The Spirit of Maun
by George Archibald, Director and Rich Beilfuss, Wetland Ecologist

Since times untold, African people have lived in harmony with wetlands and their wildlife. Reeds provided thatch and fuel, while the waters abounded with fish. But now increasing human populations, along with ill-conceived dams and other development projects, threaten the survival of wetlands and their self-sustaining natural resources.

In response to this challenge, ICF and the Government of Botswana co-hosted the first all-Africa workshop on cranes and their habitats, where participants began drafting action plans for conservation, and studied strategies for preserving cranes and wetlands. But our goals went beyond the technical—we wanted to help generate a new spirit of cooperation within and between nations—a spirit that could empower Africans to develop solutions for the problems facing Africa’s cranes.

As with African cranes that gather in large flocks before the nesting season, the gathering of human “birds of a feather” generates spirit. The enthusiasm was contagious when 100 crane, wetland and grassland specialists from 24 nations met for the African Crane and Wetlands Training Workshop. From Tunisia to the Cape, from Senegal to Ethiopia, delegates flocked to the Botswana Wildlife Training Institute (BWITI), where we lived together in dorms and tents from August 8-15.

Teaching and inspiring

The Workshop began with two days of intensive training sessions. First, Paul Mafabi from the Government of Uganda discussed how, with technical and financial support from the World Conservation Union (IUCN), new laws are helping to assure the wise use of Uganda’s wetlands so their natural functions are maintained. Next, colleagues from Zambia, led by Ben Kamweneshe, taught how the World Wide Fund for Nature (WWF)—Zambia Wetlands Project was organized for research and management. Local people have influence on management decisions, and also receive a portion of license fees collected from sport hunters, who are allowed to harvest a quota of game mammals. This provides an incentive for local people to conserve wildlife and wildlife habitat. Finally, a delegation of 14 Kenyans, organized by Cecilia Gichuki, shared the results of crane and wetland research supported by WWF. To help other Africans embark on more comprehensive studies, WWF project leader Nathan Gichuki explained crane research methods.

The final three days of the workshop were a feast of papers, posters, videos, flights over the Okavango Delta, and small group discussion sessions. Colleagues shared information on the status and ecology of African cranes and wetlands, on techniques for studying wetlands and managing captive cranes, and on education programs for the wise use of wetlands and grasslands.

The Okavango Delta

“The Jewel of the Kalahari” is the broad Okavango River that drains the highlands of Angola and Namibia onto the sands of northwest Botswana to form one of the biggest inland deltas in the world, the Okavango Delta. The lush delta provides a great diversity of habitats, including floodplains with reedbed, forest and scrub.
permanent lagoons, and Kalahari sands.

Midway through the workshop, we set down our notepads and climbed onto flatbed trucks for an all-day field trip. Peter Smith and Fred Ellery, both experts on the Okavango Delta, explained the natural processes that formed and maintain the Delta's flora and fauna.

The Delta abounds with both savanna and wetland species including lion, cheetah, leopard, elephant, buffalo, giraffe, hippo, crocodile, and Wattled Crane. The Okavango Delta, together with floodplain wetlands in Zambia and Mozambique, is a major breeding area for the endangered cranes that are found only in Africa.

The Okavango reaches its highest water levels in August, about four months after the rainy season in Angola. Just as the water begins to recede, there is little chance of new flooding, the Wattled Crane builds a platform nest and lays one or two eggs. At the same time, flocks of 20-80 non-breeding subadults congregate along the floodplains of the Boro River.

Our long and bumpy ride through the bush was rewarded by close observations of elephants, Ostriches, and Saddlebill Storks. At dusk, we splashed through the wetlands to watch the sun set over the roosting site of more than 60 Wattled Cranes. We hiked back to our vehicles in the dark to the sounds of waking hippos.

During the days that followed, early morning and late evening flights provided views of the Delta and its abundant wildlife. Delegates learned techniques for mapping and censusing cranes.

