

THE BROLGA BUGLE

Editor: George Archibald; Assistant Editor: Joan Fordham

.

INTERNATIONAL CRANE FOUNDATION City View Road

Baraboo, WI 53913, USA

Address Correction Requested . Saraboo, WI. 53

PAID Permit No. 179 Saraboo, WI 53913

Nonprofit

Organization

U. S. Postage

International Crane Foundation Quarterly Newsletter

Volume 8, Number 2 — City View Road, Baraboo, Wisconsin 53913

City View Road, Baraboo, Wisconsin 53913, U. S. A. — A Non-Profit Organization

May, 1982

GLOBAL MIGRATION

by George Archibald

As one of Wisconsin's coldest winters on record swept over the Baraboo Hills, aviculturists primed the captive flock for the upcoming breeding season. Floodlights were checked to provide an arctic night for the Siberian Cranes, breeder diet was ordered and the chick house was cleaned spotless to await a new generation of chicks. All the while, I was in Asia negotiating for Black-necked Cranes in Beijing, shivering and crane counting on the Korean DMZ, bowing in Japan, sharing an evening tea with Indira Gandhi, and toasting our comrades in the USSR. So if Tex and Dushenka agree, this issue of the Bugle will concentrate on the exciting achievements of our colleagues overseas.



The Siberian Cranes began their migration north from Keoladeo National Park, India, March 10.

ANOTHER GREAT LEAP FORWARD IN CHINA

No country is home to a greater number of endangered cranes than China. Of the seven endangered species of orange, fire are native to China, Consequently, ICF is especially interested in assisting research and conservation programs in the People's Republic. In addition to the abundant Common and Demoiselle Cranes, China supports breeding flocks of Red-crowned and White-naped Cranes in the northeast, the little-known Black-necked Cranes on the Tibetan Plateau, and the endangered Eastern Sarus in the tropical regions of southwest China. Two rare migrants from the Arctic, the Hooded and Siberian Cranes, find winter refuge along the Yangtze Valley.

Since early times cranes have represented good luck and long life to the Chinese. Stone cranes flanked the throne of the Emperor. Tame cranes were kept by the nobility and trained to perform their elaborate courtship displays on special occasions. Today murals and greeting cards frequently depict the Red-crowned Cranes in flight and dance. In the old China cranes were abundant, for they benefitted from protection by the ruling classes. Man did not have the equipment to either drain wetlands or to propel bullets. But such is clearly not the case in modern China. One billion Chinese are emerging from a traumatic era. It is not surprising that during the political and social upheavals of the last few decades, the Chinese put little emphasis on conservation of wildlife. But a new and much brighter period has arrived and ICF is a part of it.

Our vintage members may recall that my first trip to China occurred in 1979. I was honored to be the guest of China's foremost ornithologist, Dr. Tso-Hsin Cheng, and his colleagues at the Institute of Zoology in Beijing. Most of these scientists had been ordered to hard manual labor during the turbulent Cultural Revolution from 1966-76 and were just catching up on their profession when I landed that autumn. My mission was to alert the Chinese to the plight of rare cranes and ibises in neighboring countries and to stress



Mr. Steven Kohl (USFWS), Dr. Qing Jing Hua (center) and Mr. Yuan Hai-Ying (China Ministry of Forestry) escort a Baraboo-made portable incubator which we hope will someday bring the Black-necked Cranes to Wisconsin. January 23.

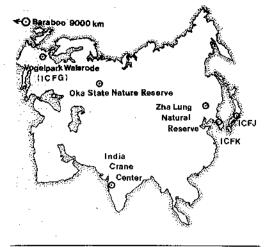
the importance of basic field research and conservation in China, particularly with regard to Siberian Cranes and Japanese Crested Ibises.

I explained to my colleagues that in 1979 between 100 and 200 Siberian Cranes summered on the tundras of Yakutia and were presumed to winter along the Yangtze River, but where? Also in that year I informed them that the Japanese Crested Ibises were reduced to a half a dozen birds in Japan and there had been no breeding since 1972. Chinese ornithologists in turn told me they had been searching for the Siberians and ibises, but had not been able to find a single specimen.

