

THE ICF BUGLE

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World Center for the Study and Preservation of Cranes

A Necklace for the Yangtze

by Jim Harris, Deputy Director

Climbing the new tower in dim light, I looked out over the flat reed beds. Against drab browns and grays of earth and sky, the Red-crowned Cranes glowed, white figures striding with grace and mastery over the marsh. The lands here have only newly risen from the sea, built of silt carried by the Yangtze River from the heart of China and deposited along the beaches of the Yellow Sea. But the cranes look like they have walked here forever. The moment was timeless, jewel-like, infinitely precious.

The Yangtze is the third longest river in the world, after the Amazon and the Nile, with such a wide, strong current that only two bridges cross for over 1,000 miles of its lower course. In winter, its valley and delta host 99 percent of the world's Siberian Cranes, 65 percent of the White-naped Cranes, 40 percent of the Red-crowned Cranes, significant numbers of Hooded, Common, and Blacknecked Cranes, and probably the vast majority of Oriental White Storks. But the watershed also supports one-third of China's 1.2 billion people, and the silted lowlands on which the cranes depend have an ancient history of human use.

With relentless hunting and no protected habitats, there seemed to be little hope for the valley's cranes until a few years ago. But since the mid 1970s, China has been creating nature reserves in the places where wildlife survive.

This winter I visited the Yangtze for five weeks to assess progress in developing the reserves. I had first come here exactly five years ago, while George Archibald had been here a year earlier. But six years is a very short time compared to millennia of intense human activity. I traveled to six provinces along the river, observing how well wildlife conserva-

tion is progressing alongside traditional land uses.

Yancheng Reserve develops visitor program

First, I visited Yancheng Nature Reserve, a 186-mi-long strip of lowland created by the sediment from the Yangtze along the sea beaches north of Shanghai. A hundred yards of new land appear each year.

Yancheng Nature Reserve lies in Jiangsu Province, the richest along the Yangtze, and it shows. The headquarters is such a change from 1986, with new offices, new exhibits, a new lodge for visitors. More importantly, the observation tower we just imagined five years ago has been built, in old Chinese style. Every morning at 6 a.m., you can see and photograph 200 Red-crowned cranes that visit to eat 30 lbs of corn spread before daylight. It's done very well—by 10 a.m.,

most of the cranes disperse after exhausting the corn and seek natural foods for the rest of the day. Last year, 100,000 people came to see the cranes.

On this reserve, as all the others, control of natural resources—the habitats on which the cranes depend—is the major challenge. China's nature reserves gained control over the wildlife when they were established, but lacked any control over the habitats. If the reserves cannot guide human exploitation in directions compatible with cranes, they will have no future. The 600,000-acre Yancheng Reserve continues to manage a core area just for wildlife, not human use, a highly unusual success among Chinese reserves and only possible because the land has recently emerged from the sea; but people encroach from the inland edges, cutting reeds, taking soil, even digging a new canal.

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Black-necked Cranes winter at Cao Hai in wetlands over 7,000 feet above sea level. Long protected by Buddhist tradition, the cranes have little fear of people. Cao Hai Nature Reserve is one of several important reserves for cranes within the Yangtze basin.

Restoration Mixes Science, People & Luck in Vietnam

by Jeb Barzen, Director, Field Ecology Department

Less than ten years ago, the Tram Chim Nature Reserve of Vietnam was a wasteland. The healing of this wetland exemplifies the conservation challenges all countries face. Globally, wetlands are among our most endangered ecosystems and their fate in the next century will likely mirror our own destiny. Restoring and protecting our remaining wetlands is therefore both an ecological and a social challenge. At Tram Chim, the Vietnamese want to provide a place where cranes and people can co-exist. Though still unfolding, the story of attaining a management plan for Tran Chim provides strong hope that cranes here will thrive, a powerful example for other wetland reserves.

Becoming a reserve

Through more than 20 years of war, the wild Plain of Reeds (of which Tram Chim is a small part) was systematically destroyed. French and U.S. forces dug ditches to drain floodwaters of the Mekong River away from the Plain. The wetland dried rapidly and the vegetation burned. Rear Mangroves (Melaleuca leucadendron) and the many species that lived among them were lost. In addition, sulphate soils, once exposed to air, acidified the water each time the monsoons returned.

