

THE BROLGA BUGLE

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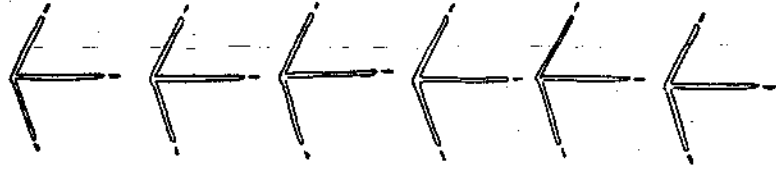
International Crane Foundation Quarterly Newsletter

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Vladimir and Kyta, only a few days old, glare at each other in their pen at the Biotron. Like most crane chicks, Vladimir and Kyta were initially very aggressive toward each other and had to be separated in order to avoid fighting. This aggression waned as the birds became older. Each chick had carpeting on the floor of its pen to help it maintain footing. Photo by Bill Gause

MAKING TRACKS - news of the foundation



The Immigration of Vladimir & Kyta

A Historic Cooperative Venture Between Superpowers Brings Two Siberian Cranes To ICF

The exchange of a rough plywood box between an American and a Soviet at Moscow's International Airport on July 2, 1977 had the drama and intrigue of a first-rate spy thriller. All the mandatory ingredients were there: the young American agent waiting nervously in Moscow for her contact, the terse telephone call, the car chase to the airport, the transfer of a sealed box, the last minute flight to London. Only, unlike most cloak and dagger scenes, the whole proceeding was conducted openly and had the expressed and smiling approval of both the Soviet and U. S. Governments. The box which was passed between a Russian and an American at the Moscow airport contained no classified documents or secret maps for a military base; instead, secured tightly within the wooden container, cushioned by four Russian socks and insulated with styrofoam and foam rubber were four eggs of the Siberian Crane, one of Russia's rarest and most celebrated birds.

Handing a wooden box from one person to another is simple enough, but in this case the act required nearly three years of negotiation between scientists and government officials both in the U.S. and U.S.S.R. Besides the international agreement which had to be worked out between the two nations, permits for importing the birds had to be obtained, two from the U.S. Department of the Interior, one from the Department of Agriculture, and a document from the Soviet Union stating that the importation of eggs from Siberia would not be detrimental to the welfare of the Siberian Crane.

Why all this fuss, time, trouble, and expense to import eggs of the Siberian Crane into the U.S.? How will the removal of eggs from endangered cranes benefit the species in the long run? Two of ICF's five major goals are the propagation of cranes in captivity and the restocking of cranes into the wild. At first glance, these may seem like contradictory aims since birds removed from the wild are no longer contributing any of their kind to bolster natural populations. Given the Siberian Crane's rarity (the most recent estimates put their numbers at 350), such tampering with the remaining wild birds could result in their faster slide toward extinction.

Yet, a thorough analysis of the biology of Siberian Cranes and an understanding of their present precarious situation seem to justify the importation of their eggs to ICF. The decline of the crane in this century appears to be the result of a widespread destruction of their preferred wintering habitat — extensive shallow wetlands with abundant aquatic vegetation. This type of ecosystem has disappeared rapidly in southern Asia over the last hundred years. Today, the Siberian Crane is found only in China and India during the winter, the latter nation harboring these birds at a single small sanctuary near Agra, the city of the Taj Mahal. Any further degradation of this crane's habitat in China or India could very well mean its extinction.

