

THE ICF BUGLE

Editor: Scott Freeman; Assistant Editor: Janet Malmon

International Crane Foundation Quarterly Newsletter.

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A GLIMPSE OF ZHA LUNG

by George Archibald, ICF Director

From the dark green depths, a sprig of vegetation stretched to the water's surface, and floated by a pearl-like chain of gleaming air bubbles. At the base of each short leaf, a bubble nestled on the anchoring stalk.

The water, the air bubbles, and the plant united like a Confucian stanza. Perfectly balanced, they represent the fragile beauty of one of the earth's great natural treasures: Zha Lung Natural Reserve, an immense wetland bordering the Nen River in northeast China.

Last July Wolf Brehm, the owner and director of Vogelpark Walsrode in West Germany, and I visited Zha Lung through the invitation of the Chinese Ministry of Forestry (CMF). Together with our CMF colleague Mr. Yuan Hai Ying, we laid plans for the development of a Chinese crane center.

Zha Lung has the world's greatest diversity in crane species. Red-crowned, White-naped, Common and Demoiselle Cranes breed there, while migrating Hooded and Siberian Cranes find it a secure resting place.

In 1979, Zha Lung was designated as one of the country's first Natural Reserves. The Chinese are eager to expand conservation and research programs at the marsh. And it is ICF's mission to help our Chinese colleagues with their gallant efforts.

Along the marsh's northwest end, several buildings have been constructed to provide facilities for Zha Lung employees and guests. A fine new road links the 1.2 million people of nearby Qiquihan with the Reserve's headquarters. Here visitors can see the vast marshland stretching beyond the horizon. In a pen, a small group of hand-reared Red-crowned and White-naped Cranes offer a close-up view of Zha Lung's treasures.

The wild birds are difficult to see because of the tall vegetation—seven feet high sedges, for example.

And wild birds could be disturbed by visitors boating or hiking through the nesting areas. So, Mr. Brehm and I recommended that an interpretive facility be constructed at the headquarters. Perhaps, pairs of the six crane species found at Zha Lung could be exhibited in spacious natural enclosures. Other birds such as bustards, storks, swans, and spoonbills could also be displayed there. The captive birds' young could simply fly from the display area into the wild. These creative exhibits would help interpret the birds' natural history and their conservation needs.

Mr. Brehm and I envisioned a blend of avicultural facilities like those at our own centers, and interpretive programs akin to those at Audubon Nature Centers and National Wildlife Refuges in the Western Hemisphere.

But how could these ideas become a reality at Zha Lung?

We invited our Chinese colleagues to visit ICF and Vogelpark Walsrode and the nature reserves in Wisconsin and West Germany. By seeing these facilities first-hand, they can better understand our vision for Zha Lung. The Chinese have accepted our invitation, and in June of 1983, thanks to financial support from the "Good Family Brehm," will join us for the breeding season. Through education, the Chinese will be able to avoid many of the pitfalls ICF and Vogelpark Walsrode have overcome.

The challenge is to blend sound aviculture, public education, and habitat conservation into a unique conservation package that will benefit both people and the inhabitants of the great marsh. We hope the Chinese will follow the advice of Daniel Burnhams, who developed the site plan for Washington, D.C.: "Make no little plans, for they have no power to stir men's minds."



Common Crane at nest. photo by L. Walkinshaw

SASHA'S SIBERIANS

by George Archibald

A late May snow covered the marsh and camouflaged a white crane as it sat on its nest in the wilderness of western Siberia. Only its bright red face and long dark beak indicated the presence of "The Snow Wreath"—a Siberian Crane. But the unintentional camouflage didn't work. Sasha Sorokin spotted the bird from a tree at the edge of the forest and open tundra.

Less than two kilometers to the northeast, a narrow extension of coniferous forest formed the boundary of the Siberian Crane pair's territory. On the other side of these trees a motionless gray Common Crane, with a few flakes of powdery snow on its back, stood out in sharp contrast to the glistening surroundings. It, too, incubated through the long arctic day.

Here, side by side, nested members of one of the rarest and one of the most abundant crane species. Both pairs laid their two eggs in mid-May, and the chicks would emerge by mid-June. Our close friends, ornithologist Dr. Sasha Sorokin and film maker Eduard Nazarov, had camped near the cranes to make a great step forward in crane research—and perhaps in Siberian Crane conservation.

