

THE BROLGA BUGLE

Editors: Terry Quale, Clive Ghosh, George Archibald

INTERNATIONAL CRANE
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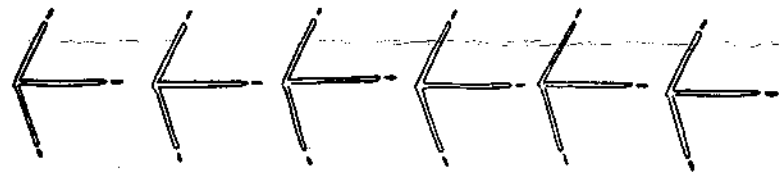
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MAKING TRACKS - news of the foundation



SIBERIAN CRANE SEASON

Sibes Arrive at ICF

Two strangers in striking red, white, and black joined the Baraboo flock this autumn. The arrival of Siberian cranes boosts our assemblage to 104 cranes of 14 of the world's 15 crane species with only the Black Necked cranes of western China missing.

Fewer than 400 Siberian cranes survive in nature and there are only 11 birds in captivity. Our Siberians are on loan from the Philadelphia Zoo and the Walsrode Vogelpark of West Germany. With no guarantees of gender when the names of Philis and Wolfe were bestowed, there was, in fact, a 50% chance they were the same sex. But luck prevailed. Not only are they of opposite sex, but they have been attracted to each other from the start.

Siberian cranes breed in May and June on Asian tundra, in the land of the midnight sun. Apparently the extended period of light during the breeding season activates the reproductive cycles of the cranes. Siberians have never bred in captivity, perhaps because midlatitude zoos holding them just didn't have enough daylight to turn on the cranes. ICF has a solution. Floodlights controlled by a timer have been installed above Philis' and Wolfe's confine. Come mid March when the wild Siberian cranes begin their 5000 mile migration north from India, the ICF cranes will be exposed to periods of light approximating that received by their migrating relatives. By late spring the cranes will benefit 22 hours of light daily. May luck prevail and provide fertile Siberian eggs come May.



Siberian cranes Wolfe (left) and Philis (right) unison call in male-typical (raised wings) and female-typical (closed wings) fashion.

"In Company with Cranes" A Flocking Success

Approximately 200 ICF members migrated to Baraboo September 11 for our annual meeting. The directors each gave a brief report on respective areas of responsibility, aided by several ICF research associates. Administrator Mildred Zantow, reported memberships have doubled in the past year to 800 with 79% from Wisconsin, 18% from other states, and 3% from foreign countries. The meeting was followed by a complete tour of the Foundation, and then a banquet at the Devi Bara Resort, where life memberships were presented to William Sauey, Marvin Westerfeld, and Winnie Zantow for their outstanding contributions of labor and material goods during the past year.

ICF Arrives with Sibes

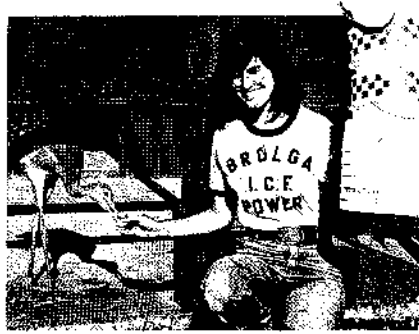
Director Ron Sauey, left for India in early October to begin ICF's third field season with the last 50 some Siberian cranes of west Asia. These cranes supposedly breed on wilderness wetlands along the lower reaches of the Ob River, just east of the Urals. Each autumn they migrate southwest to the delta of the Volga River on the northwest Caspian, and from there journey southeast to Lake Ab-i-Estada in central Afghanistan. Their final hop is over the Himalayas to northcentral India's Ghana Sanctuary.

In 1974-75, Ron Sauey and Paul Spitzer determined the ecological requirements of the cranes on their wintering grounds, providing information on which last year's proposal for the reintroduction of Siberians into Iran was based. Ron hopes to find other wintering locations of Siberians in India and to study their migration through Afghanistan. In May, Ron and Elizabeth Anderson, plan to join Soviet researchers for a field season with 300 Siberian cranes of east Asia on their breeding grounds in Yakutia.