Encouraged by my reports from abroad, the Chinese continued their search and in the intervening years, Dr. Zhou Fu-Chang found 140 Siberian Cranes wintering along the west bank of Lake Poyang, and Dr. Liu Yin Zeng discovered two pairs of ibises in central China's Tsingling Mountains. Their research continues, supported by confirmation from China's Ministry of Forestry that the government wants to save the habitats of both species.

Dr. Qing Jing Hua of the Ministry of Forestry is responsible for the conservation of endangered species and unique natural areas. Through Dr. Qing's excellent leadership and with the assistance of an able colleague, Mr. Yuan Hai Ying, 73 Natural Reserves have been created, covering two million square kilometers, 0.2% of China's area. This vital acreage is home to some of earth's most treasured animals such as the Giant Panda, the Golden Monkey, and the Blacknecked Crane. It was in reference to the latter species that Dr. Qing invited me to visit Beijing in late January, 1982, to discuss ICF's proposal that 12 hatching eggs of the Black-necked Crane be air-lifted from the Tibetan Plateau to Wisconsin. Steven Kohl from the Office of International Affairs of the United States Fish and Wildlife Service, Richard Cook of the National Parks Service, and I constituted the US dele-

(continued on page 2)



ANOTHER GREAT LEAP FORWARD IN CHINA (continued from page 1)

gation. The team of Archibald, Kohl and Cook (respectively representing cranes, endangered species and parks) met with the Chinese from January 18-23 and the Black-necked Crane topped the list of items for discussion.

Through previous correspondence, the Chinese Ministry of Forestry had agreed to supply ICF with Black-necked Crane eggs and recommended ICF reciprocate by providing China with the rare Pere David Deer. This elk-sized ungulate was once indigenous to China, but today they are gone from the wild and survive in captivity primarily in European and US zoos. The transfer of endangered cranes from the wild to captivity for the exchange of deer from confinement back to the wild, seemed like an attractive package, and the San Diego Zoological Society graciously consented to provide the deer. But the Chinese had a problem. Substantial studies had not been undertaken to best determine where the deer might be released, and the issuance of deer to China would have to be delayed. In addition, through discussion with Mr. Wang You-Shue, a wildlife management officer in Chinghai Province where Black-necked Cranes breed, Dr. Qing determined that \$150,000 (US) would be required to launch a March through June expedition into the Tibetan wilderness to find the cranes, locate their nests, collect the eggs and bring them safely to Beiing. ICF was unable to guarantee the required funds for a 1982 project and we diplomatically moved to the next item: a proposed China Crane Research Center at the Zha Lung Natural Reserve in northeast China's Heilongjiang Province.

Heilongjiang Province lies at the same latitude as Wisconsin, and like the midwest of the USA is bordered to the west by plains and deserts. The province has high mountains and broad valleys where large rivers are bordered by great expanses of undeveloped wetland that are important to six species of cranes. The Zha Lung Natural Reserve encompasses 40,000 hectares of lakes and marshes in the central part of the province near the city of Chichiharur. The Reserve was established in 1979 as a sanctuary for approximately 200 majestic Red-crowned Cranes that breed



Poisoned immature Red-crowned Cranes in the vicinity of Panmunjom on the Demilitarized Zone symbolize the growing conflict between human and wildlife needs in southern Asia, Dr. Clarence Lee (center), a Korean soldier and I made the discovery on January 26.

there in company with White-naped and Common Cranes. Migrating Demoiselle, Siberian and Hooded Cranes frequent Zha Lung in spring and autumn, thus making the area an excellent site for the proposed research center.