Three months before this snowy day, these very cranes were several thousands of miles south on their wintering grounds. The Siberians were, undoubtedly, vigorously probing for tubers in the shallow water marshes of northern Iran or India, while the Common Cranes leisurely fed on gleanings in dry agricultural fields.

Last winter only 15 Siberians were spotted in Iran, and 38 in India. The marshes which once hosted thousands of wintering Siberians are now few and far between—as endangered as the specialized aquatic birds themselves. In contrast, thousands of Common

(continued on page 4)



George Archibald (second left), Wolf Brehm (second right), and three Chinese officials display official banner of Zha Lung Natural Reserve.



George Archibald leads Gee Whiz out (left) for his first flight, supervised by Shirley Russman and Kelly Brock (right).
photos by Kyoko Archibald



short-term research projects.

Kitty Gehring, from Colorado State University, worked on a project designed to determine color preference in crane chicks. These tests should indicate if the red on the crane parents' head has an adaptive function in chick rearing. Kitty worked diligently to complete her testing chamber, but ran out of time because the chicks grew up too quickly. However, Kitty succeeded in completing the experimental procedure so that next spring's chicks can be tested.

Kelly Brock, from the University of Maryland, performed a study on the salt water tolerance of captive Sandhill Cranes. Several crane species frequent both fresh and salt water habitats, and we are interested in the cranes' physiologic adaptations to these environments. Kelly used several Sandhill Cranes to test their preferences to different levels of salinity in the drinking water. This information could also be used to determine the saline ranges which are physiologically tolerated by the cranes.

*The annual health check, on September 19th this year, went very well. The health check has become a real "family affair" with all of the ICF aviculture, education, site development, and administrative staff working together with dedicated members of the UW-Madison Veterinary Science Department to bleed, swab, and weigh all 134 birds at the foundation. Efficiency is the key during this process. Among other things, the samples will be used to test for the presence of herpes virus antibodies in the birds.

All in all, it's been a great breeding season—a result of a concerted effort by aviculturists, interns, chick mamas, and, of course, the birds.

MEMBERS FLOCK TO ANNUAL MEETING

by Pat Kovar, Intern

A decade of accomplishments and a look toward an exciting future captured the attention of the 250 participants at our 1982 Annual Meeting.

The "Flock-in" began on September 25th, when ICF members spent the afternoon at our present site meeting the birds, touring the facilities, and talking informally with the staff. The highlights, of course, included the little cinnamon-brown Whooper, Gee Whiz, and the internationally famous Siberian Crane, Dushenka.

Later our members were treated to a preview of ICF's new 160-acre site located five miles north of our present location. Visitors were greeted by Site Manager Konrad Liegel and the interns who have been helping with the landscaping and plant restoration projects. The beautiful Johnson Exhibit Pod, the first of many buildings to be completed, was open to our guests for inspection. The building will eventually house 12 pairs of breeding adult birds. It features the most up-to-date equipment for crane care.

The Johnson Pod was designed by Architect Herb Fritz of Madison and built by Kendon Construction Co. of Baraboo. Kendon broke ground almost exactly one year ago, and finished the structure just in time for the annual meeting. Members who came to flock-in were the first people to tour the building.

After the open house, we adjourned to Pierce's Supper Club in Baraboo, where we shared a lovely dinner with ICF's supporters. The amiable crowd included seven of our board members, volunteers, friends, and special guests like Mr. Kim Jin Ho of South Korea, who studied Red-crowned Cranes with Director George Archibald on the DMZ.

George opened the evening's festivities by introducing our board of directors. Administrator Joan Fordham then gave a financial report and introduced the ICF staff and volunteers. Following her financial statement, George gave a spellbinding update on ICF's work overseas. His theme was the history, contrasts, and potential of developing crane research and breeding centers in the USSR and People's Republic of China.

The overseas story was interwoven with short presentations about ICF's work in Baraboo by Education Coordinator Scott Freeman, Site Manager Konrad Liegel, former Supervisor of Aviculture Mike Putnam, and Leopold Fellow Kyoko Archibald.

Recounting the achievements of the last decade, Director Archibald urged ICF members to direct their support to our future projects, both at home and abroad. He stressed that in the past, the key to ICF's successful research and conservation projects has been international cooperation. To achieve our future goals, people from diverse countries must continue working together for a united effort in crane and wetland preservation.



