

# THE BROLGA BUGLE

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## THE SIBERIANS AND MRS. GANDHI

by Scott Freeman,  
Education Coordinator

For decades, the migrating flocks of Siberian Cranes have been buffeted by political turmoil, harried by destruction of wetland resting areas, and thinned by poacher's rifles. Their numbers have plummeted steadily, until last winter only 150 individuals remained in the wild. But now good news from India has raised hopes for 1982 becoming a turning point in the survival of the Siberian Crane — "the lily of birds."

A key question in the Siberian's future has been the security of the tiny flock which migrates through Afghanistan and winters in India. On November 12, 1981, the first family from this flock flew into India's Keoladeo Ghana National Park in Bharatpur. Week by week the flock's numbers increased, and now a total of 38 Siberians are wintering on the sanctuary's wetlands — an increase of five over last year!

Perhaps as important as the increase in the flocks' numbers, the Siberian's winter refuge in India seems more secure than ever. Last year the Government of India declared the Bharatpur refuge a National Park, and now private citizens, led by a dynamic conservationist named Harsh Vardhan, are campaigning for the government to control illegal cattle grazing and firewood gathering — persistent threats to all of the wildlife in the sanctuary.

The campaign may just prove successful, as the Siberians have gained the attention and sympathy of India's highest officials. Jeffrey R. Short, Jr., member of the ICF's Board of Directors and President of the

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A family of Siberian Cranes flying over India's Keoladeo Ghana National Park.

photo by Steve Landfried



A wild-caught Demoiselle Crane, now residing in a Pakistani rose garden.

photo by Steve Landfried

## CRANE HUNTERS IN PAKISTAN

by Steve Landfried, ICF Researcher

A tinge of excitement raced through me as the Lufthansa flight from Frankfurt approached the twinkling lights of Karachi, Pakistan. The jolt of the touchdown immediately brought to mind two questions that had been nagging me for over two years. Do Siberian Cranes stop in Pakistan during their biannual migration between the Soviet Union and India? If so, are Siberian Cranes subject to the hunting pressures which are depleting wild populations of Demoiselle and Common Cranes migrating through Pakistan?

Tom Roberts, one of Pakistan's leading conservationists, was waiting for me outside of the customs office. His important but little known article "Crane Catchers of the Kurram Valley" suggested that the trapping of migrating cranes in Pakistan might warrant serious attention from ICF and other conservation groups. His faithful correspondence had also provided the encouragement and information I needed to investigate the crane situation in Pakistan.

My first stop was the provincial wildlife office, where I met Mr. Khan Mohammed Khan, Deputy Conservator of Forests and Administrator of the Sind Wildlife Management Board. During my brief visit there, I heard a retired military general tell a lively story about his experiences catching cranes near the Afghan border with a group of "fanatical hunters."

Later, while in Peshawar, a breakthrough occurred during a meeting with one of these "fanatical hunters." Brought to Peshawar at the request of Captain Usmani Isani, Chief Secretary of the N. W. Frontier Province, the crane hunter was an attractive brown-skinned man

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## ICF-J GOES TO PRESS

by George Archibald, Director

While a student at Cornell University from 1968-1970, one of my best friends was Kenizhi Goto, now a professor of political science in Tokyo. I met Kenizhi again in 1972 during my studies of cranes in Japan and his mother, Yumi Goto — then an official at the U.S. Embassy in Japan — became a great friend to me and helper to the cranes. Subsequently, Yumi has been an artery between ICF and the Nipponese, and today she is a Director of our flourishing branch in Japan.

ICF began a paying membership in Japan in 1977, and Yumi sent Brolga Bugles (with a Japanese translation) to those who contributed 3,000 yen to the cause. Among other things, the funds which accrued helped to feed the Red-crowned Cranes in Hokkaido, Japan each winter, supported a few of my in-Japan flights, and in 1978 helped to build a fine concrete floor in the non-breeders barn at ICF.

As ICF-J's membership increased, Mrs. Goto needed help in administration. Consequently, conservationist and businessman Mr. Masanobu Yamaguchi became the Director-in-Chief of ICF-J in 1980, assisted by Mrs. Goto and three other new directors: businessman Yoshiuo Masuda, artist Matazo Kayama, and landscape artist Kichitaro Nagashima. In addition, a Board of Advisors was established which included former Minister of Culture Kengi Adachi, Japan's top zoo man Tadamichi Koga, philosopher and conservation author Godo Nakanishi, and one of earth's foremost ornithologists, Yoshimaro Yamashina.

