

THE BROLGA BUGLE

Editor: Scott Freeman; Assistant Editor: Theresa Coffey

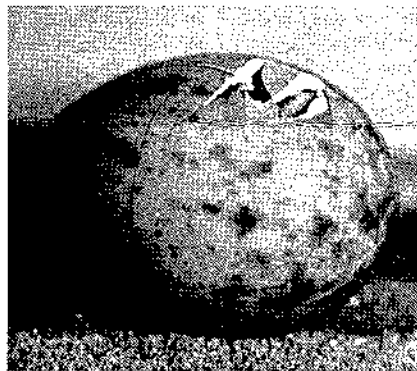
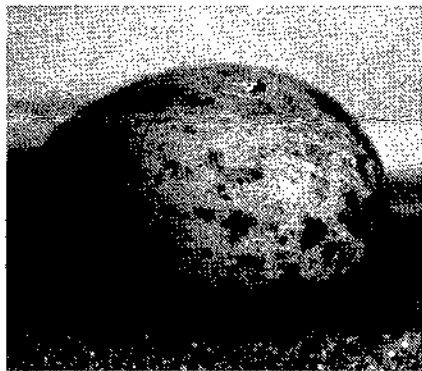
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—photos by ICF

A SIBERIAN CRANE CHICK!

Ron Saucy, Director
International Crane Foundation
Baraboo, Wisconsin, USA

... "the hatch heard 'round the world"

by George Archibald, ICF Co-founder

As the number of wild Siberian Cranes dwindled to 150 birds during the past decade two senior male captive Siberian Cranes, Wolf and Tilliman, left their comfortable home at Vogelpark Walsrode in West Germany. In secure plywood boxes they landed in the heart of America: Baraboo, Wisconsin. Wolf had survived two world wars in European zoos and Tilliman, although apparently slightly younger, was perhaps also a senior citizen (if the amount of white on the forehead of a Siberian Crane has a link with antiquity).

To round out the trio a ten year old female Siberian Crane, Hirakawa, was enroute to Baraboo from Japan's southern island of Kyushu. In November of 1969 Hirakawa had become lost on autumn migration south to the Yangtze River. She ended up on Okinawa Island where she was found starving in a ditch. She was then revived, housed, and adored by her friends at the Hirakawa Zoo.

Wolf, Tilliman, and Hirakawa assembled at ICF in an effort to breed Siberian Cranes in captivity. This effort culminated five years later on June 4, 1981 with the hatch of Dushenka. If fledged (in late August), Dushenka will be the first Siberian Crane bred in captivity. Dushenka's hatch heralds new hope for a dying species. Her hatch was heard around the world.

Breeding Siberian Cranes in captivity was a challenge — particularly since zoo records indicate the males often kill their mates in captivity and those females that do survive seldom lay eggs. To protect Hirakawa from Wolf, their enclosure was subdivided with one crane to a side. Likewise, Tilliman's enclosure was subdivided, though he benefited from a full view of Vladimira, a young female reared from eggs imported from the USSR in 1977. With females secure, ICF tried to bring the Siberians into breeding condition for artificial insemination.

The wild Siberian Cranes nest on the arctic tundra of the Soviet Union: a land of silent ice in winter and

humming hordes of mosquitoes in summer. This flat landscape receives almost continual daylight each spring, as part of the northerly latitude "Land of the Midnight Sun." We reasoned that perhaps light was the missing stimulus in inducing captive Siberians to nest at southern latitudes.

So ICF aviculturists placed floodlights over the aviaries of the Siberians. Beginning in March and April the natural plus artificial light which shone on Wolf, Tilliman, and Hirakawa imitated the daylengths of their breeding grounds in May and June. Obviously in top reproductive condition, Hirakawa responded by

laying a total of 38 eggs in 1978-1981. Wolf built nest after nest along the fence separating him from his sexy mate. Despite his interest in breeding, however, his ancient gonads just would not produce enough sperm to fertilize Hirakawa's eggs.

Finally in 1980, Tilliman began to produce sporadic but adequate semen samples, and that year four of Hirakawa's ten eggs were fertile. But unfortunately all the embryos died for unknown reasons during artificial incubation. A great step had been achieved in at last producing fertile eggs, but a giant
(continued on page 3)

DUSHENKA

News of the Siberian Crane hatch spread like wildfire. The day Dushenka emerged five television stations besieged ICF. Reporters and photographers from the major wire services and several Wisconsin newspapers awaited each peep anxiously. A national radio network called for a telephone interview. ICF's staff was amazed — and delighted — by the attention.