New working groups established

The six species of African cranes can be divided into five regional groups: (1) North Africa (migrant and resident Demoiselle Cranes and migrant Eurasian Cranes); (2) West Africa to Ethiopia (Black Crowned Cranes); (3) East Africa (Grey Crowned Cranes); (4) South-central Africa (Wattled Cranes and Grey Crowned Cranes); and (5) South Africa (Blue Cranes, Wattled Cranes and Grey Crowned Cranes).

Two new regional working groups emerged from the workshop, the North African and the South-central African groups, to supplement the three that had previously been established. During the last three days of the meeting, the five groups met to discuss regional challenges. Then, the delegation from each country met to draft a National Crane and Wetland Action Plan, a document they can bring home for further discussion, revision, and implementation.

Here are highlights from some of the National Plans. Colleagues from Morocco hope to find and protect resident Demoiselle Cranes. Tunisia may attempt to reintroduce Demoiselle Cranes and Nigeria may reintroduce Black Crowned Cranes, their national bird, using cranes produced in zoos.

Colleagues from Burkina Faso hope to embark on a massive public education program in the French-speaking African nations. The Sudanese and Ethiopians hope to begin their first national crane surveys.

Tanzanians hope to embark on surveys of large wetlands in the west near Zaire. South Africans hope to use satellite telemetry to study movements of Blue Cranes.

Colleagues from Namibia, Botswana, Zimbabwe, Zambia and Mozambique hope to monitor numbers and distributions of Wattled Cranes on major wetlands across the continent. These cranes may prove to be excellent indicators of the welfare of some of Africa's most important wetlands.

Grassroots conservation

Perhaps the most inspiring work in African wetland conservation comes from the organizing efforts of Maurice Wanjala in Kenya and Elna Kotze in South Africa. Maurice is a teacher in Crowned Crane country near Kitale in western Kenya. Elna and her husband, At, operate a bed and breakfast inn on the eastern highlands of Transvaal. Through commitment to conservation, contagious enthusiasm, and hard work, Maurice and Elna have each created citizens groups to work on local conservation issues ranging from soil conservation to crane protection. Without support from outside conservation organizations, they operate on shoestring budgets, but their results are impressive. Elna summed up her formula in these rules:

1. If you do not know where to start, start anywhere; just start.
2. Be prepared to learn. Ask questions, read, and enlist help. People are more than willing to assist.
3. Keep a broad view, because wetland conservation is often also catchment conservation and/or grassland conservation.
4. Do not despair, because it will often seem as if things are in a greater mess than when you started.
5. Expect to have opposition, enmity, and setbacks. See them as challenges and respond positively.
6. Do not neglect public relations, communications, and consultations, because involvement of the local community is vital.
7. Financial setbacks are to be expected. Be enterprising and scale down, if necessary.

Keeping the spirit

On the last evening, we all gathered in the lecture hall, while outside the calls of hippos and Scops Owls broke the stillness. It had been a time of excitement and joy to “flock” together that week in Maun, but now it was sad to part. Through each successive day of shared discussions, meals, and campfires, colleagues from across Africa had drawn closer as bonds of respect and friendship were formed. Now, at this last gathering, resolutions from Sudan, Mozambique, Nigeria, Zimbabwe, and South Africa were presented and discussed. Maurice sang a song about wetlands. Peter Micheni read a poem he had written about the workshop.

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The Blue Crane, South Africa's national bird, has declined precipitously throughout much of its grassland habitat. Causes of the decline are conversion of grassland to forest plantations, and poisoning of cranes by farmers.
A Peace Park and Nature Reserve for Korea’s DMZ?

by Fran Kaliher, ICF Research Associate

While much of the decline of threatened and endangered species in this century has been due to habitat destruction, one natural area only 20 miles from a capital city has stood uniquely undisturbed for the last 40 years. Barely knowing any human intrusion, this 372 square mile area is the winter home for populations of two of the world’s most endangered species of cranes, the Red-crowned and the White-naped. Yet it has become a de facto wildlife reserve because of a human tragedy which only the most misanthropic wildlife lover would seek to perpetuate for the sake of cranes.

