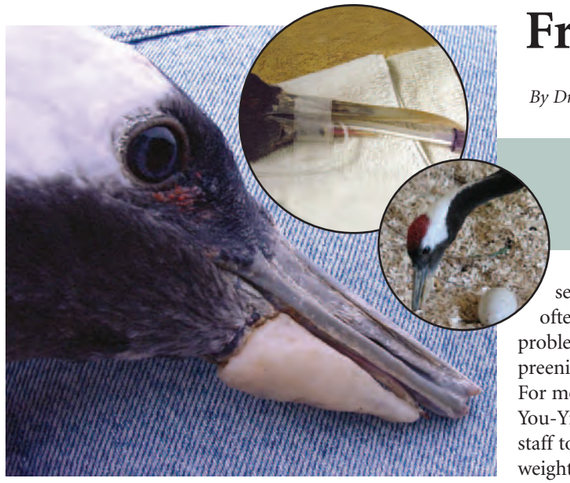
Whooping Crane Longevity Record!

Cranes are symbols in folklore around the world of good fortune, marital fidelity, vigilance, and perhaps most notably, as symbols of long life. A Whooping Crane named Rattler turned forty at ICF on June 2, 2008 making him the longest living Whooping Crane ever recorded in captivity! Rattler hatched at USGS Patuxent Wildlife Research Center on June 2, 1968 and came to ICF in 1989. Rattler is seen here unison calling with his long time mate Riva (on right). Senior Aviculturist Sara Zimorski tosses Rattler smelt and handfuls of corn on his birthday. Hardly over the hill, Rattler produced 17 offspring in his lifetime and continues to be an important foster parent in ICF's captive flock. He and Riva are considered to be excellent parents and are beloved by ICF staff.



Photos by Betsy Didrickson

Veterinary Dentistry: From Dogs to Cranes



By Dr. Barry Hartup, Director of Veterinary Services

You-Yi with her shorter prosthetic lower beak. Insets: You-Yi in surgery at UW-Madison and You-Yi lays an egg!

Cranes continually pose challenges to the medical and surgical treatment of their illnesses and injuries. On the other hand, those long beaks and legs sometimes provide unexpected opportunities for creative applications of techniques that are now standard in small animal veterinary practice.

This year I have managed two such cases, and both involved fractures of a crane's beak. Though the ICF aviculture and veterinary staff continually strive to identify and remove hazards in crane enclosures, the appearance of these injuries in two older, well-habituated captive cranes caught us all by surprise.

You-Yi, a 23 year old female Red-crowned Crane fractured and lost 75% of her lower beak, or mandible, in early February. She became entangled in a bracket supporting the heating element used to keep her drinking water clear of ice in her Crane City pen. Howard, a 27 year old male White-naped Crane on display at the Johnson Exhibit Pod fractured his upper beak, or maxilla, in June. We suspect that Howard became entangled in or was disturbed while patrolling the chain link fencing at the front of his pen and wrenched his upper beak, breaking three bones in the process.

Cranes can typically survive the loss of up to about half the length of either the upper or lower beak, but losses more serious than that are often associated with problems eating and preening feathers properly. For more than a month, You-Yi was tube fed by ICF staff to maintain her body weight while her wounds healed and her upper beak was surgically shortened to more closely match what was left of the lower beak.

She was then brought to the University of Wisconsin School of Veterinary Medicine (UW-SVM) Dentistry Service for the placement of a temporary prosthetic to augment her lower beak, such that it would protect her healing stump and provide the necessary length and solid base for her to eat. Drs. Jason Soukup and Bill Gengler worked to wire the two parts of the mandible together, creating a framework for a cold-curing dental acrylic used to construct the prosthetic.

You-Yi rebounded well and was self feeding by the end of March. Though her outlook was touch-and-go for many weeks, remarkably, she laid two eggs by early June and incubated a pair of "dummy" plaster filled eggs as a test. Whether she successfully turned the eggs as normal cranes do is unknown, though videotape may help us discern this aspect of her performance. We are guardedly optimistic that You-Yi will be able to continue contributing to the conservation of cranes through her use as a surrogate incubator for other cranes' eggs.