Within days of the successful hatch telegrams and notes of congratulations came to ICF from government officials and ICF members from all over the world. Mr. Harsh Vardhan and the Tourism and Wildlife Society of India arranged an evening program to commemorate the event. Newspaper clippings, from Oregon to Florida, streamed in. We even made the front page of the China Daily.

But of all the articles we received, an editorial in *The Christian Science Monitor* was perhaps the most beautifully written. We would like to share this article, which appeared June 8th, with all of you:

We've never wanted to be sent to Siberia, but we wouldn't mind going to it if there are any more

at home like Dushenka. To be sure, Dushenka was born in the West — in Baraboo, Wisconsin, which is about as far from Siberia as you can get, in more ways than one. But she is a Siberian crane, the first one bred in captivity. And, besides making an endangered species a little less endangered, she could give Siberia a good name. Look at that deep young eye, that ungainly grace.

Certainly she has a good name. Dushenka! It calls up Danny Kaye saying, "Ah, my little Karzink!" It calls up the affectionate tone of a Russian aunt speaking to some little dear one. The kind of tone the human species could use more of as, unlike the cranes, it has to cope with overcrowding.

Now we want to find out more about the Siberian crane. Surely, like all the cranes we know, it is a swell dancer. Okay, maybe we haven't practiced enough to match those leaps of 15 to 20 feet in the air that many cranes make — out of sheer exuberance, say some observers. But the vision of a new Siberian crane in Baraboo ought to give the world a nudge toward fun and friendship.

Dushenka, may we have this dance?

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AN EGG-STRORDINARY SEASON

by Beth Baechler and Sue Rogers, Aviculturists

The byword for ICF's 1981 breeding season is innovation. We've tried a number of new techniques in incubation and chick rearing this year, and have been rewarded with a bumper crop of crane chicks.

We used new incubation procedures in an effort to increase hatchability (# hatched / # fertile eggs). Our first new technique tried to imitate the natural parent's behavior during incubation. Since the eggs of northern-dwelling cranes cool when the parents switch incubation duties, we began putting Sandhill, White-naped, Red-crowned, and Siberian Crane eggs in a refrigerator several times a day. We cooled the eggs three times a day during the first three days of incubation and twice a day until the onset of hatching. Preliminary indications are that this procedure may help produce stronger embryos.

We also experimented with surrogate parents this year for the first time. Two pairs of Florida Sandhill Cranes and one pair of White-naped Cranes sat on the eggs of other cranes (most notably Siberian Crane eggs) as "foster incubators."

Thanks to a new incubator and these new techniques, 1981 has been a successful breeding year. At this writing, our birds have laid 83 eggs which we've incubated. Many more were sent off for research purposes as soon as they were laid. We now have 21 chicks. The breeding season, though still going strong, is now in transition: the northern species have just

ended and the southern birds are now in the midst of production.

Several new pairs of birds began breeding for the first time this year, which is always a promising development. Ise, a three-year old female White-naped Crane, paired with Casey, a much older male, and began to produce eggs for the first time. Amazon and Mercury are two birds who were caught in the wild in China several years ago, and have finally settled into ICF's habitat. So far, with natural copulation, they have produced ten fertile eggs - nine of which hatched.

Once again, Zhurka, our prolific Red-crowned Crane, laid her record number of sixteen eggs this year. She is the mother of Kuni, our first chick, whose flight feathers are already coming in. Unfortunately many of her eggs have been infertile, though we've been unable to determine the cause.

Along with our record number of chicks this year has come a record amount of work in chick rearing. The chicks demand constant attention as they spend their summer days swimming, running, peeping, catching insects, fighting dandelions, and resting in the shade. Our crew of volunteer chick mamas has contributed a great deal of time and care vital to successful chick rearing.

Thanks to new chick mamas, new ideas in incubation, and new parents, captive propagation has been a shining light in ICF's list of accomplishments for 1981.



ICF chick mamas at work. From top: Paula Smith on "sanitation patrol," Judy Fordham leading the pack, Marion Hill feeding the masses, and Virginia Murray as muppeteer (see articles page 2, 3).