The Demilitarized Zone (DMZ) separating North and South Korea since the cease-fire of 1953 is a 2.5 mile wide band of mostly mountainous terrain spanning the peninsula for 149 miles. Fences run the length of its north and south boundaries, as well as along the Military Demarcation Line (MDL) through its middle, the actual north-south border. Adjacent to the DMZ in South Korea is a Civilian Control Zone (CCZ), another 2.5-3 miles wide, in which agricultural activity is strictly supervised. There is virtually no civilian activity in the CCZ during winter except within its few villages, where security is extremely tight.

This physical division prevents any contact between north and south Korean civilians. But it also provides a rare and safe winter haven for cranes once widespread across the peninsula. Waste grain in the fields of the CCZ, together with secluded streams and rivers within the DMZ for roosting, constitute an ideal wintering environment.

My mission for the past two winters has been to seek out the specific areas still being used by cranes in Korea and determine what sort of habitat the birds are using, how much disturbance they are presently tolerating and what threatens the long-term usefulness of the sites for crane wintering. The ultimate objective of my work has been to anticipate what political reunification of the two Koreas, widely considered inevitable, will mean for the future of the DMZ and CCZ as a wildlife preserve. With sufficient understanding of the present situation, plans can be made to protect critical habitat areas after reunification makes the present secure status of the DMZ unnecessary.

Surveys reveal larger populations

This past winter I spent 5½ months making intensive surveys in the DMZ and CCZ. The field work both confirmed the suspected sites of crane use and, happily, brought the known populations of both species in Korea and revealing previously unknown wintering areas. I formed ideas of where to start this year’s searches from four sources: historical information, pioneering research by George Archibald in the 1970’s, annual but necessarily limited surveys by Dr. Won Pyong-oh of Kyunghee University’s Institute of Ornithology and his students, and my own reconnaissance work done the previous winter. This reconnaissance was done in collaboration with Curt Halvorson, a retired U.S. Fish and Wildlife Service research biologist and Korean War veteran. An invaluable asset this year was the assistance of one of Dr. Won’s graduate students, Mr. Pae Song-hwan. As the season progressed I was able to follow up on tips from local amateur birdwatchers and sightings by soldiers.

But the restrictions required in a militarily sensitive zone caused constant frustration in following up on these leads. Conditions became even more strained at the height of the spring migration season, when North Korea suddenly withdrew from the Nuclear Nonproliferation Treaty and warned its citizens of impending war. From that point on we were denied access to the Panmunjom area entirely. Even when granted permission to survey in the CCZ, the hours of general civilian access do not usually include the active periods of dawn and dusk when cranes might be observed leaving and returning to roosts. These extreme restrictions explain why there had not yet been a comprehensive census of cranes in or near the DMZ.

However, our persistence over the entire season and a gradual building of trust ultimately overcame many of the obstacles, and allowed for the first comprehensive census of the wintering cranes in South Korea. Eventually, we concluded that “roost counts” are the most accurate census method. This method included direct observation of cranes roosting in CCZ rice paddies, and counting others as they exited the DMZ river roosts we could not view directly.

Results showed there were 292 Red-crowned Cranes and 346 White-naped Cranes, all wintering in or near Korea’s DMZ. Another 2000 White-napped stopped over for several weeks during their migrations between Japan and northeastern China and Russia.