The Boards of Directors and Advisors predominantly reside in Tokyo, where they gracefully manage the membership and the subtle but all-important political conservation activities. The grass-roots field programs are directed by Japan's foremost crane biologist, Professor Hiroyuki Masatomi, and conducted by a team of volunteer researchers: Kuni Momose, Yoshimitsu Shigeta, Kyoko Archibald, Kiyooki Ozaki, and Mamoru Mitzuki. All members of the scientific team, as well as Mrs. Goto and Mr. Yamaguchi, have spent extensive periods of time at ICF headquarters in Wisconsin, and thus are well-versed in ICF's grass-roots philosophy and programs.

As of the fall of 1981, ICF-J members not only received the English Brolga Bugle, but also a Japanese edition called Sarorunkamui which means "God of the marsh" a name the native Ainu gave to the Red-crowned Cranes of Hokkaido. Sarorunkamui includes special news pertinent to Japan, along with translations from the English volume. Mrs. Goto and Mr. Shigeta are to be congratulated on their excellence in the arduous task of editing, translating, and publishing.

ICF-J has also just completed an exceptionally successful field trip to crane wintering areas in Korea. There ICF-J members viewed White-naped and Red-crowned Cranes near the DMZ, and compared notes

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# At ICF: A Meeting of the Minds

by Michael Putnam,  
Supervisor of Aviculture

On the 24th of October, 1981 ICF held its first formal research meeting to discuss ways of improving our knowledge and management of captive cranes.

Several distinguished researchers from the University of Wisconsin-Madison attended: Drs. Milton Sunde and Bernard Wentworth and graduate student Ellen Wilson (Poultry Science Department), Dr. Tom Yuill and graduate students Betty Burgess and JoAnn Schuh (Veterinary Science Department), and Scott Melvin, a graduate student in Wildlife Ecology. Drs. Douglas Docherty and Lynn Siegfried, from the U.S. National Wildlife Health Laboratory in Madison, were present, along with ICF researchers Beth Baechler and Shirley Russman and the ICF aviculture staff. Although we've often contacted these scientists individually, and on an informal basis, this was the first time we had all met together. It was a unique chance to review our work with captive cranes, tackle problems, and plan a productive future.

The session began with reports from ICF's aviculture staff on the results of work already in progress. ICF researcher Shirley Russman discussed artificial insemination and the research she has just completed on crane sperm morphology. Rich Besser explained our incubation procedures, and Sue Rogers reviewed her analysis of the 1981 hatching data. The final presenta-

tion of the morning was by Lisa Hartman, who summarized the history of crane mortality at ICF. Each presentation was followed by discussion, involving our panel of advisors, of ways to improve our management and refine our experiments.

George Archibald then discussed this year's experiment of hand-raising crane chicks in visual isolation, which yielded two "wild" Stanley Cranes. He also discussed ideas on the role of imprinting in hand raising cranes for release into the wild. Dr. JoAnn Schuh completed the formal reports by explaining the research she has been conducting for the past year on the crane herpesvirus at ICF.

Since the virus' outbreak in 1978, cranes in an isolated flock have been swabbed regularly for testing to detect virus. Blood samples have also been taken each year, from all ICF birds, to determine levels of antibody for the virus. JoAnn is now working to develop a sensitive diagnostic test which will pinpoint the birds that harbor the virus. She is also investigating which individuals are carriers and shedders of the virus, how the virus is transmitted, and how the virus exists in its latent state. Despite her diligent efforts, though, many questions remain unanswered.

Following the reports, the group offered and discussed new research and management projects for us to undertake in the coming year. Since the meeting, we've already improved rodent control, and this spring we will slightly modify our artificial insemination schedule and apply improved incubator hygiene techniques.

New research we'll undertake this spring should also advance our artificial insemination (AI) program. To schedule AI, we need to know how long a female crane remains fertile after being inseminated. To find out, we will separate paired males and females for intervals between mating and egg laying, and will also examine the oviduct of one female to try and locate sperm-host glands where sperm might be stored. Sperm-host glands have been confirmed in some birds, but not in cranes.