—photos by ICF

A day in the life of. . .

ICF CHICK MAMAS

by Paula Smith, Volunteer

Being a volunteer chick mama at ICF reminds me of the time I spent several years ago as a pre-school instructor. Crane chicks and small tots both need to be supervised carefully, fed often, exercised daily, cleaned up after, and sent to a corner when they fail to get along properly with playmates.

When a crane chick finally emerges from its egg, wet and exhausted, the chick mama (or papa) steps in as a surrogate parent. We try to give the chick a secure, healthy environment - similar to what it would receive from its natural parents.

When the chick has recovered from its hatching ordeal, we bring it to the brooder room and place it carefully in a heated brooder box. This warm and carpeted little bungalow is equipped with a feather duster, which the crane babe can scurry under if cold or frightened. The brooder box also contains a mirror so the chick constantly watches its own reflection. Our "mirror trick" is the most effective tool we have to ensure that the chick is imprinted on cranes rather than people.

Once the chick is secured in the brooder box, our next job is to get it to eat. Although newly hatched chicks can stand almost immediately and stagger about on their wobbly legs, they have to be taught to eat and drink. While crane parents offer insects, tadpoles, and such from their beaks, chick mamas offer a nutritious pelleted concoction from long red spoons. The chick's first futile pecks at the spoon usually result in just a few pellets actually getting swallowed, but practice makes perfect and the chicks soon learn to feed - first from the spoon, and then on their own. Both the food and vitamin-enriched water is held in bright red bowls to catch the sharp eyes of hungry crane babies. We put brightly colored marbles in the water bowls and rattle them to attract the chick's attention. They have a voracious appetite!

Crane chicks grow very rapidly - to almost adult size in only three months - and adequate exercise is vital for their proper physical development. Usually on the second day after hatching we take the chick outside to the "corral" for a romp on the grass. Soon we can exercise the chicks at least four hours each day, and they even go for leisurely swims in the baby-sized pool. While outside, they learn to peck at bugs, worms, dandelions, and their chick mama's mosquito bites.

During these exercise periods we call the chicks by imitating the repeated "Brrr" or purring sounds of crane parents. It's cute to see them chasing after us, tiny wings flapping and peeping loudly as if to say, "Mama, wait for me!" But we keep our conversation and physical contact with the chicks to a minimum to reduce the possibility of imprinting on humans - which can ruin a crane chick's ability to breed normally as an adult.

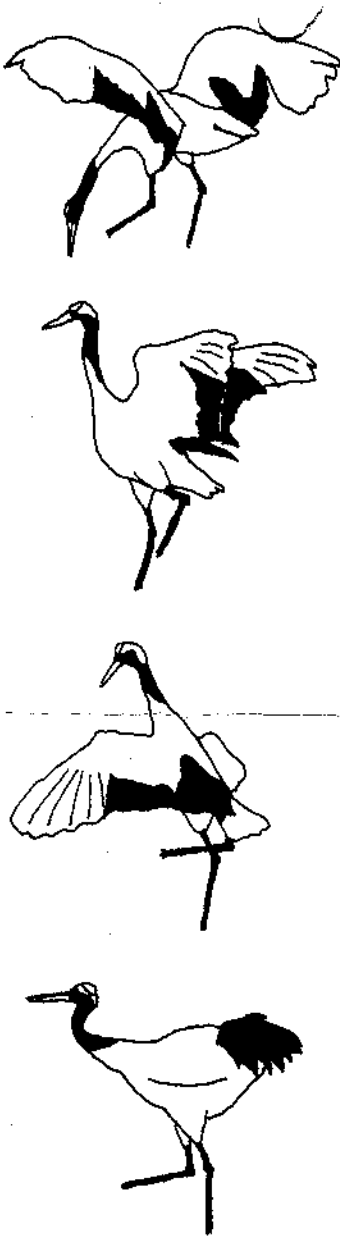
Cute as they are, most crane chicks are extremely aggressive toward their siblings and cousins. To avoid disastrous pecking bouts we have to keep young chicks separated constantly. This aggression usually diminishes after a few days, but some chicks, like this year's Kuni, remain so hostile that they have to be exercised in separate corrals. The chicks are less likely to be aggressive if we keep their bellies full and their feet moving.