Russians Find Iranian-Marked Common Cranes

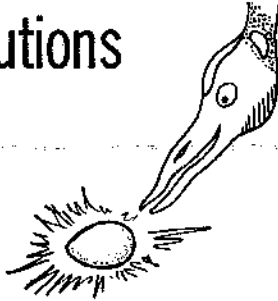
Our colleague, Dr. Vladimir Flint, of the Moscow Zoological Museum, reports that Iranian-wing-tagged Common Cranes were spotted this summer on their Soviet breeding grounds. Last winter, the Iran Department of the Environment and ICF marked 77 Common cranes wintering in southwestern Iran. The plan is to identify the northern breeding grounds of the Commons and to eventually replace their eggs with those of the Siberians. The ultimate goal is to establish a new population of cranes in West Asia that winters in Iran.

In late March, Soviet and ICF colleagues taped a television show on cranes ending with a description of the Iran project and urging that Russians in the boondocks keep an eye open for gray cranes wearing bright green wing tags. From the viewing audience of some 130 million people, five sightings of marked cranes were reported. The project is evolving. Soon Siberian cranes may again be a reality in winter Persian skies after an absence of 52 years.



Autumn is the season summer's little crane become big cranes and require less and less parental care from ICF folk. It is also a time we bid sad farewell to students that devote their summers to study and labor with cranes. Here graduate student Barbara Brown, "mother" of the chick house, bids farewell to dirty water dishes and to her little charge, Furen, a Japanese crane chick.

Contributions



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LOAN OF BOOKS

Brnx Zoo, San Diego Zoo, Walsrode Vogelpark.

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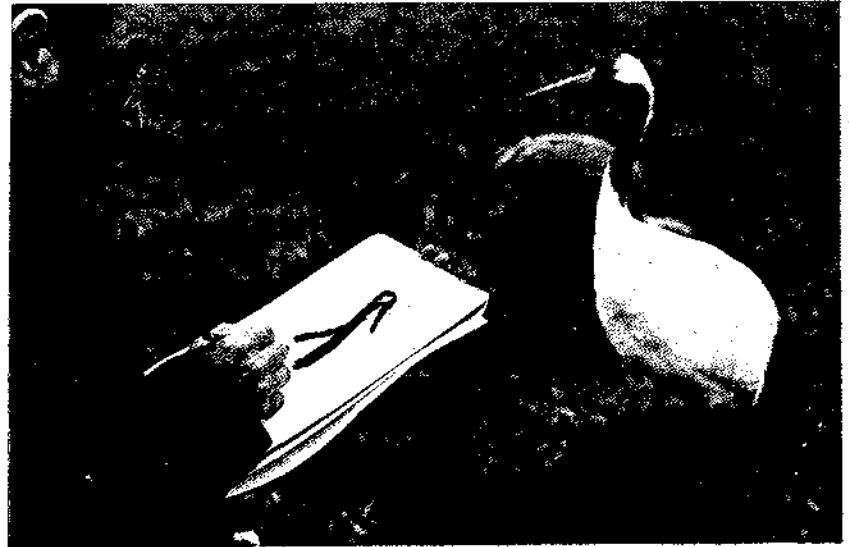
Herb & Helen Malzacher, Dorothy Mudd, Patuxent Wildlife Research Center, Ploetz Furniture, Portage Industries Corporation, Marilyn & Glenn Quale, Candl Ruppelt, Donald Sauey, Norman Sauey, Gladys & Gerald Scott, John Seaburg, Linda Smith, Lucille Thompson, University of Wisconsin, Baraboo, Mark Vladick, Nancy & David Ward, Dr. Marvin Westerfeldt, Dennis Zantow, Forrest Zantow, Winnie Zantow.

Crane Book For Sale

Editor, Dr. James Lewis of Oklahoma State University, informs us that the Proceedings of the 1975 International Crane Workshop are in press. The 360 page volume contains research reports on the behavior, ecology, physiology and other aspects of crane biology. The book can be purchased through ICF for \$5.00, that includes handling and mailing charges.