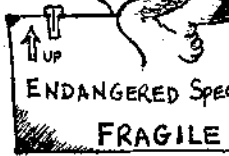
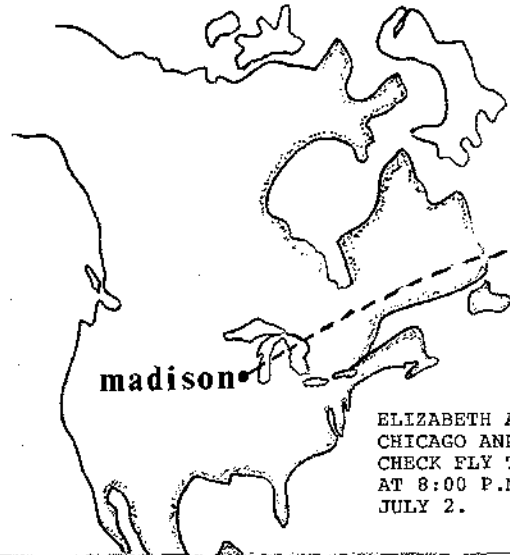
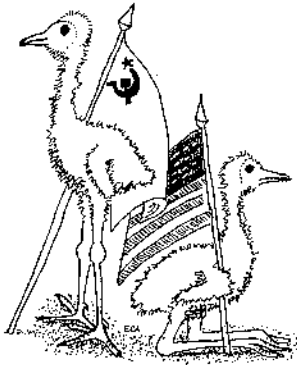
The Siberian Crane once had a wider distribution during the winter months. Iran was also a regular wintering haunt of the crane during the 19th century, but unregulated hunting and habitat destruction eventually resulted in the bird's disappearance. Today, Iran has a progressive program of conservation and many sizable refuges have been established to protect Iran's remaining wildlife. The Iranis have gone further. They are now attempting to reestablish all the species of birds and mammals once native to their country. When ICF approached Iran's Department of the Environment in 1975 with a proposal to reintroduce the Siberian Crane to Iran, the Department decided to adopt our program.

Reintroducing the Siberian Crane to Iran as a winter migrant should be a boon to the species

(Continued on page 2)



Wolf and Phyllis, ICF's adult Siberian Cranes, pose on the snow at the Baraboo headquarters. Though both birds were sexually active this spring, all ten eggs laid by Phyllis proved infertile. It is significant, however, that Phyllis laid her eggs at the same time that wild Common Cranes are nesting in Siberia, indicating that the cross-fostering project between these two species is feasible. Please see the text for more details.



ELIZABETH AND EGGS ARRIVE AT CHICAGO AND AFTER CUSTOMS CHECK FLY TO MADISON. ARRIVAL AT 8:00 P.M. DATE IS STILL JULY 2.

THE 10,000 MILE ODYSSEY OF VLADIMIR AND KYTA

(Continued from page 1)

since adequate protection can be supplied for the crane and its habitat. The trick is to convince the Siberian Crane itself that such a change is desirable. Obviously very little can be accomplished with the existing populations which winter in India or China. But what about future generations of Siberian Cranes who have not yet learned their ancestors' traditional migration route to India or China?

ICF's plan is to place the eggs of Siberian Cranes in the nests of the Common Crane, a species which also nests in Siberia but winters in Iran. The Common Cranes will hatch their foster chicks and eventually lead them to Iran rather than to India or China. The easiest modus operandi would be to take eggs from wild Siberian Cranes and substitute them for the eggs of the wild Common Cranes. Unfortunately a major snag arises in that Common Cranes nest much earlier than Siberian Cranes and already have hatched their chicks by the time their rarer cousins are laying eggs.

This is where ICF's headquarters becomes involved. By artificial photoperiod, we can induce captive Siberian Cranes to lay eggs at precisely the same time that wild Common Cranes nest. These eggs can then be flown to Siberia for the egg switch.

The eggs which ICF received this summer are the vanguard of a new captive population of Siberian Cranes from which we will eventually send eggs back to Siberia to the nests of Common Cranes.

The next three articles are detailed accounts written by those most closely associated with the many facets of the egg importation. The first is by our crane comrade and friend, Dr. Vladimir E. Flint of the Central Laboratory for Nature Conservation, USSR's Ministry of Agriculture. Dr. Flint's account is taken from a letter he wrote to us on July 16. We are grateful to Dr. Michael Petrovich of the University of Wisconsin for translating the letter from the original Russian.

A great many other people have generously donated their money, time and labor toward the egg importation. We are particularly grateful to the Walter and Olive Stiemke Foundation and the New York Zoological Society who provided funds for air travel, filming and space at the Biotron. We also thank the three airlines, Aeroflot, British Airways, and Northwest, who "bent" the rules to allow Elizabeth Anderson to carry her precious cargo in the passenger section. The crew at the U.W. Biotron in Madison were extremely helpful during the quarantine period. Finally, our thanks go to the Office of International Activities of the U.S. Department of Interior and to the Central Laboratory for Nature Conservation of the U.S.S.R.'s Ministry of Agriculture who approved the project and allowed us to carry it to a successful conclusion.



Dr. Vladimir Flint, the Soviet expert on the Siberian Crane demonstrates one means of transportation he used during his study of the crane in northeastern Siberia.