After a good exercise period, but before we let them rest, we carefully weigh all the chicks. Our most critical responsibility is to note any and all abnormal behavior we observe. We carefully make notes on the physical and behavioral condition of each chick, and make recommendations for changes in their care when necessary.

Finally, the chick mama tucks her babies in for the night with one last "Brrr." Back home, we have to wonder how much the chicks will change by the time we return, and what adorable new faces will have hatched by then!

THE CALLIGRAPHY OF CRANES

by Scott Freeman, Education Coordinator



The behavior of cranes is made up of gestures and calls as beautiful and intriguing as the calligraphy of oriental peoples. Each posture the crane makes in unison calling, displaying, or dancing is like a character of oriental script. The challenge of learning to "read" this language of bows, leaps, and strutting is what lured a distinguished behavioral scientist to ICF in the spring of 1981.

That scientist, Dr. Hiroyuki Masatomi, was born and raised on Japan's northernmost island of Hokkaido, whose wetlands are home to a small but treasured flock of Red-crowned Cranes. Masatomi-san, as he is affectionately called at ICF, began to study cranes in the wild when he became Director of the Kushiro Municipal Museum in 1964.

Later, when Dr. Masatomi took a teaching position at Senshu University, he was freed to spend more time studying the birds intensively. He then began to publish a series of papers on the crane's life history and ecology which established his reputation as Japan's leading authority on the Red-crowned Crane. These studies culminated in the ethogram — a painstakingly detailed account of the species' behavior — which he and Tamaki Kitagawa published in 1975.

Last April Dr. Masatomi came to ICF to open a new chapter in his career. His goal: to begin comprehensive behavioral studies of other crane species — specifically the Stanley, Siberian, Hooded, Crowned, and Eastern Sarus cranes.

Through cool wet April and into a droughty May and stormy June, Masatomi-san sat in a blind observing crane pairs — patiently videotaping their behaviors and making notes. For weeks on end, it seemed, he emerged only to shave, eat, and change clothes before returning to the blind.

And his dedication and expertise have paid off. His ever-present videotape camera has captured remarkable sequences of copulation, dancing, and egg-laying. These preliminary observations of captive birds, which Dr. Masatomi is now carefully analyzing, can later be combined with field studies of wild birds to produce complete behavioral studies on many members of the crane family. With a sigh and a modest smile, Dr. Masatomi acknowledges that his new project is nearly a lifetime's worth of work.

ICF has been delighted to host Dr. Masatomi



Dr. Masatomi, tape recorder in hand, is ready for action.

—photo by ICF

for two reasons. First, his research is an excellent and compatible use of the birds maintained here for captive breeding purposes. And second, we've drafted him to initiate a fascinating experiment.

Sometime in the near future ICF will be transplanting — into the wild — 9-10 month old juvenile cranes raised in captivity. But by hard experience, wildlife ecologists have learned that putting captive-reared birds into the wild usually fails. What we need to do is develop a way of rearing crane chicks in captivity so they grow up with wild characteristics.

The Patuxent Wildlife Research Center has made a very promising start in transplanting Mississippi Sandhill Crane chicks from captivity to the wild (see *Bugle* 7(2)). These chicks were hatched and reared in captivity by crane parents. ICF would like to find ways of rearing "wild" chicks by human parents.

Enter Dr. Masatomi and ICF's aviculturists, now the proud chick papas of two young cranes who have never seen people. These chicks only see a muppet of a crane's neck and head, created by Baraboo school teacher Ted Hegley, which Masatomi-san or an aviculturist wears on their arm. The chicks are learning to feed from the muppet's "bill" and will, we hope, grow up behaving like wild birds.

Dr. Masatomi, ever the ethologist, is taking careful notes on the development of behavior in the isolated chicks. He will go back to Japan with data to scrutinize for many months to come. Though ICF staff will be sorry to see him go, our cranes will rejoice — they will finally be able to dance, mate, and lay eggs without being filmed in the act!

APPELLATION SPRING

ICF's bumper crop of crane chicks this spring has been an unprecedented challenge. Not only have we had to feed, house, and exercise the burgeoning flock of youngsters, but we have had to find an appropriate name for each and every one.