The Johnson Exhibit Building at ICF's new site, completed just in time for the annual meeting.
photo by Kyoko Archibald

Chick Chat: 1982

by Shirley Russman,
Supervisor of Aviculture

The 1982 breeding season is truly one to remember. We have 22 chicks and all have now fledged.

Here's the wrap-up:

*This year's star chick, Gee Whiz, fledged on September 3rd. Gee flew for the staff, the press, and all the Whooping Cranes.

*Last year's one Siberian Crane chick, Dushenka, is joined by three more this year.

*All five Red-crowned Crane chicks have fledged—four from Zhurka and Ueno and one from Tsuru and Sauwaka. The latter chick was named Gunther after the avicultural staff's trusty ladder.

*The greatest number of chicks came from White-naped Cranes Amazon and Mercury. These two contributed seven birds to this year's flock of White-naped Crane chicks. All together, our three breeding White-naped pairs produced a total of 12 chicks! One of these hatched on July 4th, the same day as a Sandhill chick hatched. We named the two McMahon and Carson, respectively, after the NBC-TV "Tonight Show" stars who had hosted ICF's George Archibald about two weeks earlier.

*The isolation-rearing trial described in the last issue of the Bugle has now been completed. In this year's experiment, we raised six birds in isolation—without human contact. All of these chicks, which learned to feed from the bill of a puppet, have now been exposed to people.

Although our results are only tentative, some of the isolation-reared birds seem to display behavior similar to that of the wild bird's. For example, the Siberian chicks exhibit a begging behavior similar to that occurring in the wild. The two Red-crowned chicks appear to be more wary of people than do the hand-raised chicks. But the isolation birds also have behavioral characteristics similar to those of hand-raised chicks. All hand-raised chicks, for example, have their own personalities. This seems to hold true with the chicks raised in isolation, too, because one of the isolation-reared Red-crowned chicks is much "wilder" than the other.

We won't have the final results from this experiment until these chicks reach breeding age, though. Three years from now we will be studying their behavior during courtship, pair-bonding, mating, and chick raising, and compare it to the behavior of hand-raised birds.

*Interns were again a great asset during the summer, helping with daily chores as well as working on

PARENTS ♀♂	HATCH DATE	NAME
RED-CROWNED		
Zhurka/Ueno	May 7	Kushiro*
	May 15	Khanka
	May 21	Voss*
	June 1	Golly*
Sauwaka/Tsuru	June 4	Gunther
Zhurka/Ueno	June 5	Puck
	June 12	Wallace
	June 16	Clover
WHITE-NAPED		
Ise/Casey	May 16	Pitney
	May 20	McDuff
Amazon/Mercury	June 4	D'Alessio
	June 7	Roscoe
	June 12	Burdick
	June 14	B.C.
Ise/Casey	June 19	Regis
Amazon/Mercury	June 24	McNulty
	June 26	Brady
	July 4	McMahon
Ise/Casey	July 9	Kily
Bette/Butch	July 19	Herndon
SIBERIAN		
Hirakawa/Tilliman	May 13	Gandhi
Hirakawa/Wolf	May 16	Poyang
	May 22	Ramsar
Hirakawa/Tilliman	June 8	Sorokin*
WHOOPIING		
Tex/+	June 1	Gee Whiz
SANDHILL		
Terry/JC	July 4	Carson

* Died

+ Semen shipped from Patuxent Wildlife Research Center

ICF'S INTERNSHIP PROGRAM: What It's All About

by Janet Malmon, Intern

Scott helps take care of cranes. John works on the prairie restoration at the new site. Patty gives tours of ICF.

These folks, although their jobs differ, are all interns at ICF.

ICF has been offering paid internships to college students and recent college graduates since 1980. In-

terns come from all over the country and usually stay three months, although some stay longer.

Students can do internships in aviculture, plant ecology, or education, depending on their preference and, of course, their background.

"Aviculture interns are responsible for care of the birds," says Shirley Russman, Supervisor of Aviculture. "Plus, they have a research project—often on crane behavior."

Aviculture usually has interns only in spring and summer. This fall is an exception, however, for ICF took on two interns: Scott Swengel, a University of Kansas graduate, and Ashley Brock from Bethesda, Maryland.

"Plant ecology interns assist in restoration of the prairie, wetland, savannah, and forest communities at the new site. They also assist in landscaping. In addition, each intern concentrates on a special project," says Konrad Liegel, Site Manager.

