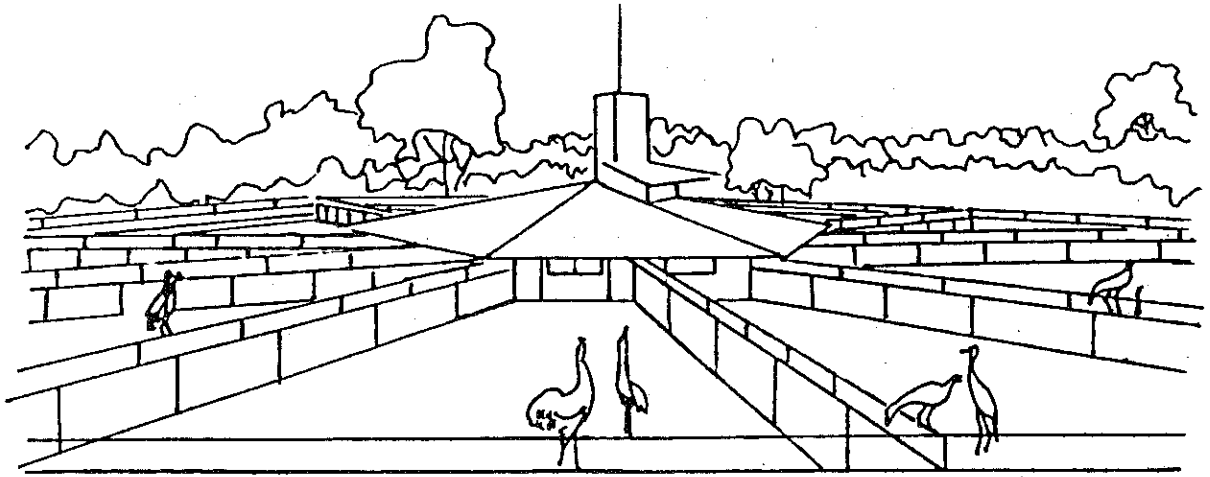




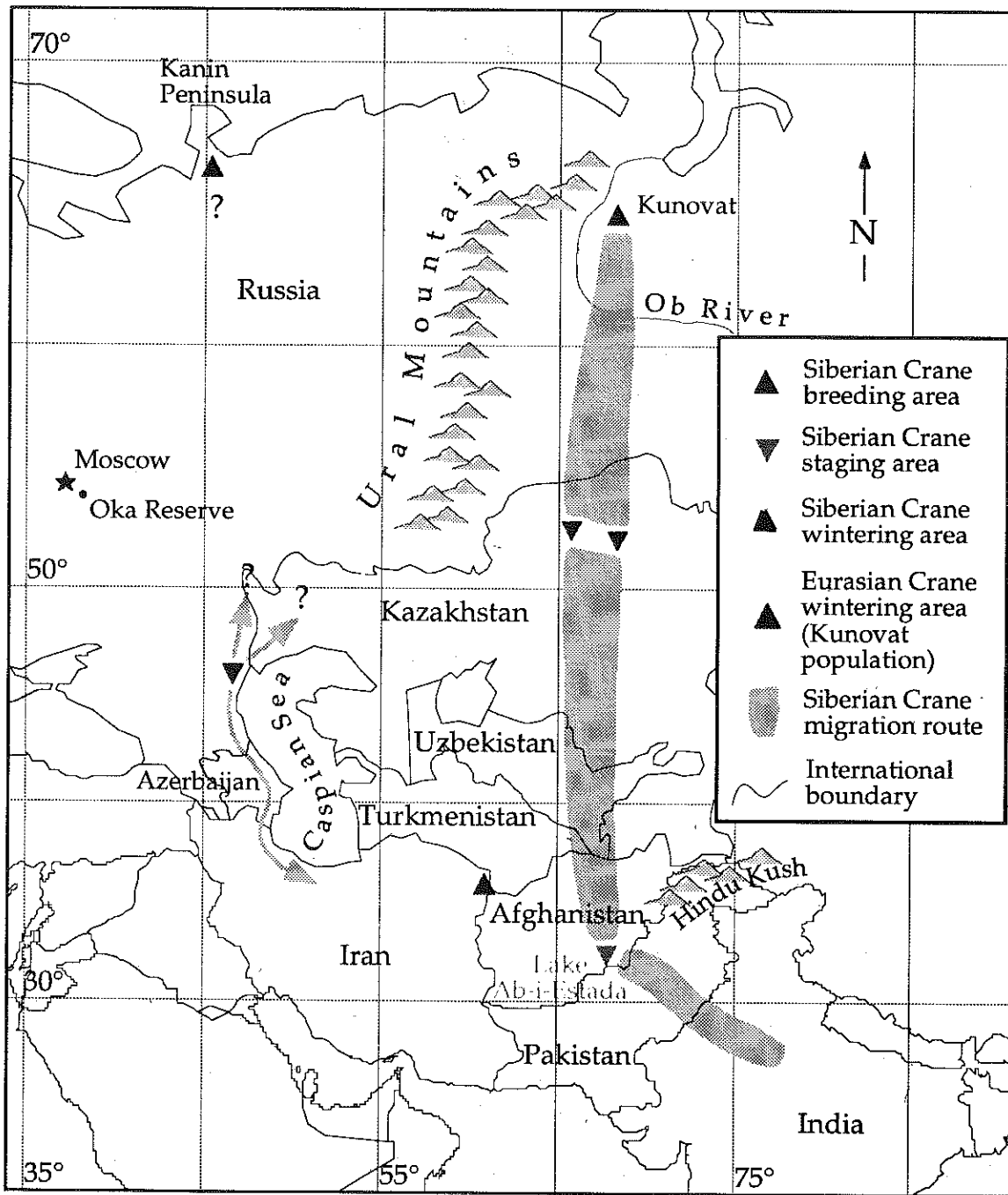
SIBERIAN CRANES

साइबेरिया के सारस



Published by WWF-India on the occasion of the Meeting of Siberian Crane Range States (4-7 November '96, Keoladeo National Park, Bharatpur, India) under the Convention on the Conservation of Migratory Species of Wild Animals (CMS), (secretariat provided by the UNEP).

Bachhu Singh : बच्चू सिंह



This map shows the range of the two western flocks of Siberian Cranes. Between the wilderness of western Siberia and the Hindu Kush mountains of Afghanistan, the Siberian Cranes migrate across three new nations—Kazakhstan, Uzbekistan, and Turkmenistan. Uzbek and Turkmen delegates reported that Siberian Cranes were seldom seen, even when crane population were higher, suggesting that the cranes move rapidly between wetland staging areas of northwest Kazakhstan and Lake Ab-i-Estada, where the cranes are more regularly observed. Courtesy : The ICF BUGLE Vol. 21 No. 3 (August 1995)

Cover sketch of the Crane-City at ICF, Baraboo, US



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WWF India has a long dedication to the Keoladeo National Park at Bharatpur. Apart from bringing out a scientific monograph on this unique aquatic habitat in a series for all the Ramsar Sites in India and also carrying out training for the managers of such wetlands in the country, WWF India is currently involved in getting the interpretation programme established here which is dedicated to the late Dr. Salim Ali.

The Survival of our National Parks and Sanctuaries is dependent on the cooperation of the village communities who live in their vicinity. A number of villages are located around Keoladeo National Park and the villagers have been contributing to its well-being in various ways. Bachhu Singh is an excellent example. He has served for a number of years with the Bombay Natural History Society and has now been retained by the Park authorities specially in the context of the captive bred Siberian cranes. His knowledge of birds and their ways is no less than that of an expert on the subject and it is fortunate to have persons like him. Infact, we need more Bachhu Singhs in our countryside to support the cause of Nature Conservation. I commend the efforts which have gone into this publication and extend my very best wishes to the author for his continuing dedication to the cause.