Many of our 1981 chicks are named after crane researchers. We have "Kuni" and "Shigeta" after Kuni Momose and Yoshi Shigeta of ICF-Japan, "Gavin" after Australia's Brolga expert Gavin Blackman, and "Cheng" after China's foremost ornithologist Dr. Tso-Hsin Cheng. A White-naped Crane chick named "Curly" celebrates the coiffure of long-time ICF researcher Shirley Russman.

A second category of names are those inspired by chick mamas and volunteers. "Smithie" (Paula Smith) and "Marion" (Marion Hill) are examples. Another substantial group of names honor patrons of ICF, like Claire Sauey ("Claire"), Mary Griggs Burke ("Griggs"), Walter Frautschi ("Frautschi"), Gerda Mueller ("Gerda"), and Doris Swartz ("Dori").

Finally, fun can be irresistible. Since Stanley Cranes were named after the British journalist who sought out a famous medical doctor in Africa, the names for our two Stanley chicks this year were obvious: Dr. Livingston and I. Presume.

—photo by ICF

State Reserve (USSR), Vogelpark Walsrode (West Germany), and Tama Zoo (Japan). Techniques developed with senior citizens Wolf and Tillman and blooming Hiramawa can also be applied to the maturing young flock, to establish a substantial and genetically diverse captive population of Siberian Cranes. Dushenka is the first of what we hope will be many dividends from the species bank now in captivity.



Dushenka, at ease.

A Sibe hatch

(continued from page 1)

step lay ahead: determining how to effectively incubate the fertile eggs.

It is common knowledge in the bird world that cranes are much better incubators than mechanical simulators. Fertile Whooping Crane eggs at the Patuxent Wildlife Research Center produce weak chicks when artificially incubated. Eggs from the same pairs of adults, when incubated by captive Sandhill Crane foster parents, produce strong chicks that thrive.

Inspired by Patuxent's example, and through the generosity of our excellent colleagues at Patuxent and at the National Zoo in Washington, four pairs of breeding Florida Sandhills were sent to ICF in the autumn of 1980. These birds would serve as natural incubators for Hiramawa's fertile eggs this spring.

A year older, but still trying, Wolf and Tillman produced fewer sperm in 1981 than a year ago. Nonetheless three of Hiramawa's 10 eggs proved fertile. All were incubated under the Sandhills or a pair of White-naped Cranes. The first embryo died early in development, and the last egg hatched but the chick died several hours later from what appeared to be a bacterial infection of the intestine. Hiramawa's egg No. 7 was Dushenka's egg. It hatched, and the beautiful cinnamon-brown colt is thriving. We're hoping that it is a she because Bazov, a male reared from the 1978 egg import from the USSR, is unpaired.

ICF reared three males and three females from the USSR-imported Siberian Crane eggs in 1977 and 1978. Perhaps some of these young birds will reach reproductive maturity in 1982 and many fertile Siberian Crane eggs will be produced. Seventeen other subadult Siberians are maintained at the Oka

Distinguished Visitors



ICF hosted a fascinating array of visitors this spring: Top left: Scott Freeman, ICF's Education Coordinator, with John Squire, Joanne Worthington, Richard Ashley and Willie (left to right). Mr. Squire and Dr. Ashley of Milwaukee's Schlitz Audubon Center and Ms. Worthington of the National Audubon Society were at ICF to discuss cooperative programs in conservation education.

Far right: Prakash Gole, Indian amateur ornithologist and author, reads from *A SAND COUNTY ALMANAC* by Aldo Leopold. Mr. Gole has studied the Black-necked Cranes of Ladakh, India under the auspices of the World Wildlife Fund, and was at ICF for more than a month to study captive propagation techniques.

Bottom left: Dushanka (Petrovich) meets Dushenka, the "little loved one." Dushanka inspired Dushenka's name, and supplied us with the English translation. Mike Putnam, who supervised the chick's incubation and hatching, looks on.

—photos by ICF



Contributions



Received April through June

Grants and Awards:

Mrs. Adolph C. Bolz, Wolf Brahm, Chapman Foundation, Exxon Corp., Findley Adhesives, Sam and Gene Johnson, LAW Fund (Lila Wallace), Edward John Noble Foundation, Schroeder Foundation, Jeffrey Short, Mrs. John C. Stedman, Wisconsin Power and Light Co., World Wildlife Fund.