We'll also be studying egg shell formation. It is generally believed that in most birds egg shell formation requires about 24 hours. But, we know from experience that a crane egg can be felt in the oviduct as much as 48 hours before it is laid. We hope to learn if crane eggs require more than 24 hours to form, and, if they don't, why are they retained.

We will also continue the research initiated by



Swabbing a Red-crowned Crane to test for herpesvirus.

photo by Kyoko Archibald

Shirley Russman, and prepare slides of crane semen for future morphological study.

Research in artificial incubation will also continue, for despite our improved techniques, some eggs still fail to hatch. In these cases the chicks usually fail to begin the hatching process at the end of incubation. In such emergency cases we'll try administering a hormone that appears to trigger the onset of hatching, and thus try to prod the chick into breaking out of the egg.

Once hatched, we know that in most cranes there is strong sibling aggression between young chicks. But in raising chicks at ICF, the staff and chick mamas have noticed that each species seems to have its own "personality." This spring we plan to conduct an experiment to measure the intensity of sibling aggression in each species.

Finally, research on the crane herpesvirus will continue. One new facet of this vital work has been the stationing of two "clean" birds, raised away from the isolated birds, within the isolated flock to act as sentinels for the virus. These birds are swabbed twice weekly and occasionally bled, in an attempt to determine how and when the virus is transmitted, and what time(s) of year herpesvirus is being shed.

Our research is critically important to ICF's future, and the future of the birds — we plan to make the research meeting an annual event. For when we know enough about managing cranes in captivity, we can begin to manage their move out of captivity and back into the wild.



Extracting a blood sample from a Whooping Crane.

photo by Kyoko Archibald

## THE INSIDE STORY

by Lisa Hartman, Aviculturist

Late in October, when people everywhere were designing Halloween costumes to mask their identity, ICF's crane chicks found themselves face to face with an instrument designed to reveal their identities — sexual, that is. The instrument, known as a laparoscope, employs fiberoptics to examine internal surfaces, much the same way an otoscope is used to examine the human ear. For the crane chicks, the laparoscopy meant examination of their sexual organs. In essence, we wanted to determine the sexes of the chicks, so that male-female pairs could be isolated to assist us in our captive propagation program.

Cranes, like many birds, are sexually monomorphic — male and female cranes are identical in appearance. Among adults of some species, contrasting unison call postures render the sexes distinguishable, but other species fail to exhibit such differences.

For young birds, these sexually-based behavioral differences will develop only as they gain maturity and come into breeding condition. As they approach this age they seek prospective mates, establish strong pair bonds, and become territorial and increasingly aggressive toward other cranes and intruders. In ICF's cap-



Lisa Hartman holds "Dushenka", a Siberian Crane chick, during the laparoscopy.

photo by Susan Freeman

tive situation, we must take care to eliminate sibling pair formation and interindividual aggression. So, by knowing the sexes of our chicks, we can isolate potential pairs early in the game and prevent injury to all of the birds.

Enter Dr. William Satterfield, D.V.M. and assistant Jodie Kaiser from the Franklin Park Zoo in Boston, Massachusetts. On a journey made possible by Stuart Avery (recently-elected ICF Board member), Dr. Satterfield and Ms. Kaiser flew out to ICF and performed a laparoscopy on 17 young cranes. The operation was quite simple, and took about 10 minutes per bird.

Each bird was held on a table with its left side facing upward, legs and neck outstretched. Dr. Satterfield then made a small puncture in the abdomen just below the last left rib, and inserted the lighted probe of the laparoscope. By peering through the eyepiece of the probe he could then look directly into the bird's abdominal cavity and search for the presence of the ovary or testicle.

The field of view provided by the viewing tip of the probe was only 2.2 mm (the size of a large hypodermic needle), thereby permitting a very close look at the surface detail of the sex organs. After Dr. Satterfield removed the probe and disinfected the minute incision, the bird was returned to its pen to resume its normal daily activities.

The procedure itself went very smoothly, and the only problem lay in the fact that, at this stage, we discovered that the chick's sex organs had not differentiated enough to be conclusively distinguished as ovaries or testes. However, Dr. Satterfield was able to make fairly positive diagnoses which will be helpful in our propagation endeavors. In the future, we'll wait to use the laparoscope until the chicks are a few months older.