This fall's plant ecology interns include Annie Whitney, a graduate of Macalester College in Minnesota; John Palis, a Southern Illinois University graduate; and Scott Weber, a graduate of Carleton College in Minnesota.

Education interns give tours and work on a special project in curriculum development, museum design, audio-visual production, or public affairs. There are two education interns this season: Pat Koyar and Janet Malmon, both graduates of the University of Wisconsin.

What do the interns get out of the internship program? Besides receiving a small monthly stipend, the interns get experience they usually can't find in the college classroom. For some interns, the internship helps them decide if they're in the right field. Others hope the experience will help them find a job.

"But most importantly," says Education Coordinator Scott Freeman, "it gives them a chance to use their skills on a professional level and to see how an organization works."



Sharon Linville, an ICF summer intern, shows off lupine growing in prairie restoration at the new site.

photo by Jeff Strobel

ICF also benefits from the internship program. Scott explains, "Interns are our most valuable and reliable source of skilled people. We have a very small staff, and can only do so much by ourselves. Interns contribute a great deal."

ICF may be moving to a new site, but its internship program will stick around and, if anything, improve. In fact, we hope to eventually provide a dormitory for interns at the property.



Summer intern Karen Atkins sketches cranes for educational materials.

photo by Jeff Strobel

NEW SITE: HERE WE COME

by Konrad Liegel, Site Manager

"When are you going to move?"

This question is often asked by visitors to ICF, now that the Johnson Exhibit Pod is completed and awaiting its new occupants. But no one ever asks, "How are you going to move?" Perhaps people think that we will merely move all the birds in an Allied Van, with the staff following closely behind. The real story, though, is a little more complicated.

ICF's move to the new site will be gradual, taking place over the next two years. First several structures, besides the Johnson Pod, must be constructed before we can become fully operational. These buildings include:

The Hatchery-Chick Rearing Complex for the incubation, hatching, and raising of the rare and endangered crane species, for aviculture and site development staff offices, for vehicle storage, and for education programs; and

Additional Breeding Facilities (removed from the general public areas) to intensively propagate cranes in captivity.

A pair of trailers has been purchased for the new property to temporarily house the administration, education, and site development offices. ICF also needs temporary facilities to accommodate education programs until a visitor center can be constructed.

This fall, 21 of our 134 birds are being quarantined in their pens while they await the move to the Johnson Pod in February 1983. There they will be joined by a Brogla from Australia and, we hope, a pair of Black-necked Cranes from China. Next spring, these 12 crane pairs will be allowed to rear their own chicks. ICF's remaining birds will be bred as usual in 1983 at our present site.



Birds are now being moved into shelters for quarantine procedures this fall.

photo by Scott Freeman

The staff will move to the new location in March. The aviculture department, however, plans to stay at the old site for the 1983 breeding season.

Next May, after the temporary education building is completed, we will have guided tours only. But come mid-June, we will also provide self-guided tours for drop-in visitors. All visitors will see the cranes and their chicks in the Johnson Pod and the nearby prairie, wetland, and oak savannah restorations.

The second part of ICF's move will take place after the hatchery complex and breeding facilities are finished, probably in the fall of 1983. We plan to quarantine most of the remaining birds after the 1983 breeding season, and move them, along with the aviculture staff, before winter. Intensive breeding of the birds will begin on the new site in 1984.

This is an exciting and challenging time for us all. With your continued support, we can look forward to blooming flowers, breeding cranes, and growing chicks at our new home in 1984.

NEW CRANE HORMONE DISCOVERED

by Janet Malmon

Sifting through crane droppings may be a messy job, but it can yield some startling results, as Dr. Arden Bercovitz recently discovered.

Dr. Bercovitz, an avian reproductive physiologist with the San Diego Zoo, examined the excreta of several ICF cranes in hopes of determining what kind of estrogenic hormones, or estrogens, are present. Estrogens, produced in the gonads, are key regulators in the reproductive cycle.

His work paid off when he discovered that crane excreta contains a large amount of an unidentifiable estrogenic compound, along with several known estrogenic substances. And what's more, this unknown compound was the primary estrogenic compound in the Siberian Crane, an endangered species.

"To my knowledge," writes Dr. Bercovitz, "this type of study has never been reported for any crane species." In fact, there is little published information available on any aspect of crane reproductive biology. That makes Dr. Bercovitz's study extra important because hormones play a major role in the reproductive process. The more we know about crane hormones, the more we'll know about crane reproduction, and thus, the more we can improve our captive breeding program.