Howard's fracture was more common, but complicated by the degree of damage to the bones of the upper beak. After wearing a temporary splint for two weeks, Howard received an external splint of the same dental acrylic anchored by two wires placed through the beak. Practice with home caulking projects certainly helped me in the construction of Howard's splint, which will stay on for 4-6 weeks.

Both of these cases illustrate the successful collaboration that ICF has maintained with the UW-SVM for many years and under formal agreement since 2000, as well as the successful (and creative) transfer of techniques "from dogs to cranes."

Howard following placement of the acrylic splint. The tip of his beak is now normally aligned and significantly more stable than with a temporary splint. Photos by Barry Hartup

ANNUAL REPORT 2007

BY JIM HOOK, PRESIDENT & CEO

This past year has seen continued transition for the International Crane Foundation (ICF). After the successful turnover of ICF leadership in the fiscal year ending March 31, 2007, we have continued to add staff to fill open positions and enhance our organizational strength. I am very happy to report that we filled the key Director of Conservation Education position earlier this year and are already making great strides under the capable leadership of Erica Cochrane. As I complete my second year as President and CEO, I am pleased with our progress.

Looking at the numbers for our latest fiscal year, I note that ICF is celebrating its 35th anniversary in 2008. Shortly after ICF's founding in 1973, our earliest financial report shows $40 in contributions against slightly more than $8,000 in expenses which included a trip for George Archibald to Australia. Fortunately, the fledgling organization was generously supported by the Norm Sauey Family and this afforded us an early asset base including a little cash, some modest buildings, a chain link fence and a post hole digger with a recorded value of $240. As they say, the rest is history. Look where we are today.

Bob Dohmen shows a scale model to staff and visitors of the planned African Cranes Exhibit that will break ground at the end of August.

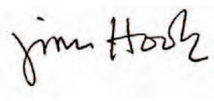
During this past fiscal year which ended on March 31, 2008, our sources of funds, the money we raise to support our mission, grew 28% to $7,282,880, while our use of funds, the money we actually spent during the year, grew 19% to $4,986,384. We continue to see strong growth in net assets, the best measure of our net worth as a foundation, up 19% to $14,407,111. Much of this growth in net assets resulted from the generous bequest by Brooks McCormick of his ornithological book and art collection which was sold at auction this past October. The resulting increase in our endowment will enlarge ICF's operating cash flow for years to come.

As the use of funds increased to support ICF programs, we continue to maintain best in class performance in organizational efficiency, our ability to allocate expenditures directly to support program expenses. We typically hold fundraising and administrative expense to 10-12% of total expenditures and have performed within this range again in 2007-08. Our biggest challenge in the financial area, and a planned increase in administrative expense next year, will be to add a full time Director of Accounting and Finance. This important position will round out our senior management team and enable us to install new financial accounting software for the foundation. An added benefit of new software will be better administrative support of programs, so that our program staff will spend more time directly on conservation activities.

We are well along in implementing the first step of our 2005 Master Site Plan and expect to break ground on new state of the art exhibits for African cranes just before this year's annual meeting. We plan to open in late June of 2009. Our project involves substantial rework of our existing Wattled Crane site, located just west of our Gift Shop, an upgrade to part of our existing pod structure and the creation of two brand new exhibits. All four exhibits will feature natural settings for the African cranes and strong interpretation of our field conservation efforts on the African continent. Our Conservation Education Department has crafted a carefully thought out Site Interpretive Plan which will tell a balanced story about people, places and these spectacular African birds.

ICF Director Bob Dohmen, through the Dohmen Family Foundation, provided lead funding for the project while ensuring that this very generous gift also includes direct support for field conservation for cranes in Africa. Bob's financial support and his tireless participation in the planning and execution of this project deserve the highest accolades. We are also grateful to many of our members who also helped this effort through last year's annual campaign.

I look forward to seeing many of you at our Annual Meeting on Saturday, September 27, 2008. We will have the chance to hear our Co-founder George Archibald share inspirational memories of our thirty-five year history, while sensing our exciting future as we develop new exhibits and new conservation action. We have a great event planned and look forward to a terrific day.