Dr. Qing proposed that ICF provide both technical and financial assistance in establishing the Crane Center, the goal being to build an ICF-like facility where foreign and native ornithologists could work together on both field research and captive propagation. It would be a base from which crane researchers would travel to remote regions of the People's Republic to study the wild cranes and their problems. As such crane programs proved successful, efforts could be expanded to other endangered species of birds, as has been ICF's record with the USSR. But ICF has struggled to maintain its own financial needs since its inception in 1973. How can we possibly be of financial benefit to the Chinese? One possibility is that ICF can seek financial assistance in Japan and Germany where greater interest lies in helping the wild cranes in China than in raising captive Chinese cranes in Baraboo. Another opportunity lies in the fact that the State of Wisconsin has recently formed a sister relationship with Heilongjiang Province, and within such a canopy there may be an opportunity to develop conservation programs as well as cooperation in agriculture. Governor Lee Dreyfus has welcomed ICF into the exchange program with Heilongjiang, and we are optimistic that our step by step approach to aiding conservation in China will better assure that conservation is a part of development.

This July I hope to return to China to visit the Zha Lung Natural Reserve and discuss possibilities for the China Crane Research Center. As this Bugle goes to press Steven Kohl and Richard Cook in Washington and Dr. Qing Jing Hau and Mr. Yuan Hai Ying, in Beijing are promoting a protocol cooperatively developed by the four officials in January. It will provide a formal agreement between China and the USA for long-term cooperation in aid to endangered species. It seems that the cranes continue their tradition as birds of good will and good luck!

able to determine if there were any marked birds among the eighty or so cranes we sighted.

Of great consternation was the discovery of two dead Red-crowned immatures near Panmunjom. The DMZ has not only become a sanctuary for cranes but also for Ringnecked Pheasants. The Pheasants inflict crop damage in the nearby rice paddies, and farmers poison the birds. Unfortunately the Red-crowned Cranes also ate the bait. The United Nations Command investigated the killings and the problem was identified. In the future such activities will not be allowed in areas frequented by the rare cranes.

The cranes along the DMZ seem to be holding their own but the few chicks counted in the flocks reflect poor productivity on their breeding grounds in northeastern China and southwestern Siberia. Consequently, ICF-K is preparing a release site near the DMZ where captive-produced Red-crowned Cranes might eventually be transfused into the wild flocks to bolster their numbers.

A TOKYO TRANSFUSION

Japan has been an ICF sanctuary since 1972, and it was with a sense of homecoming that I updated our ICF-Japan members on the latest bird news from China and Korea. They were particularly interested in the Japanese Crested Ibis Nipponia nippon since only four captive birds, one male and three females, remain in Japan.

While in Beijing I had the pleasure of meeting Ibis researcher Dr. Liu Yin Zeng, who had just returned from his study area in the Tsingling Mountains to join his family in Beijing for the Chinese New Year, Through a fine movie and many color slides he conveyed the dramatic ibis story. Four birds were found in a valley during the winter of 1980-81, and in late winter they divided into two pairs, each building a large stick nest in tall trees about two kilometers apart. Each couple laid four eggs near the end of March. Unfortunately a farmer cut down one of the trees in which a pair was nesting and all the eggs were smashed. The adults left the area not to be seen again. The second pair hatched all four eggs near the end of April. One chick fell from the nest and died, another coasted from the nest just before fledging, was captured and reared by Dr. Liu, and now resides in Beijing Zoo. Two ibis successfully fledged in mid June. One chick flew away and was not seen again while the second chick was still with its parents in January, 1982. Just before Dr. Liu came to Beijing he observed the pair copulating, an excellent sign for the 1982 breeding season.

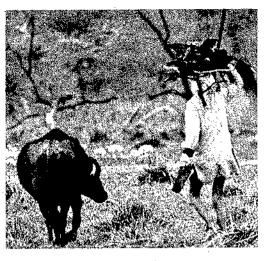
This year Dr. Liu wants to monitor the temperatures in the ibis nest so that if some eggs are collected they can be artificially hatched and the chicks handreared to offset the mortality of eggs and chicks in the field. He also hopes to place micro-radios on the tail feathers of chicks reared by their parents so the chicks can be followed by radio telemetry after fledging. Perhaps the chicks will lead Dr. Liu to other ibises in remote areas of central Shensi Province.