International Crane Foundation

World Center for the Study and Preservation of Cranes



ARTHUR SINGER PAINTS CRANES

Famed wildlife artist, Arthur Singer, best known for illustrating Birds of North America and Birds of the World, spent several October days with the ICF flock photographing and sketching. Arthur plans to paint a composite illustration of the 15 crane species to appear in a four page color foldout in a national magazine in spring 1977.

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. In its organizational charter, the International Crane Foundation sets forth its five principal goals:

1. Research—to determine the biological attributes and requirements of cranes both in the wild and in captivity.
2. Conservation—to protect cranes and their habitats throughout the world.
3. Captive Propagation—to establish a species bank of rare cranes to guard against extinction.
4. Restocking—to reestablish cranes within former habitat wherever feasible
5. Education—to act as a disseminator of information on cranes to the people of the world.

The International Crane Foundation currently holds the world's most complete collection of captive cranes. These birds are used as breeding stock and as subjects for behavioral and physiological research. Tours of the Crane Foundation are welcomed but only on an appointment basis. Tours can be scheduled year-round, any day of the week. For more information, contact the International Crane Foundation in Baraboo, Wisconsin.

The International Crane Foundation is completely supported by public donations. Memberships in the Foundation are the usual way of contributing to the organization. Information on memberships, bequests, and alternate ways of donating funds to the Crane Foundation can be obtained by writing directly to the International Crane Foundation, City View Road, Baraboo, Wisconsin 53913 or telephone: 608-356-3553.

Banks Island Summer

by ICF Researchers: Johnathon Reed, Christine Roth, James Bruskwitz

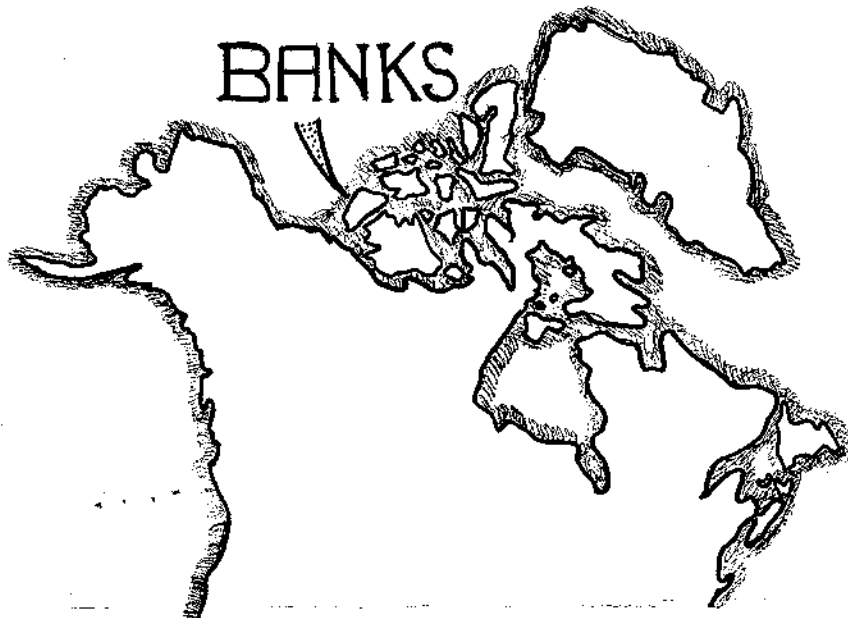
Banks Island is a windswept, treeless land, one half the size of Wisconsin in the high western Canadian arctic. Home to about 170 eskimos living in a small village on the southwest coast, Banks is perhaps the world's most northerly home for cranes, in particular the Lesser Sandhill crane. There are six Sandhill subspecies found from Cuba to Siberia and the Lessers are the gruids of the north. Sometimes known as the Little Brown Crane, Lessers benefit by a broad distribution from Yakutia, in Russia, to Hudson Bay. The entire population migrates to southwestern United States and northern Mexico for winter. The Sandhills of Banks Island are considered Lesser Sandhills; however there is evidence they are distinct from the mainland birds.