INTERNATIONAL CRANE FOUNDATION

ANNUAL REPORT 2007

FINANCIAL SUMMARY

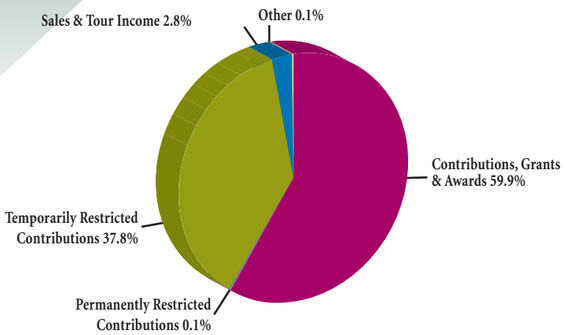
APRIL 2007 – MARCH 2008

STATEMENTS OF FINANCIAL POSITION

Years ended March 31, 2008 and 2007

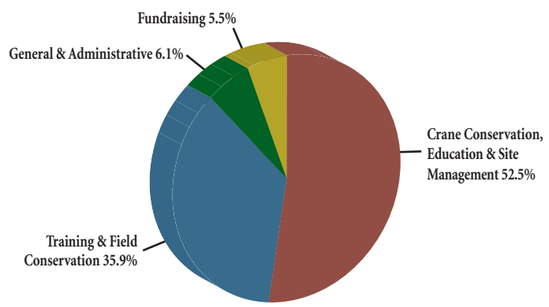
ASSETS	2008	2007
CURRENT ASSETS		
Cash and cash equivalents	$2,771,900	$1,412,146
Accounts receivable	16,238	10,570
Grants receivable	14,584	14,584
Unconditional promises to give - current portion	756,923	273,000
Inventories	66,397	62,075
Prepaid expenses	8,547	6,139
Investments	5,440,385	4,730,959
Total Current Assets	9,074,974	6,509,473
Property and Equipment, net	1,922,919	1,999,005
OTHER ASSETS		
Unconditional promises to give - net of current portion	40,000	223,000
Beneficial interest in charitable remainder trusts	762,087	764,102
Cash surrender value of life insurance policy	-	-
Investments permanently restricted	2,884,865	2,880,542
Total Other Assets	3,686,952	3,867,644
Total Assets	**$14,684,845**	**$12,376,122**
LIABILITIES AND NET ASSETS		
Accounts payable	$168,346	$135,131
Accrued expenses	109,388	98,376
Deferred revenue	-	32,000
Total Liabilities	277,734	265,507
NET ASSETS		
Unrestricted	9,843,850	7,822,476
Temporarily restricted	1,678,396	1,407,597
Permanently restricted	2,884,865	2,880,542
Total Net Assets	14,407,111	12,110,615
Total Liabilities and Net Assets	**$14,684,845**	**$12,376,122**

SOURCES OF FUNDING



Contributions, Grants & Awards	$4,361,763	59.9%
Temporarily Restricted Contributions	2,754,498	37.8%
Permanently Restricted Contributions	4,323	0.1%
Sales & Tour Income	200,761	2.8%
Investment Income (loss)	(47,037)	-0.6%
Other	8,572	0.1%
	7,282,880	100%

USE OF FUNDS



Crane Conservation, Education & Site Management	$2,618,974	52.5%
Training & Field Conservation	1,788,267	35.9%
Fundraising	274,910	5.5%
General & Administrative	304,233	6.1%
	4,986,384	100%

INTERNATIONAL CRANE FOUNDATION

ANNUAL REPORT 2007

CONTRIBUTIONS APRIL 2007 – MARCH 2008

The International Crane Foundation thanks the following donors who generously supported our work with gifts of $500 or more during the last fiscal year.

$100,000+

C. Robert Binger
The Bobolink Foundation
Dohmen Family Foundation, Inc.
Felburn Foundation
Reinhardt H. & Shirley R. Jahn Foundation Trust
National Fish & Wildlife Foundation
United Nations Environment Programme Trust Fund

$10,000 - $99,999

Anonymous (1)
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AMS Fund
Antonia Foundation
Aria Foundation
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Celebrate ICF's **35th Anniversary** on Saturday, September 27, 2008!