But Dr. Liu needed help. He could not find the elaborate electronic equipment in China required to expand his research. ICF-J came to the rescue and today Dr. Liu and ICF-J Director Mr. Masanobu Yamaguchi are expediting the transfer of the temperature-sensing equipment from Japan to China. The radio-telemetry equipment is being provided by our colleagues in West Germany, Mr. and Mrs. Wolf Brehm.

ICF-J has also been busy on the home front. With support from the City of Izumi and Suntory Incorporated, ICF-J made excellent educational displays for the visitor centers in Kyushu and Hokkaido where thousands of tourists appreciate the winter flocks of Hooded, White-naped, and Red-crowned Cranes. But the problems remain: the overcrowding of Hooded and White-naped Cranes at the small feeding station in southern Japan, and the attrition of wetland breeding habitats for Red-crowned Cranes in northern Japan. With a membership of more than 200 and the ICF newsletter published in Japanese, ICF-J has growing momentum in addressing the serious conservation problems in Japan.

Death On The DMZ

Although I had only three full days in the Republic of Korea, the excellent planning of ICF-Korea Director Dr. Clarence Lee and the help of my old friends in the Korean and US armed forces expedited my work. I was able to survey the three main Red-crowned Crane areas near the DMZ and spend an evening with 40 ICF-K members in Seoul. My objective was to count the cranes and determine if any of the chicks carried bright orange tibial leg bands, evidence that the DMZ birds are those that nest along the east bank of Lake Khanka in the USSR. Last summer Soviet researcher Dr. Yuri Shibaev, color-marked five prefledged Red-crowned Cranes. Poor visibility in the Cholewon Basin, where most of the Red-crowneds winter, made it difficult to get a good look at the birds and I was un-



Grazing and deforestation have reached all time highs at Keoladeo National Park, India. February 16.

INDIAN SUNSHINE

In India the International Crane Foundation is working with many dark clouds overhead, but also with promises of sunshine breaking through.

The Keoladeo National Park in northcentral India is a 29 square kilometer sanctuary, composed largely of a man-made water impoundment that ranks as one of earth's greatest water bird sanctuaries. 38 Siberian Cranes spent the past winter at the Park. But it is bordered by 25 villages, and for decades the farmers have grazed their herds within the borders of the sanctuary. In recent years the increased human population and subsequent proliferation of cattle and buffalo have placed such stress on Keoladeo that the natural integrity of the area is threatened by poaching, felling of trees for firewood, and grazing. A mud-brick wall was built around most of the area, but the villagers broke through. There were not enough game guards to keep them out. A recent study indicated that only 90 to 100 families used Keoladeo and these farmers have additional privately-owned lands that they also farm. There are options for saving the sanctuary, and under the excellent direction of Joint Secretary Mr. Samar Singh of the Ministry of Agriculture, a solution to the crisis will undoubtedly be reached in the near future.

My mission on the subcontinent in January, 1982, was to aid Keoladeo and other areas by helping my close friend and colleague, Prakash Gole, found an organization called the India Crane Center (ICC). It will be an ICF-like body that will address research and conservation problems in India on a long-term basis. Prakash is a dedicated student of wildlife and devotee of conservation efforts. His studies of Black-necked Cranes in Ladakh and Bhutan, his 1981 tenure in the USA studying at ICF and other crane centers, and his connection with ornithologists and business people in India amply qualify him to direct ICC.

Prakash has put together an impressive Board of Directors for ICC and is now organizing the Board of Advisors. Initially ICC will concentrate on the immediate crane crises: the conservation of Keoladeo and the breeding habitats of the four to seven Black-necked Crane pairs that nest in Ladakh. Next winter ICC hopes to undertake an aerial survey of wetlands within a 300 kilometer radius of Keoladeo in quest of additional Siberian Cranes. A proposed color marking program of Common Cranes wintering near New Delhi may help determine their migration route and nesting grounds in the USSR, thus opening the possibility of a new flock of Siberian Cranes using the Common Cranes that winter in India as foster parents. ICC will also embark on a captive breeding program for cranes with initial efforts concentrated on the common Sarus, a ubiquitous resident of the north Indian plains. As expertise is developed in breeding Sarus in captivity, efforts might then be expanded to work on Blacknecked and Siberian Cranes. ICC has many dreams, but so did ICF back in 1973.