Dr. Bercovitz's findings are important for a second reason—people. The previously unknown crane hormone may prove to be useful to humans as well as cranes. George Archibald, Director of ICF, explains, "No one knows what this estrogenic substance is like in Siberian Cranes. What is the chance it may have some use to humans? But if the species is extinct, so is the substance."

Siberian Crane Stamp Soon A Reality

by Steven Landfried

The Siberian Crane rates as the most endangered crane species in the world - its numbers barely reach 200. But soon this rare crane will be seen all over India and Pakistan—on postage stamps, that is.

India plans to issue its Siberian Crane stamp next February, concurrent with the opening of the International Crane Workshop at the Keoladeo Ghana National Park in Bharatpur. This bird sanctuary happens to be the only home in India for wintering Siberian Cranes.

India's stamp will feature the Siberian Crane painting by American artist, Diane Pierce. Ms. Pierce presented the painting to Prime Minister Indira Gandhi in 1981 in recognition of her efforts to help save the Siberian Crane.

Pakistan hopes to issue its stamp later next year. Pakistani wetlands serve as a resting place for Siberian Cranes migrating from their breeding grounds in Siberia to their wintering home in India.



This Siberian Crane painting will soon be featured on an Indian postage stamp. painting by Diane Pierce

The two countrys' actions represent a major step in a world-wide effort to increase awareness of the plight of Siberian Cranes. Publicity surrounding the stamp's release may help mobilize greater support for programs designed to protect the few remaining birds.

The stamp concept arose during ICF brainstorming sessions in the spring of 1980. At that time, ICF's staff was trying to figure out how to save the last 35 Siberian Cranes migrating to India. Out of those sessions came many ideas, including the stamp proposal.

The proposal was warmly received in India. But the project was set aside because of the upcoming crane workshop, publicity on the Siberian Crane migration, and, of course, Dushenka's hatching in 1981.

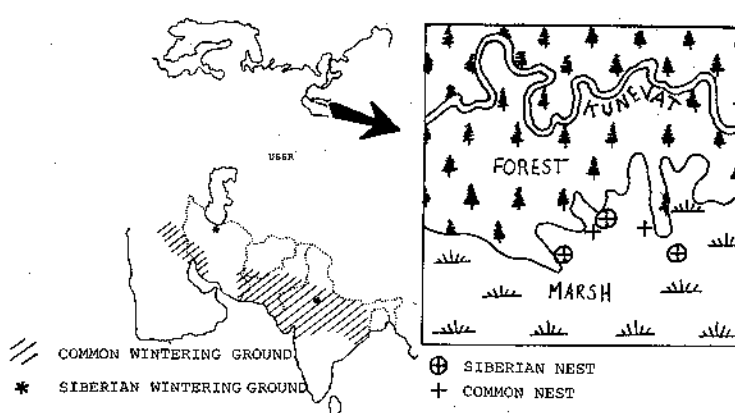
Then early in 1982, Anne Wright, a consultant in India to the U. S. Fish and Wildlife Service, arranged a meeting with ICF Director George Archibald and Prime Minister Gandhi. At that meeting, George mentioned the stamp idea to Mrs. Gandhi. The result: Mrs. Gandhi not only approved of the idea, but she was also willing to have the stamp feature the Siberian Crane painting by Diane Pierce.

The stamp, however, still needed the approval of the Indian postal service. At first, the postal service director turned down the proposal because India had already issued its one annual wildlife stamp. But when Anne Wright told him that Mrs. Gandhi supported the proposal, the Siberian Crane stamp was given the green light.

Meanwhile, I had begun a letter writing campaign seeking the assistance of leading conservationists around the world to get the project off the ground in Pakistan, the People's Republic of China, the Islamic Republic of Iran, and the USSR.

So far, Pakistan is the only other country to give the project its stamp of approval. ICF hopes that the actions of Pakistan and India will be replicated by the birds' other home countries.

But the biggest hope of all is to see the Siberian Crane population stabilize and then increase once again.



SASHA'S SIBERIANS (continued from page 1)

Cranes still roam the countryside, wild and adaptable, making full use of the south Asian upland habitats which have been altered by man. If only the Siberians could learn to feed in the upland agricultural fields with the Common Cranes! The experiment which Sasha Sorokin and Eduard Nazarov were about to perform might demonstrate that they can.