MAHARAJA GAJSINGH JODHPUR

Chairman, WWF-India
Rajasthan State Committee

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We are proud of India's 5,000-year-old conservation practising history. Our philosophy of 'live and let live' is unique and attaches respect to all living beings. Our Vedas have enriched the global consciousness through practical teachings. The Ishopanishada have said :

ईशा वास्यं इदं सर्वं। यत्किञ्च जगत्यां जगत्॥
तेन त्यक्तेन भुञ्जीथाः। मा गृध कस्यचित् धनम्॥

"This Universe is the creation of the Supreme Power meant for the benefit of all his creations. Individual species must, therefore, learn to enjoy its benefits by forming a part of the system in close relation with other species. Let not any one species encroach upon the other's rights."

To this day, such teachings are observed in practice in our villages and cities. People offer grains to birds, worship trees and revere the five elements of Nature. We have a community – Bishnois – that is prepared to save the Indian Gazelle and the Black Buck at the cost of an individual's life.

Siberian Cranes had been dotting the entire Gangetic plains during the early decades of this century – from Punjab to Patna. However, their decline is a sad story on the part of development schemes. Their number reached a single digit by turn of the eighties at the Keoladeo National Park, and the birds skipped this habitat for two consecutive years.

We appreciate the efforts being made by the galaxy of experts in overseas countries for devising measures to conserve this beautiful species, and hope they would attain the desired success in their endeavours.

We are happy to present in this publication, an effort made by a villager.

Bachhu Singh is among the millions of Indian villagers who represent the true Indian spirit of conservation. His studies on the Siberian Cranes at this Park should inspire our foresters and other non-government sources, and his sketches of these birds in the field should come as a lesson to our tribe of artists, to pay greater heed to the endangered lot of birds and animals. We appreciate Bacchu Singh's zeal and give him best wishes.



Thank You... And...

1970. Tejendra Kumar Bapna and Harsh Vardhan brave the wintry season, piercing the mist, led by V.S. Saxena, spot 63 Siberian Cranes in L block of Keoladeo, then a Sanctuary. We are enslaved. And start a move.