The Great Egg Heist

Moscow, July 16, 1977

Dear Friends:

And so our common cause has been accomplished! Following your telegram I felt, and still feel like the happiest man in the world, for the first attempt to transport eggs across three continents has been successfully completed!

And now I will briefly relate how everything took place and how the operation was carried out.

On June 1 Edward Nazarov, who shot a film about cranes, flew out to the location. His task was to find a pair which he had photographed earlier and to determine from it when the laying of eggs would begin. We had no other course but to accept that all cranes begin to lay eggs at approximately the same time, perhaps with a difference of a day or two. Such accuracy suited us completely. Nazarov found the pair at their old place and informed me by telegram that spring had come late that year and that the cranes had only begun to nest on June 8. Thus the day of gathering the eggs was set approximately June 29-30.

I flew out to the Indigirka (river in Eastern Siberia) together with one of my colleagues on June 12. On June 15, having joined Nazarov, who

had meanwhile already set up a blind near the control pair and was ready to start shooting film, we undertook an aerial inspection. For five days we flew around the main part of the nesting area and found 40 nesting pairs. This discovery elated us greatly and showed that my previous estimates concerning the number of cranes was correct. Among the observed pairs we picked out five which we might use in case we were forced to gather the eggs instantly at the first flight of the helicopter without any preliminary deployment of men for tracking. Around these nests there were dry hummocks on which it would be easy to land. But the contingency of a preliminary tracking party still remained in force.

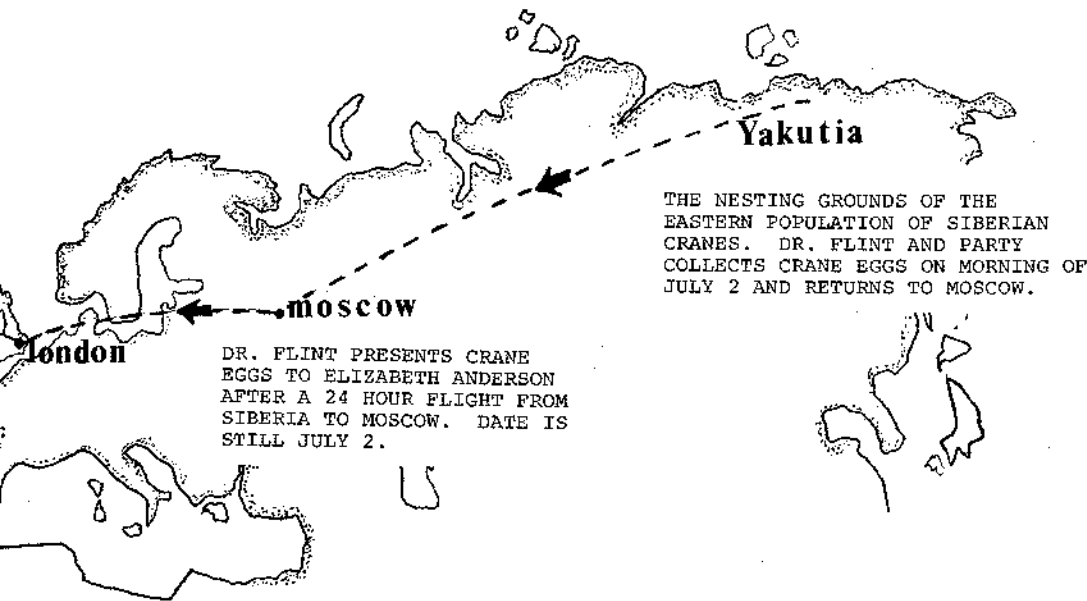
On June 21 we were joined by the remaining 6 participants in the expedition. During the remaining days we went out on excursions over the tundra, observing the roseate gulls and snipes while Nazarov went back to his cranes and continued shooting film.

On June 27 the fog came thick and it began to rain. This quite unsummery weather lasted throughout June 28, 29, and 30 as well. During that time I fell into despair. All the deadlines had passed, and there was no hope that the weather would improve. And then, on the night of July 1, the weather did suddenly change, and in the morning we beheld the sun. This was such a beautiful gift! Without losing a minute, we flew out to pick up Nazarov on the way. And there the worst possible news awaited us: Nazarov told us that in his control nest the chicks had hatched on June 29 and had already left their nest! It became clear that the cranes had somehow managed to deceive him and that we were hopelessly late. Naturally there was no more thought of any preliminary scouting by observers. We immediately flew to the nests we had designated for immediate gathering. And just imagine my horror: the fledglings in all five nests had already hatched and left their nests! We were able to find only a single chick which was about four days old. These were some of the worst moments of my life.