Protection is a priority

An exciting but sobering part of my work included visiting sites throughout the peninsula—sites to which White-naped Cranes bearing radio transmitters had been tracked by satellite during their migration from Japan (see pages 4-5). Korea’s increasing human population pressure and rural development are gradually eliminating habitat suitable even for brief stopovers by migrating cranes. This emphasizes the urgency of planning now to protect existing significant stopover sites: the Han River Estuary at the western end of the DMZ and the Choelewon Basin in the central DMZ. The Choelewon Basin is also the principal wintering site for the species in Korea.

continued on page 8
Tracking Cranes by Satellite in Eastern Asia

by Hiroyoshi Higuchi
Director, Research Center
Wild Bird Society of Japan

There are two areas in Japan that are well known for wintering cranes. One is Yashiro, in Yamaguchi Prefecture of western Honshu, the largest main island of Japan, and the second is Izumi. The Izumi Plain is a major wintering site for Hooded and White-naped Cranes located in southern Kyushu, Japan. Izumi is bordered on one side by the Yatsushiro Sea and on the other by low hills. The cranes feed in small flocks in the 6,000 acres of paddy fields scattered across the plain. In addition, a 126 acre area is used as an artificial feeding site for the cranes. The feeding site is off limits to people during the winter, and 3.7 acres within that area is used by the cranes as a communal roost.

A visitor center overlooking the feeding area treats visitors to a view of several thousand cranes under the morning sun, feeding on grain scattered by the rangers. Many family groups of cranes fly off to feed in the surrounding fields, so a total of 10,000 cranes can be seen in the area. Although the cranes are associated with Izumi in the minds of many Japanese, it is obvious that the cranes of Izumi belong in fact to much of East Asia, because of their migratory habits.

Migration mystery

Research over the years has shown that the cranes wintering in Izumi breed in both China and Russia. Recently, an interest in Asian crane migration routes has fostered many cooperative projects between organizations and people throughout the Asian region, as well as with the International Crane Foundation (ICF). The goals of the research have always been to identify the wetlands which are used by cranes during their migrations, during wintering, and during breeding, and therefore to identify those places that should be protected. Without these habitat areas, so crucial for resting and feeding, crane migrations would cease.

In addition to the years of extensive banding work done by the Yamashina Institute for Ornithology, in 1991 the Wild Bird Society of Japan (WBSJ) initiated satellite tracking studies to identify the crane migration routes. The idea was to use satellites to track cranes migrating north from Izumi, with transmitters attached as backpacks on the cranes. Satellite tracking is made possible by NOAA satellites, high-technology transmitters, and Service ARGOS, the company which administers the system. The transmitters broadcast radio signals at predetermined intervals, to save battery power. Two satellites in synchronous orbits receive the signals and relay them to ground stations, which again relay the information to Service ARGOS headquarters for analysis and determination of the transmitter's location. The locations and times for each bird are then sent to the scientists who have subscribed to Service ARGOS. With this method, we usually receive between one and four locations from the cranes each day, allowing us to follow their migration schedule and route with unprecedented clarity.

A harnessing challenge

The first transmitters we used, developed by Nippon Telegraph and Telephone Corporation (NTT), weighed about 2.8 ounces. In February of 1991, biologists from the WBSJ and Yamashina Institute for Ornithology attached transmitters to five White-naped Cranes at Izumi. Three of the transmitters were attached to the backs of the cranes using leather harnesses and Teflon tubing, while the other two were glued directly onto the crane's back. Each transmitter with its harness weighed about 2% of the crane's body weight. It is known that burdens of up to 4% do not hamper their daily movements and habits.

Unfortunately, harnessing was not totally successful, since the three transmitters harnessed with Teflon tubes fell off after a few days. The two cranes with glued transmitters migrated north, as far as the Demilitarized Zone (DMZ) along the border between PDR of Korea (North Korea) and the Republic of Korea (South Korea). After this location, the batteries of the transmitters either became exhausted, or the transmitters fell off and were covered by water or mud. Despite the loss of contact, the tracking was basically a success. Even just two cranes, tracked by satellite, could reveal both migration routes and important resting sites.

First look at entire route

In September of 1991, in cooperation with Japanese, Russian, and American biologists, transmitters were attached to one Hooded and two White-naped Cranes at Daurski Nature Reserve, close to the Russian-Mongolian border in southeastern Russia. The transmitters were identical to those mentioned above, but the harness had been improved. Now, they were attached to the cranes with Teflon ribbon, which is more flexible than the tubing used previously. As a result, one White-naped Crane was successfully tracked all the way to its wintering ground (the tracking of the other two was unsuccessful).