It is seventies. We generate opinion for this Sanctuary. Mid-seventies. We realise why a few US experts visit Ghana to study the Siberian Cranes. It is easier to observe them here than in the then USSR's Siberian cold regimes.

We meet Ron Sauey and come to realise the International Crane Foundation.

The Park hosts Audubon Workshop in 1976. Siberian Cranes are presented through a Paper, hinting what should be done to conserve the birds.

We meet Dr. George Archibald and Ron Sauey again. Sparks are ignited. An understanding is established. We discuss a meet on all species of Cranes. Many others hold parleys, and Keoladeo National Park hosts International Crane Workshop in 1983 within the Park. A great event to take note of. However, the newly established Ministry of Environment & Forest plays the issue down despite the fact many of us approach the then Prime Minister, Indira Gandhi who raises her voice with us. Like unison call of cranes!

India alarms the Ministry over sharp decline in population of Sibes at KNP. Measures like Satellite Transmitter are suggested. Numbers come to a single digit in nineties. Indian press and experts raise their voice again and pleas are made repeatedly before MOEF; how about permitting experiments with Satellite Transmitters?

Nothing comes forth. Siberian Cranes stop visiting KNP for 1993-94 and 1994-95. George makes an attempt with Russia, to send captive bred Sibes to KNP. Some experiments are initiated to raise possibilities of letting the captive bred birds mingle with the wild flock. Bachhu Singh is picked up by Department of Forest to keep round the clock vigil over the birds in KNP and Jaipur Zoo.

We raise the issue again as global conservation fraternity remarks: it is the last time. Four wild birds arrive in KNP on 1.2.96. We move to MOEF. Rajasthan Chief Minister, Bhairon Singh Shekhawat, and Rajasthan Patrika's founder editor, K.C. Kulish plead the case before Rajesh Pilot, Union Minister for MOEF. Permission is granted to put Satellite Transmitter on 'one' bird on 27.2.96. Is it not too late for MOEF to come forward? Yes. By the time nooses are spread in KNP it is 3.3.96. The wild birds soar high and take off on 4.3.96 morning. Alas!

We move forward with a heavy heart and drooping face. I accept the nation's failure to defend this species. And say thank you Ron, (who is no more with us) thank you George, Steven Landfried, David A. Ferguson, Meenakshi Nagendran, Alexander Sorokin, Hito Higuchi, Yuri Markin; my associates in KNP, the forest officials and staff, people who backed us, BNHS, SACON, the press persons who championed the cause. Thank you, Bachhu Singh, you deserve much more than this publication. And you are not alone. India has innumerable Bachhu Singhs in its villages. One wished they were in MOEF too!

— Harsh Vardhan



राम राम साहब... !

के वलादेव राष्ट्रीय पार्क को मैं बचपन में केवल “घना” के नाम से जानता था। इस पार्क के पूर्व में घना की दीवार से सटा हुआ मेरा गाँव जाटोली है, जहाँ मैं रहता हूँ। इसकी मिट्टी, इसके पेड़-पौधे, यहाँ के पानी, जानवर, पक्षी आदि के साथ रहते हुए मुझे घना दरअसल अपना घर ही लगता है। जाटोली ही वह गाँव है, जहाँ के लोग इस पार्क में काफी संख्या में काम करते हैं, वन विभाग में, रिकशापुलर तथा नेचुरलिस्ट। मेरे गाँव के बिना पढ़े-लिखे लोग आज 400 पक्षियों के ‘जूलोजिकल नेम’ बिना किताब देखे बोलते हैं और बिना दूरबीन के चिड़िया पहचानते हैं। इन सभी से प्रेरणा लेते हुए मैंने 11 साल बम्बई नेचुरल हिस्ट्री सोसायटी के लिए इस पार्क में काम किया (1980-1991) तथा इसी की बदौलत मुझे वन विभाग ने साइबेरिया के सारसों के अवलोकन का अवसर प्रदान किया। सर्वश्री आर.जी. सोनी, बी.एल. मीणा, ए.एस. बरार, श्रीमती श्रुति शर्मा, सर्वश्री डी.डी. शर्मा, सुनील शर्मा, कालीचरण वर्मा, भोलू अबरार खां आदि का मैं आभारी हूँ कि उन्होंने मुझे ज्ञान प्रदान किया और वन विभाग के लिए काम करने का अवसर दिया। सभी वन कर्मचारियों, रिकशापुलर तथा नेचुरलिस्ट का मैं आभार व्यक्त करता हूँ, जिनसे मैंने काफी सीखा है।

मुझे डब्ल्यू. डब्ल्यू. एफ. ने यह पुस्तक प्रकाशित करने का सुनहरा अवसर प्रदान किया है। इसके लिए मैं श्री समरसिंहजी तथा जोधपुर महाराजा श्री गजसिंहजी का सदैव आभारी रहूँगा। मेरे लघु प्रयास को आपका आशीर्वाद मिलेगा, ऐसी कामना है। घना के प्रति नतमस्तक होते हुए सभी को मेरी ओर से राम-राम साहब... !