As the two conservationists waited, the snow melted and the Snow Wreaths shone against the drab marsh. In contrast, the nearby Common Cranes had painted their backs with mud, so their gray plumage would blend in with the winter-brown vegetation of their surroundings. Incubation continued.

Just a year ago Sasha had discovered Siberians nesting on these tundras during a comprehensive low-altitude aerial survey. In 1981 he flew along the Kunenevat River for 50 hours, and located seven pairs of Siberians—five of which were breeding. Five pairs nested in the same vicinity this year, but despite flying an additional 14 hours over the tundras to the east, Sasha failed to sight additional birds.

On May 23rd of this year, a helicopter dropped Sasha and Eduard at their base camp just two kilometers from the Siberian and Common Crane nests. While our Soviet colleagues fed on canned foods and

fresh duck, the Siberians relished a diet of recently-thawed cranberries and an occasional sandpiper egg.

After several weeks of observations, Sasha trekked to the Siberian Crane nest. He collected one egg, then tramped to the nearby Common Crane nest. He put the Siberian egg in the nest, and removed the Common Crane eggs. A few days later the Siberian chick hatched. When Sasha left the tundra in early July, the chick was growing well under the constant care of its foster parents.

The Siberian chick may now be migrating south with its Common Crane parents, to wintering grounds somewhere between Iraq and India. We hope that a birdwatcher somewhere in the wintering range will spot the "odd family," and report the sighting. We can then evaluate whether Siberians, like Commons, can survive in an upland habitat.

If all goes well, more Siberian eggs may be substituted into Common Crane nests next spring, in an attempt to bolster the diminishing numbers of Siberian Cranes in western Asia. Perhaps when the snow melts off the tundras next May, Siberian Crane eggs produced at ICF in Baraboo may make a one-way, trans-Atlantic flight: to the Common Crane nesting grounds near the Kunenevat.

The Bottom Line

by Robert Hallam,
Development Coordinator

We have now begun, officially, the funding drive for Phase II of our building program. This construction, which we hope to begin next spring, will include a temporary education center and a permanent hatchery and chick-rearing complex. Completing this construction project, and opening the new site to visitors next summer, will be important steps toward our goal of becoming self-supporting through tour income, sales, and membership contributions.

The hatchery will be built over and around an existing barn on our new property. It is being designed to maximize heating from passive solar, and will provide state-of-the-art (and science) facilities for captive propagation of cranes. The building will include the incubation and hatching rooms, a laboratory, a library, and offices for the aviculture and site planning staffs and interns. In addition, this two-story building will provide a visitor's room with exhibits and a workshop/storage area.

The chick-rearing building will be attached to the hatchery and run perpendicular to it. The brooder room for newly-hatched chicks will anchor a long, narrow structure divided into 50 indoor pens with outdoor runs for older chicks. We estimate the cost of the entire hatchery and chick-rearing complex—including service road, septic system, well, landscaping, and public trails—to be \$350,000.

We will be calling on all of ICF's long-time supporters to help make this vital part of our move happen on schedule. If you'd like to help ICF build, just note "for the capital fund drive" on your donation. All donors will be honored with recognition plaques in the following categories: Unison Caller (\$500 to \$999), Nest Builder (\$1,000 to \$4,999), Egg Layer (\$5,000 to \$9,999), Incubator (\$10,000 to \$19,999), and Hatcher (\$20,000 and above).

In the next issue of the Bugle, I'll give you a progress report on the drive.

Contributions



Received July through September, 1982

Grants and Awards:

Hope Anderson, Wolf Brehm, Mary Burke, Patrick and Anna M. Cudahy Fund, Federated Garden Clubs of Missouri, Findley Adhesives, Griggs-Burke Foundation, Hage Foundation, Elizabeth Link Estate, Marathon Box Corporation, Milwaukee Foundation-Kopmeier Fund, NMC Projects, Norman Sauey, Walter Schroeder Foundation, J. R. Short Milling Co., Mrs. John C. Stedman, Webcrafters-Frautschi Foundation, Eleanor Zulauf.

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HEAR YE, HEAR YE: if you work in an office, you may be able to work for ICF. We desperately need an IBM Selectric Typewriter (or equivalent) and a good copying machine for the offices at our new site. If your office is remodeling or acquiring new equipment, would you please consider donating your "cast-offs" to ICF?