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Non-monetary Contributions:

American Breeders Service, Ned Carlson, Linda Coenen, Melody Dierking, Tim Dykstel, Karen Ela, Debbie Fordham, Judy Fordham, Lyn Foster, Linda Frederick, Sue Graham, Francis Hamill, Deanna Hamilton, Marion Hill, Signe Holtz, Evelyn Howell, Jean Howell, Richard Howell, Tom Hunt, Chris Jacques, Robin Kaun, Kelley Kearns, Steve Knop, Barb Lalor, Vicki Lane, Sharon Lantis, Susan Leopold, Dr. Marge Losch, David Lovell, Donna McBaine, Darrel Morrison, Dorothy Mudd, Virginia Murray, Liz Nevers, Gay Rinnan, Arleen Rudolph, Vicki Sherer, Shelley Shreffler, John Skinner, Paula Smith, Tony Steiner, Larry Stocking, Nan Stocking, Rick Sturtz, Scott Suhsen, Dr. Milton Sunde, Laura Sweemer, Lucille Thompson, Don Vincent, Karen Voss, Dr. Bernard Wentworth, Chris Winther.

The Bottom Line

by Alice D'Alessio,
Development Coordinator

It's no secret that the economy is in turmoil. A new administration in Washington is putting its philosophies into action with unprecedented speed, leaving everyone gasping and a little uncertain. No one, least of all the economists, seems able to predict what's going to happen. It's possible that the whole structure of support for non-profit organizations may shift. There's an acute case of jitters going the rounds.

At ICF, we are perhaps in a better position than many non-profits, since we are supported 100% by the private sector — by tax deductible memberships, donations and grants. Still, the reduction of federal assistance to non-profits is bound to have repercussions that will rattle cages even in the Baraboo Hills. A stampede to the doors of private foundations and corporations has already begun. One foundation executive told me recently that requests had doubled since the beginning of the year, and that they were already being approached by educational and social service agencies who were anticipating the loss of federal support.

All of which means that we must continue to look to our most loyal, long-time friends for their support, while making an effort to broaden our membership with new friends who share our concerns; who realize that a coordinated international effort to save cranes can help all endangered species, influence wetland conservation, and promote good will between nations.

Getting our message to these potential members is vital. That's why we're delighted with our new membership mailing created with the advice and assistance of some wonderful people at Johnson's Wax. Howard Moebius, of Moebius Printing, Inc., Milwaukee, has generously agreed to print it for us as a contribution, and many people have lent us the names of bird-lovers — nearly 20,000 at last count. All that remains is a great big mailing job!

ICF members can help with the membership drive by bringing "prospects" to ICF presentations or tours, or by sending names and addresses we can use in our mailing. With your help, the flock will continue to grow!

THE WISH LIST

If you recall, last issue the staff made just one sincere wish — that all of our members would visit ICF sometime this season. And you've responded in splendid form! Tours are running twice a day every day of the week at near maximum capacity. Thank you all and do keep visiting. We all have a very special feeling about ICF members.

And now, a few summertime wishes (these items may be new, used, begged, or borrowed):

- A cassette tape recorder for use on tours and radio, and during presentations \$70.00
- Two metal garbage cans (no holes please) for mixing prairie seed each \$15.00
- A wheelbarrow for transplanting prairie plants \$70.00
- A shovel for digging prairie plants \$12.00
- A file cabinet (need desperately!) \$120.00
- A lens adapter for our camera \$18.00

Thank You!

Get 'em while they're hot

Thanks to a splendid design donated by George Gard of the US Fish and Wildlife Service, ICF now has beautiful T-shirts for sale. They are light blue and show a Whooping Crane in flight over a stand of Tamaraks. Adult sizes S, M, L, XL are \$6.50 and children sizes S, M, L are \$5.50 (prices include shipping and handling). Please accompany your order with a check or money order made out to the International Crane Foundation.

Recent Publications

compiled by Sharon Lantis,
ICF Researcher

Pomeroy, D. E. 1980. Aspects of the Ecology of Crowned Cranes *Balearica regulorum* in Uganda. *Scopus* 4:29-35.

Pomeroy, D. E. 1980. Growth and plumage changes of the Grey Crowned Crane *Balearica regulorum gibbericeps*. *Bull. B. O. C.* 100(4):219-223.