Following the war, thousands of landless people settled in the drained Plain of Reeds to grow rice. With the acid soils, however, farming was poor. Neither people nor wildlife could exist in the crippled wetland. In 1984, when Le Van Thoi (Tu Thoi) and Nguyen Xuan Truong (Muoi Nhe) decided to restore a portion of the Plain of Reeds, they began with nothing more than a dream.

The return of the Eastern Sarus Crane to Tram Chim was announced in 1987 by scientists from the University of Hanoi. ICF's director, George Archibald, responded quickly with assistance (see *The ICF Bugle*, May 1988). In 1990, scientists from across the globe met near the reserve to discuss conservation of cranes and wetlands in southeast Asia (see *The ICF Bugle*, May 1990). This meeting made clear that a management plan for Tram Chim was needed.

Nuts and bolts of restoration

At the close of that meeting Rich Beilfuss, from the University of Wisconsin, and I remained in Vietnam. The Brehm Fund for International Bird Conservation would furnish

substantial funding to implement management measures if a sound plan could be developed through consensus among local people, scientists, and conservation organizations. Through the support of the National Wildlife Federation, Rich and I were able to work with Vietnamese scientists to seek answers to the many questions now before us. How should water be managed in the reserve to recreate the Plain of Reeds? How would plant species be affected by changes in water levels? How could the local people use resources of the reserve in a sustainable manner?

To restore a natural system, you must first learn what species are present and how they interact. For example, egrets were counted simultaneously by observers from dikes surrounding the reserve as they returned to roost at sunset. We counted cranes in a similar manner. Habitat-use information was compiled for rare species such as the Bengal Florican, a type of bustard. We established sampling transects for plants to quantify species presence, abundance, and habitat preference.

Before the war, the Plain of Reeds was a low depression in the Mekong Delta. At the peak of the summer rainy season, the Mekong would surge from its channels and inundate the vast Plain. Through the winter dry season, floodwaters would recede until the monsoon rains returned. As the floodwaters meandered through the reeds and Rear Mangroves, suspended solids such as soil particles and organic matter were strained from the drifting shallow sea. Now, however, ditches slashing through the Plain of Reeds have dismantled the natural hydrology.

A restoration attempt will fail if it considers only what species should be present. A wetland community needs it droughts and floods. The permanence, depth, and chemical characteristics of water in a wetland help determine what plant and animal species will survive within its influence.

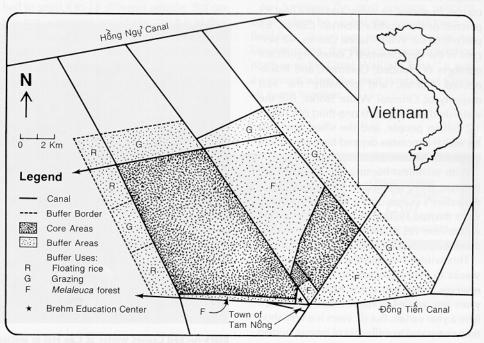
How could we restore the natural ebb and flow of waters from the Mekong through the reserve? The drainage ditches could not be plugged because they had become water highways for the people. Instead, Muoi Nhe and Tu Thoi had built dikes to hold floodwaters back from the ditches with local knowhow and materials. The more expensive water-control gates, designed to let water in or out as needed, had not been built.

Before designing the gates, Rich predicted how much water should remain by the end of the dry season to reproduce the natural water conditions. If the original hydroperiod could be restored, then the plants and animals native to the Plain could flourish.

The human side of restoration

As important as collecting data, we worked with our Vietnamese colleagues on the process of conservation and restoration. Since most of the Vietnamese knew the plant and animal species better than did Rich and I, our contribution was to share the ecological principles that connect these many species into a functioning ecosystem. Our friends could then apply the skills developed at Tram Chim elsewhere in Vietnam.

After Rich and I departed Tram Chim in 1990, George Archibald went to Vietnam with groups of volunteers from EARTH-



The Tram Chim Nature Reserve is surrounded by the devastated Plain of Reeds, now crisscrossed by canals. A management plan has established land use zones shown in the map to guide development of the surrounding area. The core area will attempt to restore the original Plain of Reeds, using dikes and water control structures. Buffer areas will be managed to provide for people as well as for wildlife.