# ICF Waters the Grassroots

by Konrad Liegel, Site Manager

Recently three prairie restoration projects have sprung up in south-central Wisconsin, like dormant prairie grasses after a spring burn. The joy of working with prairie wildflowers, and the need to restore native plant communities, has inspired a public agency and several private organizations to sponsor prairie restorations with the help of hundreds of local high school students, boy scouts, 4-H members, and adults. ICF's Ecosystem Restoration Program has also been involved, helping the projects germinate by supplying technical assistance and donating seed.

Historically, one of the largest prairies in Wisconsin was located approximately 15 miles south of ICF and the present town of Baraboo. Underlain by very fertile soil, the famous Sauk Prairie was plowed under soon after settlement by Europeans. Small remnants of the Sauk Prairie, between the road and fence line, were later destroyed when the modern highway was completed. Reflecting upon the destruction of one of the last relics of the Sauk Prairie in the 1940's - a few square feet of compassplant in a pioneer cemetery - the naturalist Aldo Leopold wrote: "This is one little episode in the funeral of the native flora, which in turn is one episode in the funeral of the floras of the world."

But Dave Fordham, Commander's Representative for the U.S. Army-owned Badger Ordinance Plant, refused to accept a prairie eulogy. Dave realized the potential aesthetic and educational value of a 16-acre hayfield along a major highway through the former Sauk Prairie. He urged the government to set aside the land for prairie restoration, and several years ago his request was granted.

This fall, over 100 students and adults joined ICF in weekly seed collections for the project. The collecting expeditions were a great success, thanks to the inspired leadership of the Sauk County Natural Beauty Council and the invaluable cooperation of Badger Ordinance, Baraboo High School biology teachers Helen Simon and Mike Widner, and several local Boy Scout and 4-H groups. ICF also wrote and distributed a slide presentation about prairies, and prepared the species list and planting design for the project. Come spring, local citizens will plant three acres of prairie.

Meanwhile, another prairie restoration was taking root in the heart of Wisconsin's Sandhill Crane nesting range. In 1980, Wisconsin's Department of Natural Resources (DNR) purchased the New Chester Waterfowl Production Area near Oxford, Wisconsin. The single purpose for the DNR's purchase was to increase waterfowl production through wetland protection and waterfowl nesting cover plantings. A pair of Sandhill Cranes nest on the preserve's 55 acres of wetland, and 175 acres have potential for dense nesting cover establishment.

DNR Wildlife Manager Jim Keir contacted ICF last spring about the possibility of re-establishing 12 acres of prairie within the area. Located near a "probable" Indian burial mound, the restored prairie would add to the diversity of the property, and serve as an educational opportunity for local schools and groups. ICF staff helped Jim by locating seed collecting areas, identifying the different prairie species, and demonstrating methods for collecting and processing the prairie seed. Joined by the Adams County Historical Society, local school groups, a 4-H group, and concerned citizens, Jim Keir collected enough seed last fall for a four-acre prairie planting this spring.

"On this sand farm in Wisconsin, first worn out and then abandoned by our bigger and better society, we try to re-build with shovel and axe, what we are losing elsewhere" wrote Aldo Leopold in the 1940's. It is most fitting that a prairie was planted this fall on a worn-out cornfield near Leopold's "Shack" and farm - now part of the privately-owned and cooperatively-managed Aldo Leopold Memorial Reserve. ICF interns Eric Espe and Kent Taylor joined Leopold Reserve staff in collecting and preparing seeds, designing the landscape plan, and doing the actual planting for the new prairie.

As ICF's Ecosystem Restoration Program learns more about the art and science of restoring habitats, it is natural that we help other interested individuals

and organizations start their own projects. Our work is to sow seeds - prairie seeds on the rolling hills of ICF's new property, and the seeds of knowledge and enthusiasm in the hearts and minds of conservation-minded people.