Nevertheless we began systematically to fly over all the nesting areas known to us. And it turned out that in the very lowest areas of the tundra the term of the eggs was significantly retarded. In any case, we found two nests with completely intact eggs, which we took. We could have taken more, but our fuel was running out, and we had to head for home.

The rest was simple. The whole way from the nests to Elizabeth's (Anderson) flight took 27 hours for eggs 2 and 3, and 25 hours for eggs 4 and 5.

It must be said that the transport crate which you sent was extremely unsuitable. First, it was



FROM RUSSIA WITH LOVE

by Elizabeth Anderson

June 27, 1977. I heaved a sigh of relief and leaned back in the seat of the Pan Am 747 as it lifted off the runway at Dulles International Airport bound for London. The hectic and seemingly endless details of the past three days were over and the GREAT ADVENTURE had begun. My eventual destination was Moscow and my task bizarre to say the least: pick up an insulated box containing the eggs of the rare Siberian White Crane, or as the Russians call it, CTEPX, and deliver the box to the University of Wisconsin's Biotron at Madison.

For three years we at the International Crane Foundation had been waiting and hoping and working for this day. Scores of letters, telegrams, meetings, and even two trips to Moscow had been necessary to finalize arrangements for the egg import. ICF's Administrator, Milly Zantow, had spent the whole last month on the telephone to be certain that we had all the necessary permits to import live specimens of an endangered species. Raisa Scriabine and Earl Baysinger of the U.S. Department of the Interior had worked hard with the State Department, the U.S. Embassy in Moscow, and the Soviet Ministry of Agriculture for the acceptance of ICF's proposal for collaborative work with Soviet ornithologists. And here I was at last, heading out over the Atlantic, for the final and shortest phase of the Siberian Crane conservation project.

Meanwhile, thousands of miles away, the Russians were also busy. Dr. Vladimir Flint of the USSR Ministry of Agriculture's Central Laboratory for Nature Conservation (CLNC) was camping on the tundra of northeastern Siberia waiting for good helicopter weather. When the weather cleared sufficiently, he and his assistants would fly around to several pre-selected nests, gather eggs from them, wrap the eggs in thick woolen socks, and place them in a large insulated box. Then Dr. Flint would take the next available flight to Moscow, where he would hand the box to me.

I landed in Moscow on Tuesday afternoon, June 28, and was met at the airport by Aleksandr Nikolaevskii who works in the Ministry of Agriculture and coordinates official Soviet-American exchanges on wildlife conservation. Also there was Tanya Shkuratova, a research biologist from CLNC who had been delegated to be my hostess and assistant. Over the next three days, Tanya and I had a busy schedule: tours of the Central Laboratory, the Moscow Zoo (where we discussed the loan of a Japanese Crane to ICF) and a wonderful

informal dinner party at the home of one of the staff members of CLNC.

Since Dr. Flint could not give us much advance notice of his arrival in Moscow, the Russians reserved a seat for me each day on a flight out of the USSR, and each day cancelled the previous reservation. Dr. Flint's party kept in touch with Moscow through telegraph and finally on July 1, the word came through that Flint would be arriving the next day, Saturday the 2nd of July, about 2 a.m.

I spent Friday evening at the home of a CLNC staff member and returned to the hotel at midnight to pack. Two a.m. came and no call. I waited until 4 a.m. and finally went to bed. At 6:30 a.m., Aleksandr Nikolaevskii called announcing, "Flint is here. With eggs!" Fifteen minutes later a taxicab sped away to the international airport bearing Tanya Shkuratova and me with all my baggage. As we careened down the highway at 120 km an hour, we caught up with another taxi and I said to Tanya, "That taxi looks as if it is going to the airport, too . . ." Then I recognized him: it was Dr. Flint straight from Siberia with no chance to change clothes, and on his lap was a large box!

Our race to the airport was in vain. My scheduled plane for Stockholm left without me, and we made a reservation on another Aeroflot flight, this time to London and on to Chicago. The delay gave Dr. Flint and me a chance to inspect the four eggs, to chat a bit and record the historic moment on film.