Sandhills were first discovered on Banks during an arctic exploration expedition in 1852. Seventy years went by before another expedition collected specimens for science. Years later, famed crane researcher, Dr. Lawrence Walkinshaw, found to his surprise that these specimens were smaller than mainland cranes. Spurred by a new interest in these tiny cranes, Walkinshaw journeyed to Banks in June of 1964 to see the cranes for himself. The Banks birds exhibited a peculiar habit of nesting on sand dunes while their mainland cousins used tundra marshes and moss-covered mounds. They arrived on their breeding grounds in mid May and left in mid August, contrasted to Alaskan cranes who benefited three weeks more on their breeding grounds at both ends of the breeding season. Sandwiched by time restriction of three months, the Bank birds had smaller eggs than other Lessers and the chicks were assumed to develop faster.



Edgewood Women Complete Display

Candice Ruppelt and Linda Aanonsen, biology students at Edgewood College, Madison, made a great contribution to ICF's public education program by building an 8 by 12 foot map of the world with inserts of a color photograph of each crane species and a smaller map showing its range. Not only did Candy and Linda make the display through the long hot summer days, but they raised the \$92.00 required for materials. Thanks to the Edgewood ladies, ICF tours now begin with a study of the form and distribution of the 15 species. But the display will not be limited to ICF visitors. The whole thing has been photographed in sections and prints issued to the World Wildlife Fund, India, to be reconstructed as a portable display available to high schools throughout India.



MILE-STONES

Black Necked Cranes Breeding in India

Ladakh, the most easterly region of India's most northern state, Jammu and Kashmir, marks the western limit of the Tibetan plateau and is physiographically Tibetan but politically Indian. The region has been an area of dispute between India and China for years and has been closed to everyone except indigenous tribes and military personnel. This year, the tide turned when an Indian ornithological pilgrimage led by renowned, Dr. Salim Ali, was granted permission to examine the fauna of eastern Ladakh.

Black Necked cranes reportedly bred along Ladakh lakes in the 1920s but no one had been back to check since then. Sure enough, the cranes are still there. Two nesting pairs and several other cranes were observed near Lake Chushal making this the only known nesting area for the species outside China.

Black Necks are the least known of cranes. An attractive crane midway in size between a Sandhill and Whooper, are smoky white with black inner wing and flight feathers, and of course, a black neck. Abundant when foreigners explored Tibet before the Chinese consolidation of the area,

Unfortunately Dr. Walkinshaw could only spend three weeks on Banks. Because a more comprehensive study was needed to better compare the Alaskan and island populations, we spent summer 1976 studying arctic adaptations in the breeding biology of Banks Island Sandhills. Actually, only three weeks in July could be termed summer with June, July, and August temperatures respectively averaging 32, 42, and 38 degrees Fahrenheit. But the cold, 80 mile winds, horizontal drizzle and snow were blessings in disguise for they impeded the clouds of mosquitoes that plagued us unbearably during the two days of fine weather. Despite the weather and insect vampires, Banks was a paradise for cranes and wildlife researchers. The wilderness island sur-

their fate in subsequent years remains a mystery. Undoubtedly the implementation of modern technology in Tibet has reduced many crane habitats.

IOF colleague, Lavkumar Khacher of the Bombay Natural History Society, hopes to trace the steps of Dr. Ali in 1977 to study the cranes in greater detail. Perhaps he will be able to collect a few hatching eggs for ICF?

rounded by a sea of ice, was bathed in unending daylight from mid May to mid August and the cranes were continually active throughout the short breeding season. The complete lack of human disturbance and an unobstructed view for miles over the sparse, low tundra vegetation, allowed crane watchers to follow the habits of their gruid cohabitants through summer in the Land of the Midnight Sun.