Prince Yoshimaro Yamashina of Japan, founder of the Yamashina Institute for Ornithology, and George Archibald at ICF's old site in 1973.

ICF's 2008 Annual Meeting celebrates our humble beginnings on a horse farm in Baraboo, Wisconsin, to our emergence as a world leader in conservation working on five continents. ICF's history contains many milestones, but ultimately it is a story of how ICF motivates people around the world to join forces to conserve cranes and their fragile ecosystems.

Help celebrate ICF's accomplishments by sharing your story – how did you become involved with ICF and what is your favorite memory? Stories will be collected throughout the day at ICF on September 27. If you are unable to attend this event, please send your stories to: *aburke@savingcranes.org.* These stories will be featured on the ICF website (with author permission).

Please use the form below to register for the evening banquet only.

9:00 – 10:00: Birding Hike. Led by Alyssa Rod, Visitor Services Coordinator, and Rob Carr, Interpretive Program Manager.

9:00 – 5:00: *African Cranes, Wetlands and Communities* Art Exhibit. Meet Kerryn Morrison, Africa Program Manager.

9:00 – 5:00: Muraviovka Park for Sustainable Land Use.

9:00 – 4:00: Book Sale. Natural history books from the collection of our late board member Fred Ott will be sold in the library. Fred collected a wide variety of books over many decades. We have added many to our library collection from Fred's collection, but we cannot keep them all. This is a great opportunity to purchase wonderful out-of-print titles for your library!

10, 1, and 3:00: *Cranes of the World* guided tours.

10:00 – 2:00: Children/Adult Activities.

11:30 – 1:30: Bag lunches will be available for purchase on site.

12:30 – 1:15 and 1:30 – 2:15: Tour of the Isolation Chick Rearing Facility. Includes an update on the 2008 Whooping Crane Reintroduction Program.

2:30 – 3:30: A Guided Tour of Crane City. A unique opportunity to visit ICF's off-exhibit crane breeding facility.

Presentations by ICF staff:
Stories from Poyang Lake – James Burnham, Poyang Lake Program Coordinator.
Siberian Crane Wetland Project Update – Sara Gavney Moore, Communications Coordinator.
Restoration on Private Lands – Alison Duff, Field Ecology Program Assistant.
ICF out West – Gary Ivey, Western Crane Conservation Manager.
Whooping Crane Reintroduction Update – Joan Garland, Education Outreach Coordinator.

Check the schedule on the 27th for times and locations for these presentations.

3:30: Prairie Restoration Hike. Jeb Barzen, ICF Director of Field Ecology, and Alison Duff, Field Ecology Program Assistant.

5:00: GATES CLOSE.

Registration is required for the following activities held at the Glacier Canyon Lodge:

5:30: Hospitality Hour: Wilderness Banquet Room (cash bar). Take a walk down memory lane with images of ICF yesterday and today.

6:30: Dinner:
Meal choices: 1) Prime Rib of Beef; 2) Roast Chicken Dinner served with sage dressing, potatoes and gravy; 3) Pasta Primavera. (Please indicate your main entrée choice on the registration form below). Sides: fresh garden salad, chef's choice of seasonal vegetables, chef's choice of starch, fresh baked assorted dinner rolls, iced brownie, coffee, tea and milk.

7:30 : Welcome and Business Meeting
Joseph Branch, ICF Board Chair and Jim Hook, ICF CEO.

Program: Good Egg Awards followed by a nostalgic presentation by George Archibald, ICF Co-founder.

Please clip and send with check payable to the International Crane Foundation. Attn: Annual Meeting P.O. Box 447, Baraboo, WI 53913

RSVP by 9/22/08

Name (1): _____

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I would like to purchase _____ tickets to the Annual Meeting Banquet @ $30 each for a total of $_____ (please enclose check or pay by credit card).

Please accept our additional gift of $_____ to help support this event.