When the time came to board the flight to London, my baggage was weighed and the woman in charge of the scale voiced the first protest of the many that were to mark the entire trip back to the U.S. The box was too large, she said, and it would have to be stored in the hold with other baggage. Fortunately, Dr. Flint was still with

very cumbersome and difficult to handle. We will construct another in the form of a carrying case, flat, with an inner shock-absorbing system. Incidentally, regarding the shock absorption, with all that vibration in the helicopter, and even in airplane, it would have been impossible to save the embryos by holding the crate on one's knees. We constructed a system of springs and elastic bands, and then everything was just fine: the water in a glass which we placed on the crate did not even ripple, though the teeth of our men almost fell out from the vibration, particularly during the landings and lift-offs of the helicopter.

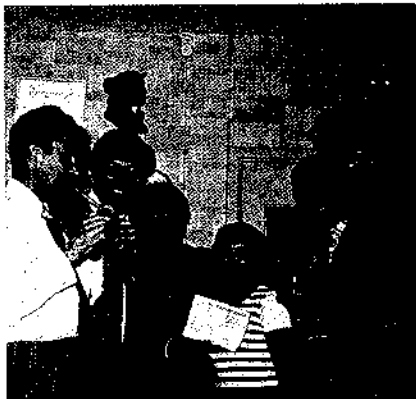
A second deficiency is the lack of a system for maintaining temperature. We installed electric cables thanks to which we could maintain the temperature within a range of 31-33° Celsius.

There were many minor difficulties which are not worth mentioning, much excitement, much fraying of nerves, but the main thing is that the job got done: two chicks have hatched and I hope that they will grow up to be beautiful birds. This was worth going through all the difficulties. Incidentally, we shot the gathering of the eggs in color film and will soon put together the entire film on cranes.

We have some other newsworthy items, but of that the next time. Meanwhile I shall wait impatiently for a detailed account of how the eggs got to the incubator and how the hatching took place.

My very best greetings to courageous little Elizabeth!

Yours,
V. Flint



Dr. Flint and his colleagues celebrate the successful completion of the Siberian Crane egg transportation with glasses of vodka. The telegram held by Flint was sent by ICF and informed him of the hatching of Vladimir and Kyta. Photo by Mark Fuller



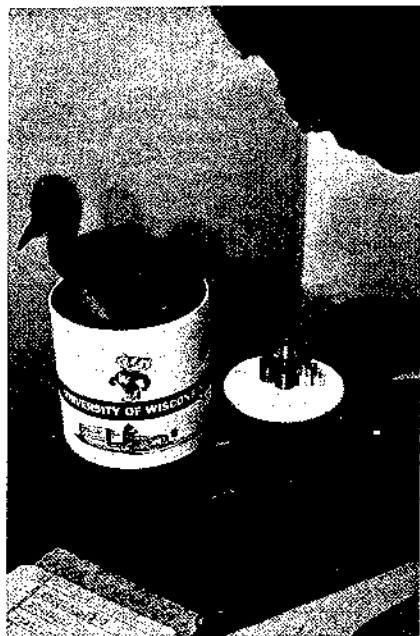
Elizabeth Anderson with Vladimir (and Kyta in the background). Vladimir is 50 days old in this photo and already is showing the first traces of white feathers in his plumage.

me and he very patiently explained that the box contained eggs of the endangered Siberian Crane (perhaps the woman had seen him speak about this project on the popular Soviet TV show "In the World of Animals"?) which had to ride with me so that the temperature could be monitored.

It worked. Triumphantly I boarded the plane with the box, and though I had to repeat the same arguments in London and Chicago (even once threatening to remove the eggs from the box and carry them with me in my blouse!), I managed each time to have the box travel with me in the passenger cabin.

When I arrived in Chicago, I was met by Dr. Moore of the Agriculture Department's Animal and Plant Health Inspection Service (APHIS) who carefully removed the eggs from their protective socks and examined each. Then he took two numbered strips of metal and sealed the box shut for its final ride to Madison, Wisconsin.

The last jog of my journey to Madison was the shortest, only 25 minutes. Waiting for me at the airport was an ICF reception party and another APHIS veterinarian, Dr. Pinkert. We all drove to the U.W. Biotron where Dr. Pinkert cut one of Dr. Moore's metal strips and carefully removed the eggs to their waiting incubator. My six-day adventure was over!