I was born in Jatoli, a village close by the eastern wall of Keoladeo National Park. So I share this habitat. I am proud of Jatoli that has given birth to illiterate persons who can identify 400 species of birds without the aid of binoculars; most such villagers of Jatoli are serving forest department, pulling rickshaws in this Park and work as Naturalists.

I am grateful to M/s R.G. Soni, B.L. Meena, A.S. Brar, Shruti Sharma, D.D. Sharma and others for providing me the opportunity to work for the forest department and serve the Siberian Cranes, after I left the BNHS job in 1991. I am thankful to Dr. Meenakshi Nagendran, Dr. George Archibald, Dr. Alexander Sorokin, Dr. Yuri Markin, Dr. Hito Higuchi, Mr. Steve E. Landfried, and Mr. David A. Ferguson, who have inspired me in a big way. It is my luck that WWF-India has given me an opportunity to publish this booklet of mine. I am highly encouraged by Mr. Samar Singhji and Maharaja Gajsinghji of Jodhpur. I seek blessings of experts so that I may do better in future. My salutations to “Ghana.” Ram, Ram Saheb!

बच्चू सिंह

Bachhu Singh

My Experiments with Sibes...

Nearly 200 Siberian Cranes were observed wintering in the Keoladeo Park (then a Sanctuary) in 1964-65. Their number had been on gradual decline. Birds were coming. And going back to Siberia. Nothing more was known to us. They were like any other bird. Those were the days when interest in birds was limited. Tourists were negligible here. While we worked for the Bombay Natural History Society (1980 to 1991), we gained vital details about not only the Park but also about the endangered species.

We observed Ron Saucy and George Archibald coming here, observing these Cranes for hours, and discussing the matter with those who would be around them. Our eyes were opened one day when George remarked: the Siberian Cranes are in grave danger and the birds will find it difficult to survive. He strongly favoured international cooperation on the species. We were delighted to listen to several experts at the International Crane Workshop, held in this Park in 1983.

And the number of Sibes continued to decline. Experts expressed concern and demanded immediate intervention by the Ministry of Environment and Forest. Rajasthan's Department of Forest would hold meetings with the Ministry. Experts from USA would come to convince the Ministry. Satellite transmitter technology had been highlighted by the end of the eighties. How to save these Cranes ?

The number of birds reached the single digit in 1991-92 when only 6 birds were observed in this Park. ICF devised a long ranging strategy for putting transmitters on these birds, bringing captive bred birds to this Park and studying the birds on migration.

What will happen? We came to know that some captive born birds are to be received by

the Park from abroad. And one day I was asked to go to Delhi to receive the birds. It was quite sensational.

6.1.93. 6pm. We arrived at the Park. Two wooden boxes were in our truck. People around us were very anxious to see the birds. The boxes were taken inside the Park towards the E block. Dr. Mini Nagendran led the mission, wore crane-costume, and took out the birds, one by one, into the aquatic habitat, finally to be kept in a specially constructed enclosure, placed amidst the marsh. Its bottom was hollow so that the birds could stand in actual aquatic conditions. Like a fast moving movie, we saw birds coming from abroad, travelling to Bharatpur, and taking their place in this marsh. It happened within hours. Great, remarked Mini, as I was introduced to her as a crane-assistant. I wonder how it happened!

Mini and myself got busy in feeding the cranes the same evening. She taught me what to do and how. Especially how to introduce aquatic vegetation to these chicks in a different habitat which they had never experienced before. I had thoroughly known about our Park's vegetation by dint of my work with BNHS. And I knew what these birds preferred, which was available in abundance here like tubers of:

Scirpus tuberosus (motha),

Elaeocharis plantigenum (polangi)

Cyperus rotundus (nagar motha)

Nymphaea pubescence (kamal)

Nymphaea nauchali (kamal)

I learnt from Mini innumerable things. She was always in the field. So was I for a decade and a half, and being a villager (hailing from Jatoli, the village sharing its boundary with this Park),

I knew well about our grasses, birds and animals. Mini was very kind to me and started informing me details about these birds. It was first time in our history that one was able to approach Siberian Cranes. I learnt from her that both these birds were male, one was White, born in Russia, another was Bugle, born in USA. We realised their aspects as we treated them in various ways while weighing them, measuring their parts, and taking their blood samples.

I was amazed to see how a radio transmitter was applied on the back of Bugle on 6.3.93. The excitement intensified when I started handling the radio to receive the message about possible location of the bird in question.

Before we could concentrate more, these two birds were shifted to the Jaipur Zoo under the supervision of K.K. Sharma, Mitthu and others. They were reintroduced in the Park in October '93, when we waited for some more surprises.

10.1.94. Two more birds were received in the Park: Boris, female, born in USA, and Gorby, female, also born in USA. On 14.1.94, two more Siberian Crane chicks were received by us: Billy, female, born in Russia, and Bushy, female, also born in Russia.