Pay by Credit Card (Visa/Mastercard/Discover) # _____ Exp. Date _____

Name as it appears on card: _____

Dinner selections (indicate number of each):

_____ Prime Rib of Beef _____ Roast Chicken Dinner _____ Pasta Primavera

ACCOMMODATIONS

for Saturday, September 27, 2008:

Glacier Canyon Lodge at the Wilderness Resort: 45 Hillman Road, Wisconsin Dells, WI. Guest rooms: $115 (plus tax) or upgrade available for $155 (plus tax). Call 800-867-9453 and book under the ICF block. **Rate deadline: August 27, 2008.** *www.GlacierCanyonLodge.com*

For other lodging options, contact the Baraboo Area Chamber of Commerce at 800-227-2266 or *www.baraboo.com*; or the Wisconsin Dells Visitor and Convention Bureau, 800-223-3557 or *www.dells.com*

Investing in the People and Science of Crane Conservation

By David Koehler, Director of Development

Photo by Tom Lynn

People save cranes. Our worldwide efforts to protect these magnificent birds and their fragile habitats depend on the passions and skills of diverse individuals – donors, volunteers, partners, citizens, staff and scientists. Science informs our work. The significance and scale of our mission requires that the people saving cranes and ecosystems are armed with the latest tools and information – the very best conservation science, practices and strategies available.

ICF invests in the people and science of crane conservation in unique ways around the world – from sponsoring graduate students investigating some of the greatest challenges in crane and wetland conservation to building networks among universities to elevate conservation knowledge across entire regions.

For our 2008 annual campaign, we celebrate this important aspect of ICF's culture and approach. We renew our commitment to building science capacity, and, through a strategic science review, we are strengthening our established best practices. Many opportunities exist to save these beautiful birds and healthy natural places. These commitments better position us to achieve lasting results for the benefit of cranes, people and our planet.

Please watch this fall for our special request for your 2008 annual campaign gift. You may also use the envelope in the center of this issue to make a gift at this time. As in years past, your gift will be matched 100%. Your ongoing support keeps ICF scientists hard at work. We hope you enjoy some of their stories – it is your dedication that will develop and advance the very best science and crane conservation.

Jeb Barzen, Director of Field Ecology

Jeb has directed ICF's Field Ecology department for over 20 years and oversees all of our work in Southeast Asia, at Poyang Lake in China and in Wisconsin where we continue our Long-term Crane Research Project with Sandhill Cranes. Jeb is a driving force behind ICF's strong use of science and has served as the graduate advisor for the studies of Fengshan, James, Triet (profiled below) and other researchers. The diverse projects of our Field Ecology department involve developing research and conservation programs that improve outcomes on both private and public lands around the world. Two examples include developing the Healthy Grown Potato that improves stewardship in the potato fields and the wetlands, prairies or savannas that cranes use on the same farms and solving crop damage in a way that benefit farmers, Sandhill Cranes and other crane species worldwide. Jeb is currently coordinating a peer review of ICF's science and conservation management practices. The outcomes of this effort will help strengthen ICF's use of science and best practices.

Triet Tran, Southeast Asia Program Coordinator

Triet was born in Vietnam and began working for ICF in 1993 while pursuing his MS and PhD from the University of Wisconsin-Madison. Upon completion of his degree in Land Resources in 1999, Triet began to direct ICF's program first in Vietnam and later throughout Southeast Asia. Triet has been instrumental in developing the first regional training program for wetland science that is now taught within a consortium of 13 Southeast Asian universities. Last spring, Triet's work in Vietnam with Phu My villagers on the Ha Tien – Habitats to Handbags project received the prestigious United Nations Dubai Award and the Equator Prize for impact, sustainability, partnership and community empowerment. His creative project combines protecting nearly 6,500 acres of wetlands important for wildlife, including Eastern Sarus Cranes, with developing skills and alternative livelihoods for residents of one of Vietnam's poorest villages. After three years of implementation, the income of local families has more than doubled and the number of Sarus Cranes using the Phu My wetland during the dry season has grown from 5 to nearly 200. He is now working to expand this program from Vietnam to Kampong Trach, Cambodia. ICF's host institution in the region is the University of Natural Science, Vietnam National University-Ho Chi Minh City where Triet serves as the Dean of Biology Faculty. This joint appointment allows ICF to strengthen its collaboration with research, academic and conservation communities in the region.