WATCH and ICF. These groups collected data and added new pieces to the restoration puzzle. How did the local people feel about the Tram Chim Reserve? The teams interviewed 80 Vietnamese. Residents of Tam Nong, a city adjacent to the Reserve, knew little about Tram Chim or the cranes in it, while rural people knew Tram Chim well.

Tam Nong district was created in 1983 on 110,000 acres of drained wetland. Except for Tram Chim, all of the land within the district is to be developed by 1995. If these goals are attained, the reserve will become a small island in a sea of rice. Though large, Tram Chim alone cannot support healthy populations of all the species living within its borders.

Our plan was to zone Tram Chim according to types of land-use. The core area of the reserve, where dikes and water control structures would attempt to recreate the original Plain of Reeds, would be managed as naturally as possible. Harvest of wetland resources would be allowed if wild populations were unaffected.

Bordering this core would be a buffer area where people could use the land more intensively but where habitat for wildlife would be provided as well. Since rice crops often fail on the acid soils, why not sow native crops adapted to these conditions? Both people and wildlife would benefit. Rear Mangroves provide wood fiber, honey, and medicine to local markets, plus habitat for many wild species. Grazing the reed meadows would not drive out shorebirds, cranes, and floricans.

Reaching a consensus

In January of 1991, George, Rich and I began drafting a management plan. But what could a conservation organization from a foreign country do to assist with political decisions? Not much.

A meeting to finalize the management plan for Tram Chim would convene in early March. Huong Norton Payson, a U.S. citizen who emigrated from Vietnam in 1965, and I went to Tram Chim in February to work on the draft plan with our Vietnamese colleagues. We met with scientists, provincial leaders, district leaders, and local people to learn more about what was needed at Tram Chim. We quickly realized that clear communication, or in other words trust, needed to develop before we would be able to achieve a plan.

In these discussions I was at a disadvantage. The direct approach of Americans can often appear as a sign of weakness and impoliteness to the Vietnamese. Huong, with one foot in each culture, bridged words and feelings superbly.

As concerned as Huong and I, our Vietnamese friends met together often to seek



Muoi Nhe (left) and Huong Payson collect data at Tram Chim Nature Reserve. Huong's tireless energy and skills as an interpreter-conservationist helped ICF and the Vietnamese develop a management plan. As a result, Muoi Nhe's vision of a restored Plain of Reeds is now shared by all. Photo by Barzen.

consensus over management plans for the reserve. There were highly different views among the Vietnamese. They were determined, however, to present the conclusions of local authorities, scientists, and provincial leaders in one voice, realizing that it was the only practical way to discuss goals for Tram Chim effectively with foreigners.

Rich arrived just before the management meeting was to begin. During the first day, scientists described their work at Tram Chim. That evening, the Vietnamese presented their response to the revised plan: "We agree to the management plan except for two sticky points." First, the Vietnamese wanted to continue digging canals in the buffer areas. Second, within the core reserve, they wanted a canal to run down the middle to manage intensively for Rear Mangrove, Sarus Cranes, and fish.

The first sticky point was a problem of clarification. Where grazing would occur in the buffer zone, too many canals would dry out the soil, destroying the principal food for the cranes. The Vietnamese needed a major canal, however, in the grazing area to facilitate transportation and small canals for Rear Mangrove farming. Rather than stipulating no new canals in buffer areas, we agreed that canals could be constructed if they did not interfere with management goals designated for each buffer zone.

The second sticky point was more difficult. Putting a canal down the middle of the core reserve would improve our ability to control water levels. But at what cost? In the presence of many unknowns, it seemed wise to pursue natural management as much as possible. A canal through the middle of the reserve would also divide a 15,000-acre area in half, increasing the amount of wetland exposed to

disturbances. Species like the Black-necked Stork, which requires large areas of undisturbed habitat, might not survive.

Ecosystem management and habitat fragmentation were new concepts to the Vietnamese. How could they believe our science? It was possible through shared experiences. During a visit to ICF, Muoi Nhe had toured Horicon Marsh in eastern Wisconsin. Like Tram Chim, Horicon Marsh had a ditch crossing its core and Muoi Nhe had witnessed the problems caused by that ditch.

Huong, Rich, and I proposed delaying construction of the ditch at Tram Chim. If natural management did not work, ditch construction could resume. The Vietnamese adjourned for deliberation.