But the one successful tracking gave us our first look at the entire migration route, including resting sites and the length of stay at each place. On its way south, the bird stayed at the mouth of the Yellow River in China for about twenty days. Then he went south through the west of Nanjin (32.1° N, 116.8° E) to Poyang Lake, a well known wintering ground of Siberian and White-naped Cranes. This bird was tracked a distance of 1,439 miles, taking 65 days to reach Poyang Lake from Daurski. Fortunately, the battery life was about 110 days, so information about habitat use on the wintering ground was also gathered after his arrival at

Tracking migrating crayes by satellite is providing data that will allow us to protect critical habitat. In the spring of 1992, four White-naped Cranes (left) and two Hooded Cranes (right) were tracked all the way north from their wintering grounds in Japan to their breeding grounds in China and Russia.
that site. As a result of this first successful tracking of the entire route, we have identified several crucial sites that must be protected.

In February of 1992, smaller transmitters (1.6-1.9 ounces) produced by NTT were attached to six White-naped and four Hooded Cranes migrating north from Izumi. One transmitter with its Teflon ribbon harness weighed about 1% of a White-naped Crane's body weight, and 2% of a Hooded's. That year proved to be an unqualified success. Of the ten cranes marked, four White-naped and two Hooded Cranes were successfully tracked to their breeding grounds.

A big success

All four White-naped, consisting of two parent-and-yearling pairs, migrated through the Korean Peninsula to the Three Rivers Plain of northeast China. Crucial resting areas used were Panmunjom and Cheolwon of the Korean DMZ, the Kumya area wetlands along the east coast of PDR Korea, and the Khanka Lake area of Russia. The accumulated tracking distances during the 17 to 42 days of the White-naped's migration were 1,261 miles, 1,131 miles, 1,603 miles, and 1,423 miles.

The White-naped Cranes with radios visited many areas during their migrations; we evaluated the importance of those sites by the length of stay and the number of cranes that visited each. Rest sites were often used for just one day, representing an overnight stop. But some were used for ten days or more, indicating that these may be very important for cranes. For instance, five White-naped Cranes visited either Panmunjom and/or Cheolwon of the DMZ (not all were successfully tracked beyond the DMZ), and some stayed for quite long periods, ranging from 4 to 24 days. Another site, Kumya, in PDR Korea, is likely to be a crucial site for cranes because it was visited by three of the four successfully tracked White-naped in spring 1992, and their visits lasted 11, 11, and 3-4 days each.

The satellites provide such detailed information that, in the two families of White-naped Cranes, it was possible to follow the breakup process between parents and young.

The two Hooded Cranes tracked that year migrated up the Korean Peninsula and through the Three Rivers Plain, up into southeast Russia, around Tyrma (49.9°N, 132.8°E) and Imeni Poliny Osgipenko (53.6°N, 135.9°E). During their 32 and 38 days of migration, they visited crucial wetland resting areas along the west coast of the Korean Peninsula, and on the Three Rivers Plain. They had traveled even further than the White-naped, having flown 1,968 miles and 2,362 miles.

Subsequent tracking efforts in the autumn of 1992 from south-central Russia, and in the spring of 1993 from Izumi have proven to be just as valuable as those first successful efforts. Our understanding of needs for crane conservation is growing with each migration.

It was significant to discover that certain border regions, the DMZ in particular, are crucial for the migrating birds. It has been impossible for people to enter or develop such borders and their neighboring areas due to political tensions. As a consequence, borders like the DMZ are now acting as unofficial nature reserves for migrants. The importance of these areas for wildlife is probably increasing, since many of the surrounding areas are being heavily developed.