Photo by Joel Sartore www.joelsartore.com

Fengshan Li, China Program Coordinator

Fengshan was born in Chiefing, Inner Mongolia in the People's Republic of China. He first came to ICF in 1989 for wetlands training and, in 1997, earned his PhD in Land Resources from the University of Wisconsin-Madison on an ICF-supported project studying Black-necked Crane winter ecology at Cao Hai in Guizhou Province, China. Fengshan has continued his critical role developing our China program since that time and leads our efforts for Black-necked Crane research and conservation in Yunnan, Guizhou and Sichuan Provinces as well as our community-based conservation efforts at Cao Hai and ecological monitoring at Poyang Lake. He has also been very active in eastern China, and serves as the China Technical Advisor for the UNEP/GEF Siberian Crane Wetlands Project.

James Burnham (on right), Poyang Lake Program Scientist

James received his MS from the University of Wisconsin-Madison in 2007 while working as a research associate at ICF studying the ecology of wintering Siberian Cranes and associated waterfowl at China's Poyang Lake. He has spent the last four years investigating the relationships between water levels, water plants and water birds in the vast, complicated and dynamic Poyang system.

The work of Fengshan and James adds to nine years of data that link wintering populations for cranes (over 98% of the world's Siberian Cranes and about 50% of the world's White-naped Cranes) with the key aquatic food plant *Vallisneria* and water levels that change as much as 30 feet between summer highs and winter lows. This study represents the most comprehensive information collected to date regarding ecological requirements of the Poyang Lake ecosystem and for these critically important wintering populations of cranes. This research is also well-timed. According to WWF, the Yangtze River is the most endangered river in the world and its condition is changing rapidly. Degradation of the Yangtze, and associated lakes like Poyang, has affected a multitude of plants and animals. So far the cranes have fared relatively well, in part because we have succeeded in encouraging expansion of protected areas for wetlands at Poyang Lake from 22,400 hectares in the early 1990s to over 200,000 today. But a variety of major engineering projects within the Yangtze Basin – already constructed, under construction, or proposed – could contribute to the collapse of *Vallisneria* populations at Poyang, destroying the unique ecological conditions necessary for this last viable flock of Siberian Cranes. ICF research is helping the Chinese Government understand what the Siberian Crane and other waterbirds need to survive during the winter months at Poyang, as a basis for evaluating impacts of new developments being considered, and for exploring options compatible with waterbird conservation.

Gopi Sundar, Research Associate, India

ICF is committed to building capacity for the conservation of Indian cranes. To advance knowledge in this area, ICF has been supporting the education of Indian scientist Gopi Sundar. This summer, Gopi completed his PhD coursework at the University of Minnesota and is now conducting field research in Uttar Pradesh, India, where he is exploring ways to retain cranes and other birds in a landscape that is otherwise used intensively for cultivation. Lessons from Gopi's research may help guide ICF activities for cranes across farmlands of other regions. While in India, he will concurrently write most of his doctoral dissertation and continue to administer activities of the Indian Crane and Wetland Working Group on behalf of ICF.

Kelly Maguire, Senior Aviculturist

Kelly started working for ICF as a Chick-yard Associate in April 1994 and became an Aviculturist later that year. She has worked in all aspects of crane husbandry at ICF including incubation, maintenance, artificial insemination, chick rearing and medical care. More recently, Kelly has participated in early training and migration efforts of the reintroduced Whooping Cranes led by ultralight aircrafts from Wisconsin to Florida. As part of this project, Kelly just completed her MS in Wildlife Ecology at the University of Wisconsin-Madison studying habitat selection of reintroduced Whooping Cranes on their summer grounds in Wisconsin. She continues to supervise egg incubation for the Whooping Crane recovery efforts at ICF and will soon engage in research on breeding activity of reintroduced Whooping Cranes as we attempt to learn more about the reproductive behaviors of this rarest of all cranes.

Changing climate is affecting cranes across large parts of Asia. Map by Dorn Moore.