ICF is putting seeds and expertise in the hands of prairie restorationists all over Wisconsin.

photo by Kyoko Archibald

## PRODIGAL CRANES

by Sue Rogers, Aviculturist

In 1981, birds from ICF were breeding not only in Wisconsin, but also in Virginia. Two male White-naped Cranes from ICF, named Imjim and Tae-song, fertilized and helped to successfully hatch and rear their first offspring at the National Zoo's Conservation and Research Center in Front Royal, Virginia. The three year-old White-naped, siblings from ICF's Butch and Bette, were sent to the Front Royal Conservation Center in December of 1980.

The selling or loaning of cranes to other institutions is a standard procedure for captive propagation programs. In fact, 76 out of ICF's 116 adult cranes (potential breeders) are on breeding loan from other institutions. These breeding loans establish the ownership of successfully fledged chicks from parents loaned to ICF. The first chick to fledge goes to the owner of the female parent, the second chick to fledge is given to the owners of the male parent, and ICF owns the third chick.

For example, during the 1980 breeding season we hatched a young Stanley Crane, which we called Zulu, from Killer and Priscilla. Because Zulu's mother (Priscilla) is on loan to us from the National Zoo, Zulu was shipped out to the Front Royal center, along with Imjim and Tae-song, in December of 1980. We've now heard from the National Zoo that, at one and a half years of age, Zulu has pair bonded! It's now possible that in another year or two Zulu and her new mate will begin breeding.

Last year we also loaned two newly fledged Red-crowned Cranes, Kyoko and Isao, to the National Zoo. Unfortunately, Kyoko died shortly after his arrival, but Isao is reportedly doing well.

Captive propagation is a cooperative effort, with benefits for all. Cooperation in captive breeding does two important things: 1) it leads to increased distribution and exhibition of captive cranes, and thereby increasing the number of people exposed to cranes and conservation, and 2) it increased the number of institutions involved in research and breeding of cranes, and therefore helps preserve the genetic diversity of the species involved.

Our best wishes go to the National Zoo for the continued success of their breeding programs, and our congratulations to Imjim, Tae-song, and Zulu!

## PIPPOLA

by Alice D'Alessio,  
Development Coordinator

We're happy to announce the birth of an Italian crane chick in which we take particular interest. Italian? An Italian Crane? Well, in truth she's an Indian Sarus, and in truth the story goes like this . . .

In June, Signor Franco Monaci, who raises rare and exotic birds on his estate in Pisa, Italy, contacted us for help. It seems he has a pair of Sarus Cranes - the only ones in Italy. Each summer the birds faithfully produced eggs which hatched, but the chicks developed leg problems and died. Could we offer some advice? What was going wrong?

Our seasoned staff deduced the problem to be one of diet, and put together a packet of reprints for Signor Monaci - instructions on hatching and rearing cranes that are simply not available most places in the world. A lively exchange of correspondence resulted that proved a challenge, since the Signor writes in Italian! But he got the message. He was feeding the babies too much protein, resulting in overweight bodies and deformed legs.

At last the happy news. In October he sent us word of the birth of Pippola - "she is truly beautiful, and has already reached 60 centimetres." He also sent along a photograph, like a proud papa, for us to print in the *Brolga Bugle*. His suggested caption, when translated into English, reads as follows: "Pippola, little female Sarus Crane, born in Pisa, Italy, with the assistance of Signor Franco Monaci during the month of July, 1981, and following the instructions of ICF. Grateful thanks to Signor Putnam (ICF head aviculturist) for his learned experience, and to Signora D'Alessio for her courteous interest."

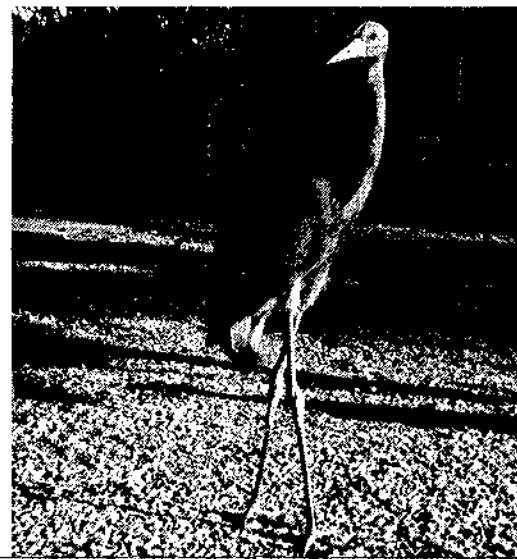


photo by Franco Monaci

The Siberians and Mrs. Gandhi

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Chicago Academy of Sciences, wrote to Prime Minister Indira Gandhi to express his concern for the Sanctuary's future. Mrs. Gandhi responded: "I have been taking a personal interest in its (Keoladeo National Park's) problems. There are human pressures on all our wildlife sanctuaries. At the same time there is also the beginning of an awareness of the importance of conservation among some of our younger administrators. We are trying to ensure that cattle-grazing and fuelwood gathering do not disturb Bharatpur's tranquility."