On February 20, 1982, I was honored to spend an hour with Mrs. Indira Gandhi and her family at

their residence. ICF Director Jeffrey Short had exchanged several letters with Mrs. Gandhi regarding the problems of Keoladeo. She was aware of my efforts in China and wanted to know more about the story of the Siberian Cranes. With help from film maker Belinda Breeden and a set of color slides, I explained the dramatic story of these vanishing white cranes that breed on the tundras of the USSR and winter in Iran, India, and China with a transit through Afghanistan and Pakistan. We illuminated the problems in China, where the planned damming of the Yangtze River might flood or dry the critical wetland used by the eastern flock of Siberians. To circumvent the problem, the Chinese may eventually have to build an artificial wetland similar to Keoladeo - a program to provide an avenue for cooperation between nations that have been at war in Black-necked Crane territory.

Mrs. Gandhi gratefully accepted the special photo album Belinda and I had prepared on the ICF story and the Siberian Crane drama. Her son Rajev Gandhi ended our meeting by warmly consenting to do whatever he could to help the crane cause in India, an offer that we hope will boost the programs of ICC.

My 25 days in India concluded with the development of plans for an International Crane Workshop, February 5-12, 1983, at Keoladeo. Sixty-five researchers from 23 countries are expected to share their knowledge and to develop new programs. At the conclusion of the Workshop we hope to have the signing of a Crane Treaty, whereby the Governments of Afghanistan, China, India, Iran, Pakistan, USA and USSR agree to work together in developing and implementing a recovery plan for the Siberian Cranes. If the Crane Treaty "flies", new sunshine for a wounded Asia will emanate from India.



Dr. Vladimir Flint (right) extends his hand to George, a 1979-hatched female (?) Siberian Crane at the Oka State Nature Reserve, while Wolf Brehm of Vogelpark Walsrode, West Germany contemplates this fine bird on the Russian snow. March 3.

A RUSSIAN REUNION

The warmth of the Russians is beautifully expressed by the tender care provided to the captive cranes at the three year-old crane center at the Oka State Nature Reserve, and by the hospitality so generously extended to Wolf Brehm and myself during our early March foray to the Soviet Union.

So much has happened since my historic March meeting with Dr. Vladimir Flint in 1976! Siberian Crane eggs were air lifted 10,000 miles from Yakutia to Baraboo, with 100% hatching. Vladimir Flint met a mottled crane "Vladimira" in Wisconsin in 1978 and a haif a dozen reciprocal visits followed through the auspices of the US-USSR Environment Agreement. The straightforward simplicity of the captive management program at ICF influenced the Soviets to build their own center, and in 1979 construction began at Oka about 300 km south of Moscow. Eggs were collected from wild Siberian Cranes and now fourteen stately subadult Siberian Cranes are established in enclosures that look remarkably similar to the crane pens in Wisconsin. Until the Soviets were able to process-their own crane pellets, chick food was provided from ICF and Vogelpark Walsrode, and in a similar manner, incubators and medicines were sent to Moscow.

Our visit to the USSR provided a chance for a warm reunion with officials and colleagues, an opportunity to introduce Wolf to everyone at Oka, and a time to share crane stories. I had news from southern Asia, while the Soviets had warm-hearted tales from the remote marshes of Siberia.

Sasha Sorokin's account of the western flock of Siberian Cranes was particularly interesting. In June of 1981, during an aerial survey over the tributary wetlands of the lower reaches of the Ob River just east of the Ural Mountains and near the Arctic Ocean, Sasha located eight Siberian Crane nests. The nesting area is between Lagasugan and Koonovat — tributary rivers

about 200 km southeast of the frontier town, Salekhard. The cranes nested in a transitional zone between the coniferous forests that bordered the rivers and open tundra. Interspersed among the Siberian Crane territories were the breeding territories of Common Cranes, the Asian ecological counterpart to the abundant Sandhill Cranes in North America. Aware that Siberian Cranes lay two eggs but only rear one chick, and that Sandhill Cranes in Idaho successfully reared Whooping Cranes. Sasha recognized an opportunity.