Continued from page 3

conditions on the breeding grounds (the counts described above were winter counts), and document habitat conditions and breeding success that may reveal the role of climate change. We have surveys planned for Ruoergai in 2009 and are preparing to do baseline studies in Tibet starting in 2009 or 2010. Repeating these same surveys in later years will enable us to track changes in cranes and the ecosystems they inhabit.

Climate change scenarios for the future are highly complex, and rely on models developed with many assumptions that may or may not prove valid in the long run. Field studies, for example, of the extent of Arctic ice, often yield results different from those predicted (polar ice is melting much faster than expected). Future scenarios have even less precision as one attempts to look at specific areas.

Research on climate in Tibet, however, suggests that any increase in Black-necked Cranes is likely to be temporary. Tibet is experiencing some of the most dramatic climate change on earth, with average annual surface temperatures rising by 1.1° C in the past 50 years. Glaciers are rapidly melting, perhaps leading to more water now during breeding seasons. But less water will be available once glaciers disappear – with major impacts on river basins below (and hundreds of millions of people) as well as on cranes and other wildlife. Parts of the Tibetan-Qinghai Plateau are predicted to have more rainfall in the future than now, but this change could be offset by greater evapotranspiration, and likely lead to substantially reduced breeding marshes. Even now, at the key breeding area of Ruoergai in Sichuan and Gansu, 6 of 17 lakes larger than 6.67 hectares have dried completely from 1985-2000, and the sizes of the other 11 lakes have been reduced to different degrees.

While we attempt to understand the changes happening to wetlands and water in Tibet, and how cranes interact with these changes, the species will remain "vulnerable" on the IUCN Redlist for endangered species.

Changing rainfall threatens the Red-crowned Crane

In regions where climate change will make water supplies less predictable and less secure, a range of important adaptations to climate change are already clear. The mainland population of Red-crowned Cranes breeds in a transboundary region where both natural and human communities are sensitive to changes in rainfall. This region, along the borders of Mongolia, China and Russia, has abundant wetlands fed by monsoons that dominate precipitation in the east, but have less and less influence as one travels west. As a result, rainfall sharply declines from forested regions of Primorski and Heilongjiang to grasslands of Inner Mongolia and ultimately the deserts of Mongolia.

For much of this region, water supplies are variable and have been inadequate to support growing human populations and rapid development. Numerous water engineering schemes in all three countries have changed natural flows, mostly to benefit agriculture, industry, electric production, or send water to the cities. On the western edges of the Red-crowned Crane distribution, the climate appears to follow thirty-year cycles. The key exploratory studies for cranes and other waterbirds, and the development of nature reserves to protect outstanding wetland habitat, occurred during the 1980s and early 1990s, during the wet part of that cycle. Now that landscapes are mid-way through the dry side of the cycle, most of those protected wetlands are dry. Wildlife has shifted from grasslands to forest-steppe, mostly at higher elevations or to the north. As years of drought continue, waterbirds, people and livestock depend on ever smaller wetlands, with so much disturbance from people and livestock that birds are unable to raise any young at all.

At present, it is extremely difficult to separate the impacts of recent human development, the thirty-year cycles and the onset of long-term climate change. Yet it is evident that Red-crowned Cranes and many other waterbirds face severe threat from lack of water combined with accelerated human activity. This year, ICF is working with Chinese, Russian and Mongolian colleagues to assess numbers and breeding success of Red-crowned Cranes across this entire gradient, from Lake Khanka in the east to the Argun and Hui Rivers in the west, and on into Mongolia's Uldz and Onon River watersheds, that have been the stronghold of the less aquatic White-naped Cranes.

With the exception of Lake Khanka, numbers of successfully breeding Red-crowned Cranes are severely reduced. This deteriorating situation has been obscured by the numbers of cranes unable to breed that still inhabit the edges of marshlands or former breeding sites. Five years ago White-naped Cranes, breeding in shallower wetlands, were less affected. Now, White-napeds also cannot breed.