Our work suddenly came under pressure. Ensuring safety to birds was not important as observing them throughout the day. I was soon asked to camp by the edge of the lake during nights so as to note behaviour of these captive born chicks here. By now we felt well inspired as other than Mini, we had Dr. Alexander Sorokin from Russia to teach us new lessons. Both these experts treated us like their close friends. They braved odd conditions for the sake of these birds. We got thoroughly inspired by each of their activity and learnt many such things which were never dreamt by us.

The wild Siberian Cranes had not arrived during 1993-94 and the season was coming to an end.

Entire Park discussed and debated the question - why the wild birds had not arrived, and when will they be landing here. Speculations were made by our forest colleagues. Experts at Jaipur and Delhi would remain in contact with overseas experts to find out details. In vain. The wild birds skipped the Park. It was first time that the Park missed its glory. So much had the interest been generated in the species, that the issue remained hot for months in India.

As the winter declined, on 4.3.94, Boris, Gorby, Billy, and Bushy were transferred to Jaipur Zoo. White and Bugle were selected to be kept in the wilderness of the Park so as to realise effects of Indian summer on them. I was ordered to go to Jaipur and remain with the four overseas guests, as perhaps, it was feared that the existing staff at the Zoo would find it difficult to cope up with the pressure of the VIPs. I was indeed anxious to spend time with them though staying at Jaipur was not my cup of tea as I was to be detached from my Park and my family.

In Jaipur, I was to live within the Zoo premises, round the clock, and keep a strict vigil over the birds, not letting them know that they were under observation. I received excellent cooperation from the Zoo staff and K.K. Sharma was always very helpful. The Department of Forest was genuinely helpful to me as it did not get any one else to care for cranes. As I had no job after leaving the BNHS project (which was over in 1991), I looked forward for an opportunity to display my dedication, and hoped that one day I could be absorbed in the Forest Department, precisely in this Park for which I was determined to give away my blood. The Department could not engage me due to certain official procedures.

Luck, however, favoured me. I do not know how. Harsh Vardhan came forward to evolve an equation to ensure some sort of retainership allowance for me in lieu of my services at the Jaipur Zoo to care for the cranes. So I reported

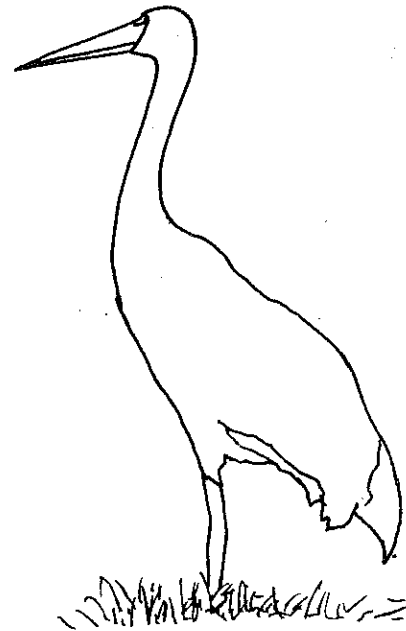
to both K.K. Sharma of Forest Department in the Zoo, as also Harsh Vardhan of Tourism & Wildlife Society of India, and WWF- India.

It was harsh summer, Living at Zoo round the clock was really a difficult experience. I had no holidays. No travel allowance to visit my family in Bharatpur, and no one to share my job when I wished to go home. However, the stay at the Zoo was very rewarding. My observations of the captive cranes belied some so far narrated truths about these birds.

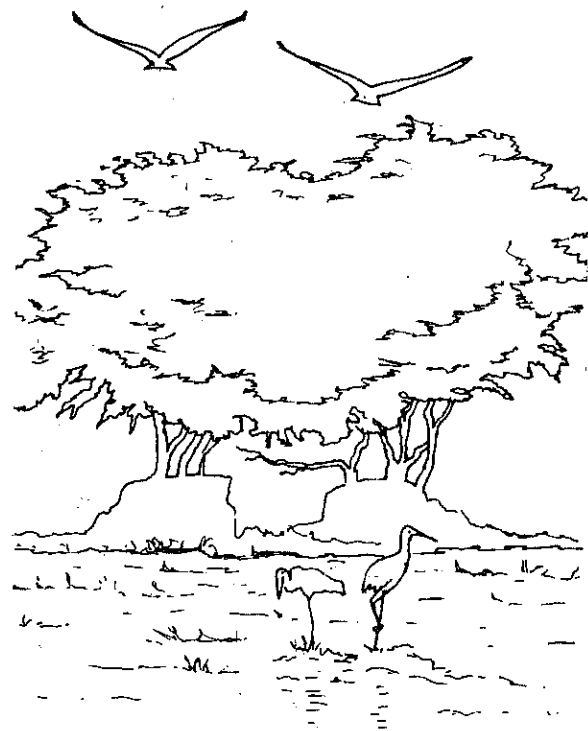
My stay at Jaipur Zoo was for nearly eight months during 1994, the year KNP did not receive a single wild Siberian Crane. Prior to this, and after the stay at Zoo, I was put around the captive bred chicks, released in KNP, to record observations. I reported to both Dr. Mini Nagendran and Dr. Alexander Sorokin. I also got associated with Dr. Yuri Markin, who was another expert from Russia and came to assist the crane conservation project. I was to report every morning to A.S. Brar, Deputy Chief Wildlife Warden of KNP, who used to give me direction about the day's programme. He gave me assignment on Blacknecked Stork which was also executed by me. From dawn to dusk, I remained in the vicinity where the Sibes would be found.