Later, we reconvened. A consensus had been reached! Cheers and tears broke out from Rich, Huong, and me. Such a display of raw emotion seems improper to Vietnamese but here, our colleagues rejoiced with us because clearly everyone was striving to make Tram Chim a success. Cultural as well as conservation gaps were bridged. "This feels like the end of the second Paris peace conference!" joked Professor Tran Phuoc Duong, referring to the conference that led to the American withdrawal from Vietnam. The ensuing laughter ushered in new hope for Tram Chim.

Though many hurdles remain, Tram Chim has fledged. Through major grants from the John D. and Catherine T. MacArthur Foundation and the Brehm Fund for International Bird Conservation, the construction of watergates has begun and there is support for a full-time reserve staff. As Tram Chim matures it will reflect what can be accomplished if people work together to solve our "sticky" problems.

A Necklace for the Yangtze

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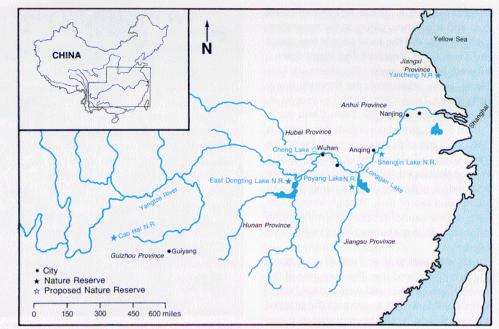
Too much fishing at Shengjin Lake

Due to poor roads and the river obstacle itself. I had to spend half my trip traveling. Leaving Yancheng, all day we followed the country roads, crowded with trucks, tractors, carts, livestock, bicycles, and children, and at last over the bridge into Nanjing. The next morning I took a passenger boat, our movement slow and stately like the river itself. At the City of Anging I met my hosts from Anhui Province. We had to cross the Yangtze by ferry the next morning, but fog stopped all ferries. Just after noon, we loaded, but still had to wait. I stood on the deck, looking idly at a tiny arc of the river revealed by the mist. Then, incredibly, dolphins broke the surface, again and again, at least two adults and one baby. The Yangtze dolphins are one of the rarest animals on earth, about 100 in the world! They survive only in Anhui Province, one of the poorest provinces in China, and therefore less developed. The Chinese, hanging out bus windows, were calling, "Look, look!"

I could see the poverty, even by Chinese standards, in the densely populated countryside. And Shengjin Lake Nature Reserve has a very low budget-it just bought its first (used) vehicle and hasn't even a single boat. But the shallow, upper end of the lake is thronged with birds, including 358 Hooded Cranes, more than at Poyang Lake, and over 200 Eastern White Storks. There are also large numbers of ducks, geese, and egrets. The big problem is overfishing. Countless bamboo traps, totaling over 6 mi in length, catch every fish, no matter how small. China's recent economic policies, encouraging individual initiative and profit, have been excellent for farm production, but a disaster for fish in natural lakes. The lakes are hurt, fish production drops, and the birds are endlessly harassed.

I spent hours discussing the fish problem with the Forest Bureau staff, for if Shengjin could make the initial short-term investment, replacing abusive exploitation with sustainable use of the fish, the people would prosper for the long-term—and the birds too. Here, as elsewhere, people and cranes suffer from the same misguided development. But in contrast to America, China's government has great difficulty regulating rural life.

We also discussed the movements of the Hooded Cranes, for their numbers vary at Shengjin during the cold months. Color banding would allow identifying individual cranes. We believe they move among the shallow lakes. A color banding project would help the nature reserves, all in different provinces, to think of their birds as a shared resource. The reserves, each isolated in a dif-



China has established a network of nature reserves across its central provinces, of extreme importance for cranes and other wintering water birds. Reserve managers now must develop effective methods to protect these critical habitats from human activities within this densely populated region. Additional nature reserves are needed.

ferent province, do not realize they form one "necklace," a set of jewels along the Yangtze, of value all together as they safeguard entire bird populations.

Poyang Lake gains control of two lakes

I took the river boat again, to northern Jiangxi Province. You would have laughed if you had seen me struggling the last 100 miles to Poyang Lake Nature Reserve. I had a new interpreter, but no vehicle for my horribly heavy suitcase. First a train ride, then a struggle from the train station to the bus station. As I stood in the rain, eating dumplings and watching 30 live chickens hoisted through the back window of a bus, my interpreter found that all buses going our way had been cancelled due to a dispute with a rival boat company—so I struggled again on foot through the town and rain with all my luggage, and then onto the boat.