Sandhills are the first migrants to return to Banks in spring and it was a mystery how they survived on the frozen landscape before the melt in late May. Soon after our June 2 arrival, we happened upon a crane stalking about in a peculiar manner with its head lowered to the ground. Suddenly it ran a few steps and thrust its bill into a burrow. It jerked its head back and we could see a brown furry mass in its grasp. The crane had caught a lemming. It flung the small mammal into the air, ran to where it landed, stabbed it a few times, picked it up, shook it vigorously and threw it again. During the next five minutes the prey was ripped into four and each piece was swallowed as it separated. Lemmings abound on the

(Continued on page 3)



Hooded crane and its eggs in Siberia
Photo by Iuri Pukinski

The Hooded crane is one of the seven critically endangered crane species with about 3000 birds breeding in eastern Russia and wintering in Japan. In the spring of 1974, our Soviet colleague, Dr. Iuri Pukinski, discovered the first Hooded crane nest (above photo) ever recorded for science. Thanks to the generousities of Dr. Pukinski and ICF life member, Mr. Danny Weaver, the photograph was provided and 2000, 8" x 10" color prints made of this our 1977 Photo of the Year. A print will be sent to each person renewing his or her membership and to those joining ICF during the next year. Dr. Pukinski will receive 200 prints that he in turn will distribute to local people living near the haunts of the Hoodeds. The print and an accompanying brochure in Russian will bring the beauty and endangered status of the cranes to the attention of those most able to help.

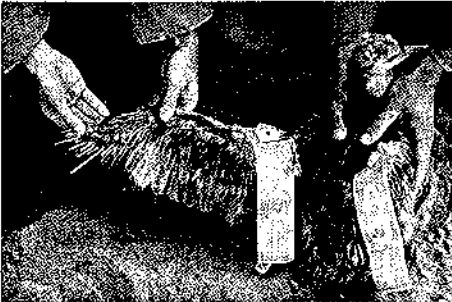
This year ICF produced the first Hooded cranes ever reared in captivity. Our choice of the Hooded as Photo of the Year, is fitting as a salute to historic happenings with *Grus monacha* these past two years.

Banks Island Summer . . .

(Continued from page 2)

tundra and therefore probably constitute the bulk of the cranes' prethaw diet.

Banks Island eskimos are also hunters, in fact. Sacks Harbour is one of the last self-sustaining eskimo communities in the arctic principally because of the island's abundance of caribou and arctic fox — food, fur, and money for the resourceful natives. Eskimo families are allowed to shoot as many caribou as needed for food. This diet is supplemented by arctic char, muskoxen, and waterfowl in addition to canned foods now available through the local cooperative, the only store in Sacks. The snow white pelage of the arctic fox spells dollars and today Sacks is known as the world's White Fox Capitol. The adaptability of



Banks Island Sandhill chick with wing tags in place.

shallow ponds that constitute the square-mile size breeding territories of the sandhill. One adult usually flew away apparently in an effort to lead humans away from the chicks. The other parent usually ran along the ground, towards the nearest dune, head down, wing drooping. The chicks usually followed this parent. Apparently escaping toward the dunes when alarmed is another adaption of the Banks Island sandhills to minimize their contact with foxes.

The fauna is tasty to the natives, but so are the natives tasty to the fauna, in particular to the Polar bear. Fortunately our camp was situated 10 miles southwest of Sacks in a tundra region interspaced with sand dunes, some distance from the ice flows where the bears hunted seals, fish, and the odd human. However, it wasn't long after our eskimo friend, Dave Nasagalowak, and his dog sled delivered and left us at our research site, that we spotted a bear out on the ice to the south. "It's the size of a small summer cottage, moving like a semi-truck on the expressway," shouted Jim. Fortunately, it was our one and only contact with the cottage.

Our tents were pitched ten feet away from one of the numerous crystal-clear arctic lakes that were often graced by Whistling swans and yellow-billed loons. We were amidst the breeding territories of 12 crane pairs. But it seemed a poor year for crane productivity for only three of the pairs nested. Two nests were on sand dunes and the third in a low grassy area. But why nest in dry areas, when marshy tundras nearby looked more like typical crane habitat and definitely supported most of the lemmings? Their nesting preference for sand dunes, seemed tied to a relationship with the arctic fox, a predator on crane eggs and chicks. The primary food item of the arctic fox is the lemming and these are not common on dunes, hence neither are foxes. Nesting on dunes is perhaps an adaptation to minimize contact between crane and fox.