Going by the dykes, keeping myself hidden, with the forest department's binoculars, I would keep a constant vigil on the Sibes, As per the forest officers' directions, I noted their behaviour in diaries and also made sketches on my own. I thought others would be appreciative of my efforts and I shall be able to tell everyone what had been my observations. The diaries now number 16, sketches about 40.

I was given yet another assignment by A.S. Brar – to evaluate the biomass concentration in the lake beds of this Park. This I executed for more than a year. It was another scintillating experience for me, for which I thank the department.



Siberian Crane



SIBERIAN CRANES AT KEOLADEO NATIONAL PARK

Wild birds arrival	Date	Details of captive born chicks/sub-adults introduced
Nil	6.1.93	<ul style="list-style-type: none"> • White (Russian born), male, weighing 6 kg 300 gm, having blue ring on right leg, and an aluminium ring on left leg. • Bugle (US born), male, weighing 6 kg 600 gm, having blue ring on right leg, and an aluminium ring on left leg.
	6.3.93	<ul style="list-style-type: none"> • Radio transmitter was applied on Bugle. Both birds lived in the KNP in the wild.
	10.1.94	<ul style="list-style-type: none"> • Boris (US born), female, weighing 5 kg 600 gm, having white ring on right leg, and an aluminium ring on left leg. • Gorby (US born), female, weighing 6 kg 100 gm, having green ring on right leg, and an aluminium ring on left leg.
	14.1.94	<ul style="list-style-type: none"> • Billy (Russian born), female, weighing 5 kg 200 gm, having yellow ring on right leg, and an aluminium ring on left leg. • Bushy (Russian born), female, weighing 4 kg 600 gm, having blue ring on right leg, and an aluminium ring on left leg.
	4.3.94	<ul style="list-style-type: none"> • Boris, Gorby, Billy and Bushy were shifted to Jaipur zoo to provide security. <p style="margin-left: 20px;">White and Bugle were kept in the wild in KNP.</p>
	9.7.94 (1 bird dies, 5 left out)	<ul style="list-style-type: none"> • White died in the wild in KNP, attacked by a Blacknecked Stork. Bugle was left alone in the wild.
	10.7.94	<ul style="list-style-type: none"> • Bugle was shifted to Jaipur zoo.
	11.7.94	<ul style="list-style-type: none"> • A partition was created in the zoo enclosure to provide separate area for Bugle from the other four birds (Boris, Gorby, Billy and Bushy).
	20.7.94 (2nd bird dies, 4 left out)	<ul style="list-style-type: none"> • Bushy died in the zoo enclosure as it took flight and hit against the wire mesh. • Gorby was found coming closer to Bugle though they remained separated by a wire-mesh partition with grass cover. It appeared they developed intimacy. <p style="margin-left: 20px;">Billy and Boris were found remaining separate.</p>
	22.10.94	<ul style="list-style-type: none"> • All the four birds were brought back to KNP, kept in an enclosure in K Block (Billy, Boris, Gorby and Bugle).

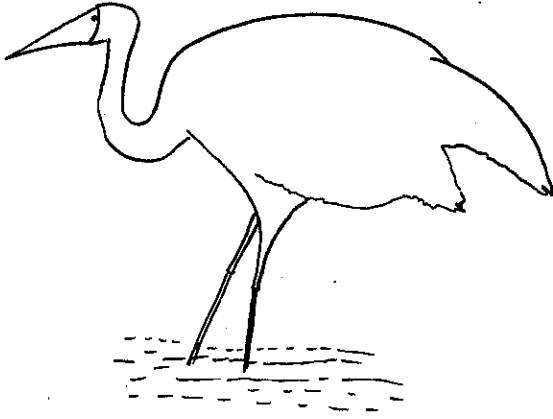
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- 10.11.94
- All the four birds were released in the wild in K block.
 - Billy moved on to E block to feed with other ducks and common cranes while Boris, Gorby and Bugle remained in K block, feeding with ducks, but each remained independent in the wild.
- 12.11.94 (1 bird flies away 3 left out)
- Boris flies away from KNP, seen last at 7 am by Bachhu Singh. Bholu and Srichand reported seeing Boris at 4.20 pm in E block, preening with common cranes. However, Boris was not reported in the Park again.
- July '95
- The three birds were found missing from KNP. They were observed feeding and also roosting outside the park for several months :
 - Billy flew out of E block towards Aghapur, Darapur, Uttu Gharoli regions and remained there; about 20 km away south-east of KNP.
 - Gorby and Bugle (who appeared having formed a pair) flew out of K Block towards Kalyanpur, Ajan and Banji regions and remained there, about 10 km away south-west of KNP.