Poyang Lake has more wintering cranes than all the other winter reserves combined. The large lake shrinks during the winter dry season, forming many smaller lakes. The nature reserve includes nine small lakes with ever-changing shallows so attractive to cranes. The birds move continually on and off the reserve, another indication that Poyang Lake, though extraordinary for its water bird concentrations, cannot alone assure a future for the cranes. A strong network of reserves is essential.

This year the cranes were more dispersed than usual. Their favorite feeding lake, Dahu Chi, has caused increasing tension between the reserve and a village that drains most of Dahu Chi for its fish. The village has unsuccessfully asked for compensation for leaving lake water for Siberian Cranes, thus forfeiting part of its catch. This year the village drained the lake quickly in autumn, and the remaining shallows of Dahu Chi were too disturbed for the wary cranes.

The next morning came bright, although mist hid all distances. We set out anyway. In the near shallows of Bang Hu three Siberian Cranes probed. We saw blurry white shapes out on the lake, spoonbills and thousands of Tundra Swans, while farther north and west, as the lake shore curved away, masses of White-naped Cranes stood on the mud flats, among them scattered families of Siberians. Behind, more Siberians were lost in the mist.

This great crane flock is the most thrilling sight in all the crane world! At times, over 2,000 White-napeds and a larger number of Siberians assemble. Also that day, I heard extraordinary news—the Governor of Jiangxi Province has already signed a document that will give the nature reserve at least partial control over the water levels (and thus fishing) on two of the most important lakes in the reserve, Dahu Chi itself and nearby Sha Hu. These critical areas can be managed for the birds, and not just according to the needs of two small fishing villages. First funds must be raised to provide these villages with alternative income, and probably the reserve will still have to allow some fishing in these lakes-nevertheless, it's a giant step!

Serious problems remain, especially with poisoning ducks for the market (now that firearms are well controlled). One wild duck sells for enough so that ten ducks will pay the fine if poachers are caught. The reserve

staff caught 50 poachers last year, but the punishment is too small.

Wetlands need protection in Hubei

When I crossed the Yangtze into Hubei Province, my host appeared three hours late, having great trouble finding a car because of Spring Festival holidays.

Work in the countryside was becoming almost impossible. Not only had local officials abandoned work (stretching three official vacation days to 10 or 15), but Hubei has done less for wetland protection than other provinces despite its reltive wealth: only six nature reserves, and none of them in wetlands. ICF, however, has supported Professor Hu Hongxing from Wuhan University, and he has surveyed a number of the lakes that used to host large numbers of water birds.

That afternoon, we visited Longgan Lake. where over 300 Hooded Cranes still winter. Professor Hu took me to the rice paddy areas where the cranes feed, separated from the main lake by a vast dike constructed during the Cultural Revolution. Thinking the cranes must need a water area for night-time roosting, I felt eager to see the shallows of the main lake. When at last we found our way over the innumerable irrigation channels, I was shocked to find Longgan Lake a maze of fish nets, all illegal. I presume the cranes traditionally wintering in Hubei have been forced into an artificial area of rice paddies. Here, at least, there is little disturbance in winter.

On a rainy morning we went to a smaller lake, Cheng Lake, where human activities are controlled by a fishing commune and a duck hunting team—they have stopped the rampant exploitation so evident elsewhere. We hid from the rain in fish guard stations. Ducks are not safe, but other birds are—including a large stork flock when water levels are right. The hunting team has a fixed line of large-barrelled guns that shoot all manner of nails and metal fragments. The team sends two boats to flush and herd the wild ducks toward the killing places in deeper water. But parts of the lake, isolated behind mud flats, are not hunted; even ducks and geese find safety.

Nature reserves must be adapted to local conditions. Both sites in Hubei deserve protection, and could be preserved without great disruption of present activities (even the hunting team could participate in the nature reserve). In Hubei, I had a sense of the dismal conditions for wildlife that must have been everywhere 10 or 15 years ago, yet nearby Poyang Lake shows what can be done. Professor Hu's students are now studying the birds on the two lakes, to guide Hubei Province as it begins wetland protection.