As Mrs. Gandhi's sentiments come to be shared by the officials and villagers surrounding the sanctuary, the refuge may indeed become the island of tranquility that it was meant to be. ICF is working toward that end, and is acting on the Prime Minister's conviction that "All countries must cooperate to preserve the Siberian Crane." ICF's George Archibald is now overseas, learning the fate of the Siberian Crane flocks in Iran and China, and encouraging continued cooperation between those countries, India, and the USSR in the effort to preserve this endangered "lily."



Crane Research  
Around the World

## CRAW Arrives

The word is out! The eagerly awaited volume *Crane Research Around the World* (affectionately known as **CRAW**) is off the presses, and available for all comers. The book contains the proceedings of the 1980 International Crane Symposium at Sapporo, Japan, in addition to papers from the International Council for Bird Preservation (ICBP) World Working Group on Cranes.

**CRAW** promises to be the craneologist's bible for years to come. The book contains detailed articles on thirteen of the crane species in virtually every geography, includes range maps for all the crane species, boasts 55 photographs, and totals 253 pages. It is a timely, and immensely valuable book for anyone seriously interested in the biology and conservation of cranes.

The volume is the product of years of effort. From the initial idea and work of George Archibald and Dr. Marie Rowlands Oesting, the torch was passed to the very capable desks of James C. Lewis and Dr. Hiroyuki Masatomi. Mr. Lewis and Dr. Masatomi did a superb job of editing and compiling the work, and are to be congratulated on their effort. The publication was funded by grants from the Mary Livingston Griggs and Mary Griggs Burke Foundation, and ICBP.

**CRAW** will provide a much-needed update on crane research activities on every continent. In addition, the book should inspire a new dedication to the field research which is so essential to conservation globally.

Anyone interested can obtain a copy of **CRAW** by sending \$15.00 plus postage to ICF on City View Road in Baraboo, Wisconsin 53913, U.S.A. Be sure to add \$2.00 for postage within the U.S., and \$4.00 for postage outside of the U.S. Only 350 copies have been printed, so be sure to get your order in now!

### ICF-J Goes to Press

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on crane conservation projects with their Korean colleagues.

Conservation problems for cranes are mounting in Japan. The finite acres of wetlands in which Red-crowned Cranes nest in Hokkaido decrease annually, as drainage and development continue. The miles of crane-killing high tension wires are also increasing as Japan's last northern frontier opens to development.

In southern Japan, where the White-naped and Hooded Cranes winter, the problems are no less imposing. The flocks have increased to almost 1,000 White-naped and 4,000 Hooded Cranes, but the majority of the cranes are congregated on several hectares of rice paddy where they are fed grains and fish throughout the winter. The artificial, and excessive, concentration of birds could trigger the outbreak of a virulent disease.

ICF-J, in company with other conservation organizations in Japan, has its work cut out. But a growing membership, and ICF-J's professional-level administration and research, will help the cranes fly away from decline to survival, on an archipelago that is home to 120 million human beings.

A deep bow to ICF-J, from ICF headquarters in Baraboo.

### Crane Hunters in Pakistan

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in his early forties. With the Chief Secretary serving as interpreter, I interviewed the man for nearly two hours.

A key element to success in catching cranes, he said, is having a vocal "decoy" pair whose incessant calls will attract migrating cranes. Under the cover of midnight darkness, the men then throw weighted sixty foot strings high in the air to snag the unsuspecting cranes as they approach for landing. Using this technique, the one hundred groups of crane hunters are each able to catch 15-20 birds. He confirmed that the Common and Demoiselle Cranes are caught in approximately equal numbers. Virtually all of the Common Cranes end up in the pot. The Demoiselle Cranes are kept or sold as pets, and have been known to reproduce in captivity after nine or ten years.