George Archibald weighs Kyta at the University of Wisconsin's Biotron in Madison. Like all cranes raised at ICF, the young Siberian Cranes were weighed and measured each day to determine growth rates and to avoid excessive weight gain. Photo by Bill Gause

Sink or Swim

by George Archibald

Fourteen hours had passed since the eggs were placed in the incubator at the Biotron, and now at 9:00 a.m. on July 3, Bill Gause and I (who would be the "midhusbands" to the expectant eggs) gently lowered each of the four eggs into luke warm water for the crucial flotation test. If a developed embryo is alive within the egg, the egg floats rather high in the water with the pointed end down, and occasionally jerks and bobs as the embryo moves and shifts position within the egg. Should the egg be infertile or contain a dead embryo, the egg floats low in the water and is motionless. We had given the eggs the night to rest before the flotation test. The moment of truth awaited. Had the precious cargo survived the 46 hour, 10,000 mile journey from Siberia?

The four eggs represented the nesting efforts of two pairs of Siberian Cranes. Two larger and

darker eggs from one pair, and two medium-sized and lighter eggs from a second. Soon after we lowered the smaller clutch in the water, both eggs started bouncing and gyrating. **THEY WERE ALIVE!!!** Bill and I jumped and shouted for joy. Next, the larger eggs were lowered into the bath. Immediately they sank low into the water and remained motionless. Too bad — the eggs were either infertile or the embryos had died at an early stage of development. We shook the two eggs gently and they made a sloshing sound confirming that they were never to hatch.

But we had two! At least all the time and effort which had been expended over the last three years had not been in vain. Since all our hopes rested on hatching these two fertile eggs, we were comforted that no better facility existed for accomplishing this feat than the University of Wisconsin's Biotron. This large square building on the southwestern end of the campus is a marvel of engineering, containing numerous rooms in which the most critical biological experiments can be conducted under precisely controlled conditions. Some rooms are built on springs to minimize vibrations. Another is surrounded by a foot of cast iron for high pressure experiments.

The Crane Foundation's room contained an incubator and hatcher which maintained the Siberian Crane eggs at 99.75° F. The room itself was kept at 98.75° F., just one degree below the incubator temperature. This was done to prevent the eggs from accidentally chilling in case the incubator malfunctioned. But there actually was little chance of that occurring. Both the room and the incubator were monitored by a central computer which continually checked their temperature and humidity. If conditions deviated as little as a quarter of a degree, the computer would notify the engineer on duty. The only task the computer could not do was turn the eggs, an action which the parent birds do several times a day and which prevents the embryonic tissues from becoming attached to the egg shell. Consequently it was up to Bill and me to turn the eggs 180 degrees every few hours. Each time we turned the eggs we also held them to our ears and listened anxiously for the first scratching sounds. Five days passed before we finally heard the wonderful rustling and crackling noises which precede the actual hatching process. We moved both eggs to the hatcher where the temperature is one degree lower and the humidity much higher than the incubator. Now began the 41-hour hatching ordeal.

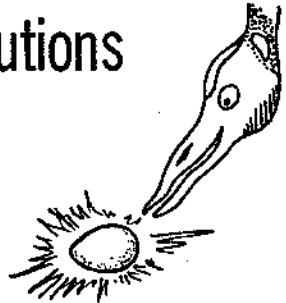
For the next four days we recorded in minute detail man's first glimpse of a hatching Siberian Crane. Our film crew consisting of John Guardalabene, Michael Camarini, and Tom Nausau had captured the arrival of the eggs in Chicago and Madison, and now they were on hand to film the hatching as well.

The first chick, Vladimir (named, of course, after Dr. Flint), emerged on July 10 and Kyta two days later. As soon as they were out of the egg, the chicks were taken to another room maintained at 70° F but equipped with heat lamps to allow the chicks to select their preferred temperature. Within four hours after emergence the chicks were dry, fluffy, and standing on their hook joints begging for food. By their 24th hour, they were on their feet and walking about. Soon they were gulping down great quantities of a commercially prepared game bird diet and were on their way to becoming mature Siberian Cranes.

We stayed at the Biotron until August 2 when health test revealed that Vladimir and Kyta were both negative for Newcastle's disease. Thus the chicks were permitted to take the last 45 mile segment of their incredible journey from the bleakness of northeastern Siberia to ICF headquarters in the beautiful Baraboo bluffs.

The International Crane Foundation is a registered, publicly-supported, non-profit organization which is dedicated to the study and conservation of cranes throughout the world. Saving cranes saves earth's vanishing wetlands.

Contributions



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