Dongting manages vast wetland

Conservation in Hubei will be critical for

East Dongting Lake Nature Reserve, located just across the border from Hubei in Hunan Province, on the south side of the Yangtze River. Dongting Lake's waterfowl must migrate through Hubei in spring and fall, and one of Hubei's most notorious lakes for overhunting is just eight miles north of Dongting!

East Dongting Lake Nature Reserve actually includes Yueyang City, the second largest in the province—so over 2,000,000 people live *inside* the nature reserve. But the city, because it is a resort, pays great attention to its lake and wetlands. To my delight, last year the nature reserve received documents giving it control over 153,000 acres of the lake and wetlands. This is a huge area, and a major precedent for Chinese nature reserves! Of course, human activities will continue, but the reserve managers will be able to guide development to avoid impacts on wildlife. Furthermore, two other large reserves will probably soon be set up for nearby wetlands.

Here Hooded and Common Cranes roost in the wetland but fly to feed in rice paddies near prison walls, areas with fewer people among the fields. Convicted poachers serve two years in the prison, listening to the bird voices daily—a punishment sufficient to deter poachers!

This year the reserve attracted 31 Siberian Cranes, but it preserves habitat for many more. To see the Siberians, we took a boat for two hours, then changed to a smaller boat poling up a narrow channel among reed beds. No one comes here but the reed cutters. At the edge of sight, two Siberians stood chest deep among the brown stems, in water too shallow for any boat, perhaps the loneliest spot on all the middle Yangtze.

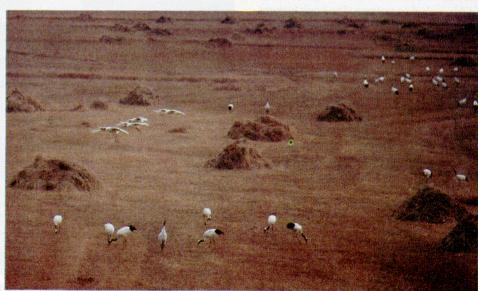
Cao Hai restores watershed

From Dongting, I left the river itself, to take a train due south and west through low mountains to Guizhou Province. My hosts from the Environmental Protection Bureau met me in Guiyang City, and next day we drove through rising valleys, among mountains conical like children's drawings. As we climbed, the land grew hard, the people increasingly poor. At last, our car crept over a mountain shrouded in fog and ice. Upon a high plateau, at 7,100 feet elevation, Cao Hai ("Sea of Grass") Nature Reserve protects the largest lake in Guizhou. Here is Weiining County, the poorest in Guizhou, with the county city overlooking the lake shallows where, in winter, Black-necked and Common Cranes feed.

Cao Hai has an odd feeling because the cranes are tame, a dramatic contrast to the rest of China. I approached within nine yards of Black-necked Cranes foraging in a potato field. Here agriculture reaches far into the wetlands, and the birds move among the people on the farmlands. There is a dreamy quality to Cao Hai—birds and people in harmony.

Cao Hai has an odd history; the lake was entirely drained during the Cultural Revolution, but after the farming failed, a dam restored the lake in 1982-83. Land rights around the shallows of the lake are confused, and the intense poverty of the farmers has caused them to dig by hand extensive deep ditches, turning the soil over onto adjacent land to raise its level for farming above the summer water levels. Day by day the wetlands are disappearing.

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Each morning in winter, Red-crowned Cranes gather to feed at Yancheng Nature Reserve. This reserve extends for 186 miles along the coast of Jiangsu Province and protects the main wintering area for the endangered Red-crowned Crane in mainland Asia. At Yancheng, as elsewhere in China, efforts to protect cranes have benefited many other wildlife species. Photo by Jim Harris.

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wetlands are disappearing.

The lake has other problems because of almost complete deforestation, and farming of steep, unprotected slopes. The reserve has rightly recognized that the protection of the lake and wetlands depends on the uplands, and therefore conservation programs extend throughout the watershed. Fund raising has allowed planting of timber and apple orchards: an enlarged dam is planned, to allow expansion of the already managed fishery. The lake would flood some of the lowest farmlands and expand habitat for Blacknecked Cranes, Bar-headed Geese, and many other birds. The local government supports these plans, but first alternative incomes must be developed for the farmers. The reserve's close involvement in economic development and cooperation with the local government are directions many reserves should follow.