Satellites reveal habitat detail

Satellites are helping crane conservation in other ways besides tracking. Satellite images are being used to study habitat characteristics of the crucial resting, breeding and wintering grounds revealed by our tracking studies. 'Photographs' from Landsat satellites can show us the pattern of vegetation and moisture on the ground. Habitat surveys are conducted in cooperation with scientists in each country, to define precisely the habitat types seen on the Landsat images. The locations received from the cranes can be superimposed with pinpoint accuracy on the Landsat images. This leads to an excellent picture of wetland use by cranes, providing real information for effective conservation plans.

Furthermore, monitoring of those habitats is possible through subsequent satellite images because development projects and wetland draining are clearly visible on satellite pictures.

Information provided by our satellite tracking and Landsat studies is helping Chinese conservationists, who are seeking expansion of an existing nature reserve at the mouth of the Yellow River. Also, the ministry which oversees the Dauri Nature Reserve in Russia will consider satellite location data as they plan protected areas for cranes around that important breeding area in southeast Russia. Scientists in PDR Korea are considering establishing nature reserves for migratory cranes, based on our satellite tracking data.

The conservation of cranes in Asia has a bright future, but there are still major threats. The Izumi wintering ground is so overcrowded that disease could spread through the dense flock, and the Poyang Lake wintering ground may be seriously impacted by the Three Gorges Dam project. In the face of these and other problems, the satellite tracking of crane migrations has been a significant step forward in protecting the beautiful cranes of East Asia, which are, of course, the heritage of all humanity.

The satellite work was generously supported by the Yomiuri Shimbun Newspaper Company and NEC Corporation, and performed in cooperation with the Yamashina Institute for Ornithology, NTT, and other organizations. I would also like to thank the following colleagues for their help with satellite tracking, both in the field and the laboratory: Kiyotaki Ozaki, Go Fujita, Masaki Soma, Noboru Kanmuri, Nagahisa Mita, Sueharu Matano, Shigemoto Komeda, Mutsuyaui Ueta, Jason Minton, Takao Baba, Masafumi Takeshita, K. Golovuskin, Oleg Goroshko, Vladimir Krever, V. Ilyashenko, Vladimir Andronov, Sergei Smirenki, George Archibald, Jim Harris, Steven Landried, David Ellis, and many others.
Platte River Field Trip

From the best blinds on the river, ICF’s group of fourteen participants will witness thousands of cranes exploding from their roosts at dawn, returning in endless streams at dusk. Visits to bridges will permit different views of these spectacular scenes. Trip leader Jim Rogers, a veteran of four spring field trips to the Platte, has prepared orientation materials that will facilitate superlative daytime crane and waterfowl watching, to fill the hours between the spectacles at dawn and dusk.

In recent years, growing weekend crowds have gathered by the Platte River in Nebraska to view the hundreds of thousands of Sandhill Cranes that migrate through each spring. To preserve the quality of experience which our participants desire by avoiding the weekend crowds, the 1994 Platte River trip has been scheduled for weekdays—Monday, March 21st through Thursday, March 24th—and it has been extended by one day to allow more birding time.

A fee of $300 per person ($360 for single occupancy), in part tax deductible, will cover your motel in Kearney for three nights, breakfasts, blind reservations, orientation materials and a contribution to ICF. Transportation is not included, nor are lunches and dinners. For more information, or to reserve your place with a $50 non-refundable deposit, contact David Thompson at ICF.

Vietnam Work Trip

ICF’s Gordon Dietzman is leading a follow-up expedition to the Tram Chim Reserve in the Mekong Delta of Vietnam. Volunteers are needed to help with field testing environmental education materials for Vietnamese schools, to assist with exchanges of art work between US and Vietnamese schools, and to help improve other education programs at the reserve headquarters. Dates are the first three weeks in March of 1994. Costs are tax deductible: $3,000, including air fare from Madison, Wisconsin, and time in Bangkok and Ho Chi Minh City. Work will not be strenuous, but volunteers need to be in reasonably good health.