And what about Siberian Cranes?

After the man was able to describe *Grus leucogeranus* on his own, I became convinced that he had seen Siberian Cranes on previous occasions. Photographs of Siberian Cranes brought a smile of recognition, and considerable information.

As recently as last year, the man saw several Siberian Cranes flying over Bannu. In 1979, he observed five of what he called "the rare white crane" on the ground near the village of Tank. A friend of his caught three of them in a single day in 1961, and ate them all. He himself had caught one in 1964. In response to my inquiry about what happened to the bird, he matter-of-factly said: "We kept it for a few days, and then we ate it up."

These insights were the topic of lengthy discussions the next day when I met in Lahore with Pakistan's most famous conservationist, W. A. Kermani, and later with the Board of Directors of the World Wildlife Fund - Pakistan. Although none of us saw anything easy about developing a conservation plan in a tribal area not unlike that of America's Wild West, there was feeling that something could be done. It is my hope that the International Council for Bird Preservation and ICF will soon work with conservationists in Pakistan to reduce short-term threats to Siberian Cranes as well as long-term threats to Demoiselle and Common Cranes. As for me, I would certainly like to take my friend from Bannu up on his invitation to join the hunting parties next spring - as long as they let any captured Siberians fly free.

### The Siberians and Mrs. Gandhi

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#### Siberians in India: Recent History

Date	Adults	Chicks	Total
1960-61	?	?	90
1971-72	?	?	72
1974-75	60	4?	64
1976-77	51	6	57
1979-80	30	3	33
1980-81	29	4	33
1981-82	32	6	38

## The Bottom Line

by Alice D'Alessio,  
Development Coordinator

It's a happy New Year when you can welcome a flock of new friends. The first results from our membership drive are causing a chorus of chirps and chortles at ICF. Our little tan brochure and letter brought an enthusiastic response. We're pleased to report over 200 new members, and more than \$5,600 in membership contributions! Our grateful thanks once again to all those who helped us with the drive - to the M & I Bank Foundation for getting us airborne, Bill Suis for creating the wonderful artwork, and the Moebius Printing Company for donating the printing and paper.

More than half the brochures are left, and we'll do additional mailings as we receive more names. Incidentally, many of the lists we use may overlap. Some of you who are already members have received requests, and if you're a super-environmentalist and support 3 or 4 organizations such as The Nature Conservancy and the Audubon Society, you may be getting more than one request. We're doing our best to eliminate duplications, but a few are bound to slip through. Please accept our apologies, and pass the extras along to your friends. To old and new members alike, a Happy New Year, and our undying gratitude.

## THE WISH LIST

The ICF store was hopping over the holidays, as faithful members used last Bugle's flyer to order Christmas gifts. Thank you for thinking of us, and we hope you enjoyed a safe and happy holiday season.

In addition to all those who purchased gifts from ICF, Mary Griffith made a generous donation to the ICF Student Scholarship Fund, and Ruth Edwards sent a beautiful telescope with camera adaptors for field research.

We're starting off the New Year with great expectations, and just a few wishes from our members:  
canvas seed collecting bags . . . . . each \$17.50  
trays for growing prairie plant seedlings . . . each \$5.00  
a slide duplicator . . . . . \$27.50  
a new guest book . . . . . \$8.50

We've had an overwhelmingly good response from Wish List readers during the past year, and the equipment and materials you've purchased for us have made a very definite difference in our capabilities and growth. Thank you, most sincerely, from the entire flock here at ICF!

## Contributions



Received October through December, 1981

### Grants and Awards:

Stuart Avery, William and Priscilla Chester, Chicago Metallic, Hubbard Foundation, Kohler Foundation, Krause Foundation, M & I Bank Foundation, Inc., Milwaukee Foundation, Charles Nelson, Rahr Foundation, Rexnord Foundation, Charles Sivelle, Washington High School, Wildcat Foundation, Wisconsin Garden Club Federation, Wisconsin Power and Light, World Wildlife Fund - U.S.

### Patrons:

Cecil Carpenter, Catherine Cleary, Janet and Gordon Renschler, Michael Weisting.

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