My trip revealed varied stages of reserve development, but as a whole the reserves are tackling the resource issues hardly addressed five years ago. This decade could secure a long future for the cranes, even in the populous Yangtze Valley. Despite intense human pressures on wildlife, I felt great respect and optimism for what the Chinese are accomplishing. Our thanks from ICF for the hospitality of our colleagues during the trip. We have high hopes that their necklace for the Yangtze will grow ever more beautiful.

New Book on Folklore

Through the generosity of author Dorothea Hayward Scott, her new book, "A Flight of Cranes," is available from ICF's gift shop for \$3.95, including postage. The book features charming stories and poems about cranes from around the world.

THE ICF BUGLE is the quarterly newsletter for members of the International Crane Foundation (ICF). Articles review ICF programs as well as crane research around the world.

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ICF offers memberships at the following annual rates:

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Special Saturdays

This summer, June through September, ICF is offering "Special Saturdays" featuring four unusual tours, each lasting an hour. You can even include a "chick walk" at 11:30 a.m. and one of the regular guided tours at 10, 1, or 3 for a full day of fun! There is no extra charge for the special tours, but for nonmembers there is the normal admission charge to the site. Please call 608/356-9462 to reserve your place on the tour.

Saturday, July 6

9:15 a.m. Identifying Birds by Song

David Thompson. An introduction to how the "pros" identify birds. A method will be presented to help you get started.

10:30 a.m. Prairie Tales and Trails

Marion Hill. Learn the folklore and so-called "powers" of some of the plants and flowers in our restored prairie.

1:45 p.m. Crane Communication

Scott Swengel. Birds have a simple system of signals based on calls and postures. Find out how cranes communicate, and about crane personalities.

3:45 p.m. Butterflies and their Plants

Ann Swengel. Learn identification, habitat needs, how to get close, and how to recognize when they are nectaring, drinking, courting, and defending territories.

Saturday, August 3

9:15 a.m. Managing your Prairie

Jeb Barzen. Habitat is the key to wildlife. Some practical information about the values and methods of restoring our native communities. Be prepared for the field.

10:30 a.m. Raising Crane Chicks Marianne Wellington. How ICF raises chicks, and the meaning of chick behaviors.

1:45 p.m. Amazing World of Insects

Ann Swengel. A look at the things that creep & crawl, fly & burrow. We'll probe in prairie plants to find "the little things that run the world." Bring field guide & sun hat.

3:45 p.m. Soils: The Earth Beneath our Feet Francis Hole. An indoor presentation with music, poetry, and displays, followed by an outdoor walk to see landscapes and soils.

Saturday, September 7

9:15 a.m. Crane Communication See description above.

10:30 a.m. Butterflies and their Plants See description above.

11:30 a.m. Meet the Butterfly Photographer 1:45 p.m. The Earth Beneath our Feet See description above.

3:45 p.m. Tour of Crane City

Claire Mirande & staff. A rare opportunity to learn why ICF's "crane condos" are so comfortable, and to find out about the personalities who live there.

Save Saturday
September 21, 1991
for ICF's Annual Meeting:
See your next newsletter
for details



This winter, the Cudahy Visitor Center was remodeled with a grant from the Patrick and Anna M. Cudahy Fund. A new office will house the Education Coordinator and guides, and ICF's gift shop will double in size. ICF's Financial Manager Terry Brooks (right) is busy purchasing more exotic gifts for the shop, while Jo Cummings (left) is arranging the displays. The shop provides important income for ICF, but also makes the public aware of the beauty and cultural values of cranes. Photo by D. Thompson.

Contributions

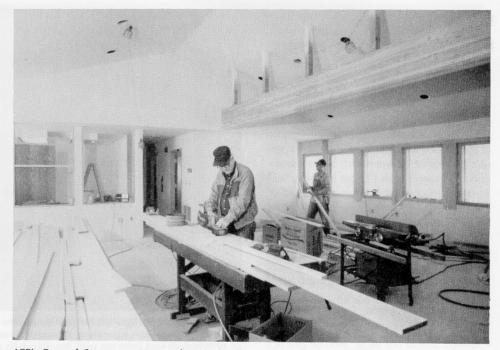
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ICF's General Contractor, Ken Decker, put finishing touches on the reading room of the Ron Sauey Memorial Library for Bird Conservation. Serving ICF staff and conservationists from this country and overseas, the library will house collections on ornithology and conservation, and provide wider access to scientific literature through a computer network. ICF is seeking donations of books to the library. Photo by D. Thompson.