A Birthday for Cranes

Last October, ICF received the following letter, with a check enclosed:

“Dear Sirs:

Last week I had my sixth birthday, and instead of presents, I asked everyone to make a donation to the International Crane Foundation. We collected $160 for you.

Your friend,
Brendan Sullivan”

Thank you, Brendan! We decided that any child who makes a significant birthday donation like this will receive a special certificate, a crane poster, an ICF membership, and subscription to The ICF Bugle. Write Gordon Dietzman at ICF.
ICF's Bird-a-Thon

by Bob Hallam
Development Coordinator

Last spring's fifth annual Bird-a-Thon raised a record of over $20,300 for the Ron Sauer Conservation Fund and for ICF operations. Income from the Sauer Fund supports the Ron Sauer Memorial Library for Bird Conservation. Over the past five years, the Bird-a-Thon has raised a total of over $83,000. We wish to thank all who participated this year.

First place for funds raised went to Judith Bautch, followed by Brian Joiner, second, and Steve Brick, third. All three received a signed and framed limited edition print by Rockne Knuth entitled "Summer Glade—Bobolinks."

The other top-scoring teams were Michael Putnam (4th), Michael John Jaeger (5th), Warren Exo (6th), Cathryn Steuer (7th), Viola White (8th), Sue Steinmann (9th), and Al Schmidt (10th). Each team received a signed, limited print by Owen Gromme entitled "Shoreline Snowy Owl." All who counted birds and raised money also received a print by Owen Gromme entitled "A Long Courtship—Wild Turkeys."

Once again we wish to thank ICF Trustee Mark Lefebvre and Stanton & Lee of Madison, Wisconsin, for donating all of the prizes.

Special Gift Envelope

Over the past several years, the "special gift" envelope has allowed each member to donate to a particular ICF program of his or her personal interest. Your donation allowed ICF's staff greater flexibility in meeting unforeseen opportunities in 1993. Your support has been invaluable for maintaining the quality of our programs here in Baraboo.

Last year's contributions to Field Ecology supported the production of an environmental educational video which will be used at Tram Chim Nature Reserve in Vietnam. Education used last year's gifts to provide slide duplicates and other educational materials to our foreign colleagues for use in educating the public around reserves in their home country. Gifts to Aviculture were used for hiring additional help to free up skilled aviculturists to care for a bumper crop of endangered cranes.

The staff wish to thank all our members for their continued support, and we hope you will renew your "special gift to the cranes."

Contributions

Received July through September, 1993

Lufthansa
ICF's Official Airline

Grants and Awards: Abigail Avery; Baraboo Sysco Food; Mr. & Mrs. Judson Bemis; Stephen Bouffard; Katharine Bradley; Robert Brumner; Linda Bullett; Mr. & Mrs. Jackson Burke; John Canfield; Henry Chandler; Catherine Cleary; Compton Foundation; Joseph & Barbara Connolly; Consolidated Papers Foundation; Robert & Verene Crane; Paul Holzman & Barbara Crass; Mr. & Mrs. James Cubbage; Mrs. Lee Gillespie; Day; John & Judy Day; Della Wood Foundation; Geraldine R. Dodge Foundation, Inc.; Mrs. Gaylord Donnelley; Bill & Jo Anne Doppelsadt; Noel Lee Dunn; Emily Earley; B.F. Edwards; Estate of Charles Nelson; Estate of Hazel McGarry; Robert Frank; Herbert Fritz; Nina Grieswald; Evan & Marion Heffer Foundation; Elizabeth Helmpol; Paul Hickie; Luc Hofman; Harold Holt; David & Anna Marie Huset; Institute of Museum Services; Ken & Marylee Jacobs; Patricia Ann Jafray; Reinhardt Jahn; Robert Keedy; Alan & Ruth Keit; Josephine Kixmiller; Raymond Lai; Alison & Keith Martin; Peter & Maria Matthiessen; Chauncey & Marion Deering McCormick Foundation; Hugo Melvoin; Dr. Josephine Murray; James Nelson; William & Eleanor Piel; Pueflcher Foundation; George Ranney, Sr.; Will Ross Memorial Foundation; H. Jean Rowley; Norm Sauer; Sr.; Don Sauer; Diane Seymour; Agee Shelton; Joan D. Sierakowski; Mrs. John C. Stedman; Sullivan Associates; The Milwaukee Foundation - Kopmeier Family Fund; Dr. James Tibbetts; Stuart & Ann Tisdale; Sally Tongren; Geoffrey & Elizabeth Towell; Robert Tracy; U.S. Fish & Wildlife Service; U.S. Dept. of State-UCN; Emil Urban; Margaret Van Altsteyn; Weeden Foundation; Mrs. William Wessinger; Mary Wickham; Dr. Margaret Winston; World Wildlife Fund-US; Robert & Sandra Zdrow.