Both sexes shared incubation duties, with one bird remaining on the nest about 12 hours at a time. Interestingly enough, the incubating bird always had its body oriented about 45° sideways to incident sunlight, thus securing additional heat to warm itself and the eggs. One pair deserted their nest, the two remaining pairs hatched and reared all three chicks from their two-egg and one-egg clutches respectively. Eggs from the two-egg clutch hatched asynchronously by 12 hours, and the older chick was led from the nest before the second chick emerged. However, not long after the second chick was following its parent about, we presumed the family united and a battle ensued between the siblings. The oldest chick apparently won the fight and became dominant over the younger bird, a dominance relationship that continued for the rest of the summer. Although crane chicks are precocial birds and thus able to find food on their own, they are provided additional food by their parents. An adult finds a tasty morsel and rather than swallowing it, extends it toward the chick. The chick runs to the parent and grasps the item. The dominant chick of our Banks Island pair secured most of the food offered by the parents. Correspondingly, the older chick grew much faster than its subordinate relative. We concluded that intersibling aggression perhaps functions in establishing a dominance relationship, so that the dominate bird is better assured food. In years of food scarcity the subordinate chick might starve long before the dominate individual, thus providing the adults a better chance to rear one chick rather than have both chicks starve by equally sharing the food.

Throughout the summer we observed the two crane families and weekly captured the chicks to measure growth rates. The catch was simple enough during the first three weeks, for the chicks crouched on the ground upon hearing their parent's alarm call. With sharp eyes one could see the cryptically designed cinnamon balls of fluff on the sandy background. However, as the chicks grew older they resorted to escape by running rather than hiding. They bolted at the sight of man. We spent many days chasing the elusive chicks over the dunes, through the hummocky tundra and

shallow ponds that constitute the square-mile size breeding territories of the sandhill. One adult usually flew away apparently in an effort to lead humans away from the chicks. The other parent usually ran along the ground, towards the nearest dune, head down, wing drooping. The chicks usually followed this parent. Apparently escaping toward the dunes when alarmed is another adaption of the Banks Island sandhills to minimize their contact with foxes.

But summer went all too quickly. August brought flight feathers to crane chicks, shorter days, and snowy skies to our arctic habitat. Soon after the chicks fledged, the Sandhill families left their territories and moved out over the arctic ocean to warmer climates. But we hoped our three chicks would not go unnoticed during their long migration through central North America to southwestern winter haunts. Bright plastic tags were attached to each crane's wings allowing ready identification of the Banks birds both on the ground and in the air.

And with the Sandhills went the Crane Watchers. We headed southeast back to the University of Wisconsin where we are now analyzing our data from the Banks Island summer. Our thoughts often return to that wilderness paradise of the north. Hopefully we can return next summer to learn more about how cranes survive at the limit of their northern distribution.

TSURU IS JAPANESE

Tsuru, the mystery chick of 1975, was believed a hybrid between Japanese and White Naped cranes until he molted his grey back feathers — the White Naped link — and replaced them with emaculate white. In addition, the 4 Japanese cranes produced this year all have the same gray back feathers which are obviously part of the feather cycle of the species.

Tsuru is the first Japanese crane produced in captivity in the western hemisphere and the first crane reared from an ICF-produced egg. But what about a mate for our handsome male? We are now negotiating with the Moscow Zoo that their lone female Japanese crane be sent on breeding loan to ICF. If fortune is with us, Miss Moscow and Tsuru will meet on the Wisconsin March snows.

We know of only about 300 Japanese cranes surviving in nature and 50 in captivity. The five cranes produced at ICF thus constitute a 1.43% increase in the total population of this world's second rarest crane.



Tsuru — Photo by Charles Luthan