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Ron Sauey Library

Through the generosity of Norman and Claire Sauey and their family, the Ron Sauey Memorial Library for Bird Conservation is nearing completion.

Enclosed in this issue of *The ICF Bugle* is an envelope for your gift to the library. We would greatly appreciate your support. All donations will go towards completing the furnishings and equipment needed for the library.

The Sauey Library will allow ICF to expand its specialized repository for crane information and to develop a basic reference collection for field ornithology and conservation issues. In addition, the library will encourage the exchange of information by providing a place for seminars and meetings, and will provide access to other library collections through computerized searches.

Finally, the library will commemorate Ron Sauey's contributions to international conservation by creating an environment that promotes future progress in conservation. In particular, crane and wetland researchers and conservationists from around the world will be visiting ICF to use the Sauey Library. Here, they will be able to write their reports with easy access both to literature and to ICF technical help, in an atmosphere that encourages concentration and contemplation.

The Ron Sauey Memorial Library will play a vital role in the future growth of ICF. We hope you will be able to join in supporting this important new endeavor at ICF.

Chinese Zoos **Cooperate for Cranes**

by David Thompson, **Education Director**

In March of 1991, ICF's Assistant Curator of Birds, Scott Swengel, visited China to present a series of 19 workshops at the Tianjin Zoo to personnel from 17 zoos in China. Said Swengel, "I covered every major aspect of crane breeding from the ground up, including how to distinguish sexes, how to develop a diet, how to get cranes to lay eggs, and the importance of marking birds individually with hands."

China is central to the conservation of cranes because eight of the world's 15 species occur in China, with five on the endangered list. Housing over 200 Redcrowned Cranes and 90 percent of the world's captive Black-necked Cranes, Chinese zoos will play a vital role in conservation. If Chinese zoos can begin to breed cranes on a large scale, it will eliminate temptation to remove canes from the wild, and will also enable restocking of depleted wild populations.

Swengel's trip continued a long tradition of cooperation between China and ICF that started in 1979 with a visit to China by George Archibald, Then in 1985, Chinese aviculturists began to visit ICF to learn captive breeding techniques. In 1988, Mrs. Gan Shenyun from the Beijing Zoo visited ICF to learn artificial insemination techniques; when she returned to China, she taught classes on the subject. Now more zoos in China practice artificial insemination with cranes than do American zoos.

ICF's philosophy has always been to catalyze action by providing encouragement and information. But all too often, cooperation between different agencies and experts



Soon fuzzy balls of delight will be exercising in the chick yard at ICF. This photo from June of 1989 shows ICF's Jay Nelson supervising Whooping Crane chicks. Last summer, ICF received a shipment of 12 Whooper eggs from the wild, but the adults sent to ICF in late 1989 did not breed because it takes a year to habituate to new surroundings. This spring, however, they were feeling romantic, and two eggs had already hatched by May 15. Photo by D. Thompson.

is lacking. Nevertheless, Swengel found "cooperation on an unprecedented scale." According to Swengel, "The Chinese Association of Zoological Gardens, founded only six years ago, has helped instill a sense of community that didn't exist before. By teaching a few people how to do captive breeding, it has really paid off, because now . . . they are breeding cranes like crazy."

One example of the new cooperation is how the Chinese disseminate technical information. According to Swengel, "Three years ago, when I provided written information, I had to send it to 18 different people. But on this trip, someone would say, 'give it to this person—he is the head of our Scientific Committee. He will have it translated and distributed to all the others.""

Swengel learned much from the Chinese. "Chinese zoos have lots of people, but they

have very little space, and money is scarce. I think we should listen, because they might give us ideas on how to be more efficient with our space or our money, or how to conserve our resources."

Swengel found that listening to the Chinese is also an important form of encouragement. He added, "They have been working really hard, and sometimes they have come up with insights that are just remarkable. They have some brilliant people I'm so glad to share our knowledge, so they don't have to reinvent the wheel."

For Swengel, the most inspiring moment came when he visited the coastal town of Beidahe. "It was just incredible to see my favorite crane, the Red-crowned, migrating north over the Great Wall of China." It was a moment when the great symbols of China all came together.

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