However, some days they were found reporting back inside KNP, often going out for feeding into agriculture fields in morning only (6 to 9 am).

 - The three birds (Billy, Gorby and Bugle) found soaring in sky of KNP at about 10.30 am, giving alarm calls in the air.
 - After four hours Billy returned to KNP in E block. However, Gorby and Bugle did not report back in KNP.
 - Search was made to locate the missing birds which were found feeding in Ajan Bund.

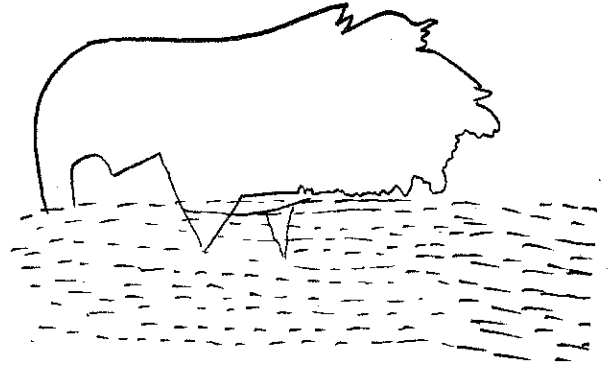
They were found feeding and also roosting in the countryside, south-east and south-west of KNP; Billy around Kalyanpur, Uttu Gharoli region while Gorby and Bugle around Uncha Gaon, Ajan village regions.
- Oct. 95 (4th bird flies away, 2 are left out)
- Gorby was found missing from the village scene where it had been feeding with Bugle. However, Bugle was observed in the same region in close proximity of Indian Sarus cranes.
- Nov. 95
- Bugle returned to KNP and commenced feeding in E block.
 - Billy remained outside KNP, towards Saidpura and Sikrauda villages, on road to Rupbas.

4 wild birds arrive in KNP (one pair with its young one and one adult)	1.2.96	<ul style="list-style-type: none"> • Four wild birds landed in E block (where Bugle was also present). The chick had a white band on right leg. • The pair with its young one adopted E block for feeding and roosting, while the lone adult male took shelter in K block.
	Feb'96	<ul style="list-style-type: none"> • The wild pair chased Bugle out of E block (the male came nearer and attacked Bugle with its beak, spread its wings and kicked Bugle with its leg). • Bugle settled in K block where the wild male bird also chased. Bugle out of the block (it flew towards Bugle to attack). Bugle settled in L block. <p>Note : The wild pair did not like presence of Bugle in the same territory as it wanted to protect its chick.</p> <ul style="list-style-type: none"> • The lone wild adult male did not like presence of another male (Bugle, captive born with leg bands in both legs) in its territory.
	14-16 Feb. 96	<ul style="list-style-type: none"> • Billy was found missing in the Saidpura region. It had adopted a very extensive territory.
	16.2.96(5th bird flies away, 1 left out)	<ul style="list-style-type: none"> • Bugle could not be observed in KNP. It flies away.
	26.2.96 (6th bird flies away, none left)	<ul style="list-style-type: none"> • Billy was observed near Kalyanpur, outside KNP. But could not be traced after this.
	3.3.96	<ul style="list-style-type: none"> • The four wild birds were in F block when efforts were made to spread noose to capture one of them. Instead of a Siberian crane, a common crane got trapped in the noose. At about 5.20 pm the four wild Sibes soared in the air, took a long flight and were observed settling in K block at a time they were enveloped in darkness.
	4.3.96	<ul style="list-style-type: none"> • The four wild birds were observed in E block, all four together preening. They were observed from 7 am to 9.30 am. They took off and settled in F block at about 11 am in the territory of the Indian Sarus crane pair (with a chick). The adult Sarus chased the wild Sibes, they took to air, gave alarm calls, took four-five rounds of the entire Park (E, K, D, B and L blocks), gave alarm calls and flew away. They departed towards north-west (in the region between Shanti Kutir and Mallah village). Farewell!



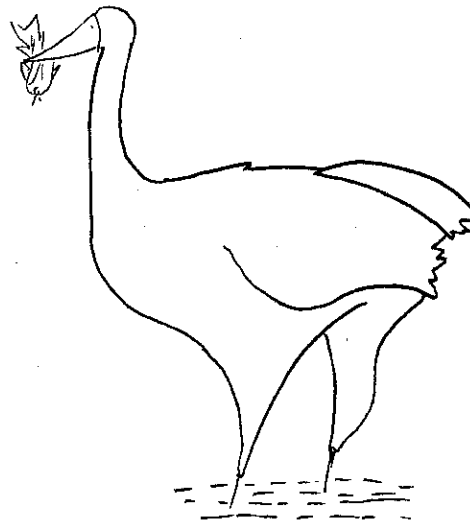
Bugle being taken from the wild habitat into its cage at KNP. Feeling sad to enter the cage.