In the past, water has been an effective barrier keeping people from the sensitive crane nesting spots. Now people and their livestock can walk almost everywhere. In Russia, where rural people believe that burning grasslands will promote better plant growth to feed their livestock, fires have much more severe impact because they sweep over drying wetlands, destroying nests and burning deeply into peat exposed to the air. Low water also makes it easier to get machinery into place for ditch digging – so that conversion of wetlands to farmlands has accelerated. During dry parts of the cycle, pressure grows to divert water from rivers and lakes already stressed by lack of water, for mines or other new development.

Variability in rainfall and scarcity of water have become a priority problem, both for supporting improved livelihoods for people and for safeguarding the region's extraordinary diversity of cranes and other waterbirds. Wetlands are intimately connected with water supply and water quality, and provide essential support for many economic activities such as fisheries, livestock, and growing tourism to natural areas in all three countries. Vast amounts of carbon are sequestered in the abundant peatlands of this region. Without protection of wetland and water resources, this carbon will be released to the atmosphere – especially as fires burn away peat exposed to air – accelerating the build up of greenhouse gases. Fortunately, the conservation actions needed in response to wetlands loss – whether those losses are due to human changes to the landscape, short-term climate cycles, or long-term climate change – are essentially the same.

Safeguarding water, and wetlands, needs to be an integral part of water and development planning for this region, based on studies of the environmental flows needed to maintain wetland functions. Policy and regulatory mechanisms need to ensure continuance of these environmental flows. Cooperating with Chinese conservation and water agencies, ICF has helped develop water management plans and mechanisms for delivering water to Zhalong and other major wetlands of northeast China – a process that can serve as models for other wetlands. Protected area networks, and other conservation strategies, need to adapt to water variability and frequent drought – in part, through expansion of protected areas so that wetlands are maintained that provide suitable waterbird habitat during dry cycles.

Underlying all, a greater awareness is needed of water, wetlands, and how all of us can adapt to the changes ahead. From our island in Kleshenskoe Lake, we were surrounded by burnt lands. People do not know the damage they cause. Again, it is not necessary, at present, to differentiate climate change from the other changes caused by people. In preparing for climate change, we should be maximizing the resilience of human communities and of wetlands because uncertainty and instability will become more the norm. The magnificent Red-crowned Cranes symbolize the dilemmas these three great countries face in the border regions – how to safeguard water and other natural resources while continuing to develop. As these birds have done so many times, the cranes can help inspire a wider vision and solutions.

This tundra landscape, prime breeding habitat of the critically endangered Siberian Crane, already is changing due to warming conditions in the Arctic. Open water is expanding over islands, peninsulas, and low-lying lake shores, including favored nesting sites for the cranes. Photo by Crawford Prentice.

These problems have a human face as well. At Keerqin Nature Reserve in Inner Mongolia, where Red-crowned and White-naped Cranes can no longer nest due to drought, ICF is helping herding communities adapt to the drier landscapes. An aggressive effort by the county government as well as the nature reserve is protecting the grasslands essential to the livelihoods of these herders. To sustain that resource base, livestock herds are now half their former size, but still too large. ICF is assisting with converting herds to more productive varieties – such as cashmere goats – while adjusting how animals use the land. We also support alternatives to herding as a way to enhance incomes.

For people who already feel that they are struggling, it is hard to think about climate change and not lose hope. It can be the same for those who care about cranes and wild places. Yet the ancient cranes are resilient and surprisingly adaptable – it is so remarkable how Wisconsin's Sandhills and Japan's Red-crowned Cranes have recovered since Aldo Leopold's day. We ourselves must be able to adapt as well. Science, as well as beauty and hope, should be our companions in the years of conservation effort ahead.

For more information about effects of climate change on wildlife, see:

- CMS Publication - Migratory Species and Climate Change (2.5MB) *http://www.cms.int/publications/pdf/CMS_ClimateChange.pdf*
- CBD/UNEP-WCMC Publication: Global Climate Change and Biodiversity (1.2 MB) *http://www.unep-wcmc.org/information_services/publications/GCCB2003.pdf*
- WWF Report: Global Status Report - Bird Species and Climate Change *http://www.panda.org/about_wwf/what_we_do/climate_change/publications/index.cfm?uNewsID=86520]*