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Donations Help Dress Up ICF

by Rob Nelson, Program Assistant

Landscaping with native flowers and grasses is taking root at ICF. Through the generous donation of plants and labor by Muffy Barrett and Scott Weber of Bluestem Farm, Baraboo, a prairie and savanna garden now graces our visitor entrance. Likewise, Prairie Nursery of Westfield, Wisconsin, has donated native landscaping services around the Gladys and Gerald Scott International Guest house.

Though most of the species in the plantings may require several years to reach maturity and bloom, they will need almost no maintenance. As a bonus, they will attract and support a high diversity of bird and insect life.
Korea's DMZ  
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At Choelwon, several factors appear promising for future protection of important crane habitat. First of all, the status quo is perfect: (1) an abundance of open rice paddies free of greenhouses and providing waste grain in a disturbance-free environment; (2) numerous springs and streams open all winter for finding food; and (3) rivers and reservoirs for safe roosting. In addition, a small but devoted group of local people are concerned with the cranes' welfare. These people already engage in some public education and a winter feeding program.

Reunification is bound to bring pressure for development in these areas, which are presently lagging behind the rest of the country economically because of their vulnerable locations. But both the Han River Estuary and Choelwon Basin offer great potential for a special kind of development that conservation interests hope to promote: ecotourism. The army lookouts and guard posts are ready-made blinds for wildlife observation, where the birds can be used to human activity. Cranes in the estuary feed less than a hundred yards from a fence along the water's edge where soldiers are on duty around the clock. There is one small army camp at Choelwon where cranes feed in rice paddies within a few hundred yards, all day, all winter. The camp could easily be converted to an interpretive center, with no added disturbance to the birds. Continued rice propagation would not only be permissible but is a necessary component of the ecotourism plan.

The historical significance of the DMZ would provide additional attractions for visitors, because pivotal battles of the Korean War were fought in the same valleys now populated by cranes.

Ironically, the lowlands of the Demilitarized Zone (DMZ) provide the last major sanctuary for wild cranes in South Korea. From October through March, flocks of these majestic birds can be observed at close range as they feed within the buffer zone established on the southern side of the DMZ.

Story of a steadfast crane

One of the most memorable experiences of my winter's research was hearing the story of a Red-crowned Crane that was recuperating in the care of the president of the Korea Bird Preservation Society after having been rescued from Choelwon's Civilian Control Zone. A soldier had discovered the bird nearly dead from exhaustion, steadfastly guarding the remains of its long-dead mate so single-mindedly that it had neglected to care for its own welfare. It collapsed upon the approach of its rescuers.

Red-crowned Cranes have been venerated by East Asian cultures from time immemorial as symbols of fidelity, and this crane's dedication was dramatic evidence of that fidelity. Good fortune and longevity are also associated with the Red-crowned Crane. This individual had the good fortune to be rescued, nursed back to health and released several weeks later to return to life in the wild. We can only hope that as species, the Red-crowned and White-naped Cranes achieve longevity rather than extinction and that they will bring good fortune both to themselves and to the Korean people, allowing all to coexist and thrive in a reunified Korea.

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