The productivity of the western flock of Siberian Cranes could be doubled, and an alternate wintering ground could be established, by taking one Siberian Crane egg from each nest and substituting them into the nests of the Common Cranes. This spring the Soviets may "cross-foster" three Siberian Crane eggs with three pairs of Common Cranes to determine the migration route and wintering grounds of the Common Cranes. Surely some enthusiastic bird watcher in south Asia will spot unusually white "Common Cranes" among the enormous flocks that winter on agricultural fields from Morocco to southern China. As the wintering grounds of these Common Cranes are evaluated, plans for the new Siberian Crane flock can be more realistically developed. A vacated building that once housed a geological survey team stands in a forest not far from the nesting grounds of the western Siberians. We hope that this building might become a field research center for US and Soviet ornithologists, as the next step in expanding our cooperative work.

The reality of the breeding center at Oka, the new Soviet Working Group on Cranes that includes some 145 researchers from 45 institutions, and the excellent communication and trust established between ICF and Soviet colleagues, are testimony to the success that can only strengthen the crane programs now in their infancy in China and India.

ICF Film Shown Nationwide

ICF has learned that "Flight From Extinction" will be aired on Public Television stations nationally on July 6, 1982 at 9:30 p.m. The half hour film, produced by Ron Meyer and Mark Samels, tells the story of ICF's work at home and overseas. The magnificent photography

provides ICFers and all bird lovers an opportunity to see cranes in the wild and on site in Baraboo. Encourage your friends to watch "Flight From Extinction" with you. Please check for possible local scheduling changes.



One of earth's greatest ornithologists, conservationists and wits, Dr. Salim Ali, joins Prakash Gole February 13 in Bombay for a discussion on the India Crane Center.

The Global Migration was made possible by funds from the Exxon Corporation and air tickets from the Governments of India and the USA.

ICF-J volunteer and researcher for the Yamashina Institute for Ornithology, Kunikazu Momose, holds a Hooded Crane just captured for color marking at the wintering grounds of the cranes in Kyushu. We hope our Soviet colleagues find the marked cranes in their breeding grounds in Siberia.

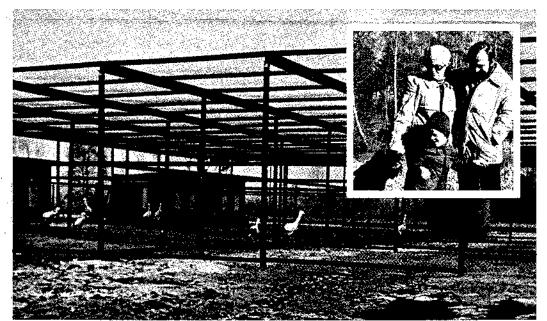
ur European Sanctuary

Wolf and I returned from Moscow to Mr. and Mrs. Brehm's fabulous bird park, Vogelpark Walsrode, near Hanover. Here I had an opportunity to study the 12 young Eastern White Storks that the Soviets had provided ICF-Germany in 1980 and 1981. The offspring of these birds are destined for the reintroduction of this species into Japan and Korea.

Recently the Brehms have embarked on three large conservation projects. ICF-Germany will be organized to coordinate crane efforts between ICF headquarters and colleagues in Europe, A World Working Group on Storks, Ibis, and Spoonbills has been established in affiliation with the International Council for Bird Preservation. And a rare parrot breeding program at Walsrode and a new center recently constructed on the lee side of a mountain in the Dominican Republic will provide hope for yet another family of birds. Charles Luthin, a 1977-79 ICF volunteer and now a graduate student at the University of Wisconsin, (whom

many of you remember as the initiator of the prairie project at ICF) will soon be employed at Vogelpark Walsrode to administer the conservation program.

Without the help of Wolf and Uschi Brehm, ICF would not have been able to produce Dushenka, the first Siberian Crane bred in captivity. Dushenka's father, Tilliman, belongs to the Vogelpark and is on breeding loan to ICF. The Brehms have supported the monthly land payments on ICF's new site, and have been instrumental in providing the Soviets with equipment and crane food at the Oka State Nature Reserve. And in their typically generous spirit, they are now committed to helping the Chinese build the China Crane Research Center. The "Good Family Brehm" is a special family to rare birds around the world, and the cooperative spirit they represent is the drive that will continue to make this planet a better place for birds and man.



Captivity for a while, but thanks to the "Good Family Brehm" ICF-G's 12 Eastern White Storks and 3 Siberian Cranes may soon be contributing to new wild flocks of their endangered kind in Asia. March 8.

The Bottom Line

by Bob Hallam Development Coordinator

Alice D'Alessio, the previous Development Coordinator, has left ICF to pursue her main interest writing. Her efforts over the last year and a half have put ICF in a healthy financial position. The membership drive which she spearheaded has increased membership by 280 to date and brought in an additional \$7,740. Once again, our thanks go to M&I Bank Foundation, Bill Suys, and Moebius Printing. Everyone at ICF will miss Alice's charming personality, her warm sense of humor, and her gracious manner.

I would like to take this opportunity to introduce myself and my family. I have lived in Madison, Wisconsin over the past fifteen years. My wife, Vicki, and I both graduated from the University of Wisconsin, and we have three daughters. Our interests as a family include a small farm near Lone Rock, gardening, crosscountry skiing, and hunting. The outdoors provides many enjoyable experiences for our family, and we are confident that our association with ICF will enrich these experiences.

Prior to joining ICF, my background was in business and sales. My position with ICF is a career change for me and I'm finding the work enjoyable and challenging. The job is enjoyable because I already have met some of our members and loyal backers, and challenging because over the next few years ICF is not only going to need operational support but also building funds for the new property. I firmly believe ICF will meet the challenges ahead through the dedication of the staff and the loyal support of our membership and Board of Directors.

Contributions



Received January 1 through March 31, 1982

Grants and Awards:

Atlantic Richfield Foundation, Stuart Avery, Mr. and Mrs. James P. Balding, Wolf Brehm, Willard and Elizabeth Clark, Cudahy Foundation, John Henry Dick, Evjue Foundation, Federated Garden Club, The Greenhouse, Hershey Foundation, Japan Johnson, Johnson Wax Fund, James Kuehn, Kohler Foundation, Marshall & Ilsley Bank Foundation, Chauncey and Marion Deering McCormick Foundation, Mrs. Walter S. Ott, Rexnord Foundation, Searle Family Trust, Dr. and Mrs. L. W. Swartz, Wisconsin Power and Light, World Wildlife Fund.

Patrons:

Linda Baymiller, Frank Freese, Jay Last, Wausau Insurance Company, Michael Weisling.

Mr. and Mrs. John Mitchell, Lucile Palmaro.

Charles and Nina Bradley, Committee for Preservation of Wildlife, William Craig, Noel Lee Dunn, Marshall Erdman, Thomas France, Karen Galley, Lucy Gemio, Mr. and Mrs. Robert Hallam, Mr. and Mrs. Corwith Hamill, Dr. and Mrs. John Harkness, Hoy Nature Club, James Isenberg, Charles Jahn, Algimantas Kelertas, Warren King, Brian Knox, David Morton, W. R. Pagen — Pauley Petroleum Company, Donald Pederson, Dr. and Mrs. Guiseppe Perna, Stuart Putnam, Nathaniel P. Reed, Mrs. Will Reed, Kristie Roth, Burton Russman, Walter Scott, Dr. and Mrs. Richard Shannon, St. Petersburg Audubon, Wallace Wendt, Mrs. Howard Wiess.

Thank you to all of you who have let us know your changes in address. The Post Office will not forward bulk mail and we need your help to see that the Brolga Bugle arrives in each member's home. Please put us on the list of those to notify before you move. We wouldn't want to lose you!

ے است