केवलादेव पार्क के खुले वातावरण में से जब बिगुल को पिंजड़े में दाखिल कराया गया तो उसने अफसोस ज़ाहिर करते हुए ऐसी आकृति बना ली।



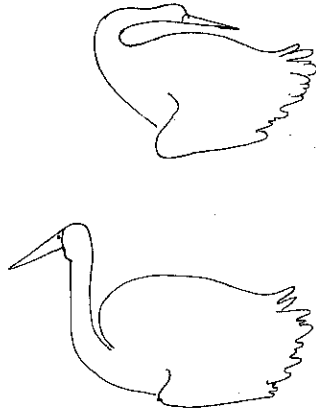
Bugle in 40 cm deep water, trying to pick up a fish; water touching its belly. The birds stay in 10-20 cm deep water while they dig out tubers.

40 से.मी. गहरे पानी में बिगुल मछली तलाश करते हुए। जब यह पक्षी ट्यूबर तलाश करते हैं तो 10-20 से.मी. गहरे पानी में रहते हैं।



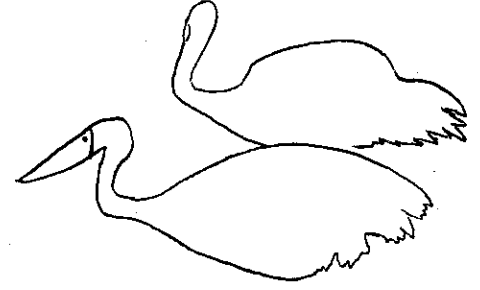
Bugle is very happy ! He got what he wanted : a fish
: He adopts a unique posture to express his jubilation.

अति प्रसन्न, बिगुल ! इसे मछली प्राप्त हो गई है
न। प्रसन्नता व्यक्त करने के लिए एक विशेष मुद्रा अब इसने बना
ली है।



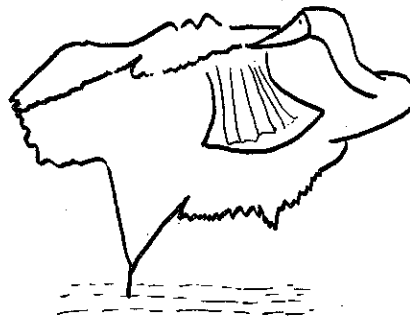
Gorby and Bugle sitting in a dry area after having fed well in the aquatic habitat.

गीली एवं पानी से भरी हुई पार्क की झीलों में भरपूर भोजन कर चुकने के बाद गोरबी एवं बिगुल सूखे इलाके में बैठ कर सुस्तारहे हैं।



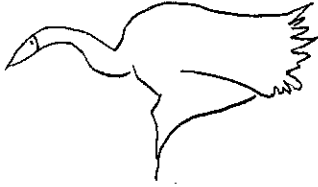
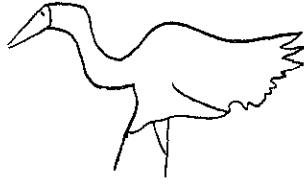
Nearness shows they have formed a pair. Bugle and Gorby sitting together in a dry habitat.

समीप विचरण करने का मतलब ? जोड़ा बन गया ! बिगुल और गोरबी जोड़े के रूप में सूखे क्षेत्रों में।



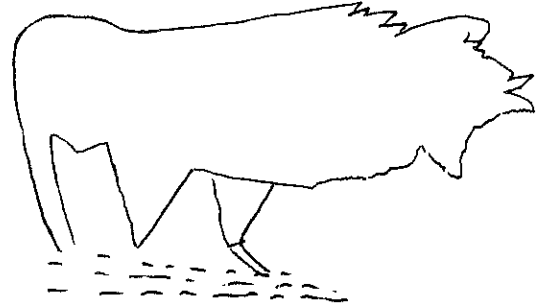
Gorby is preening in the wild at 9 am.

सुबह 9 बजे गोरबी अपनी पीठ खुजाता हुआ।



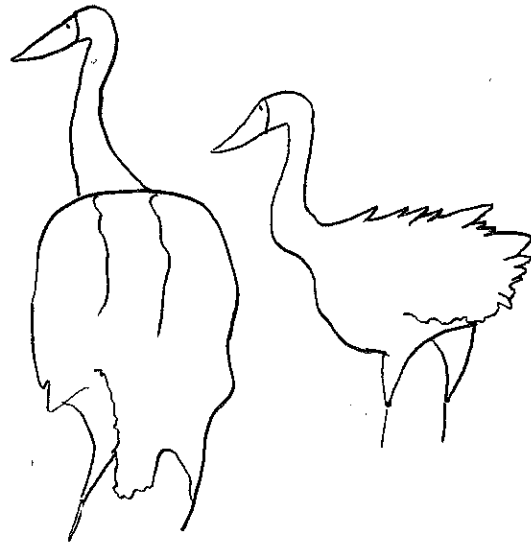
Gorby and Bugle in a dry area, where they got grasshoppers to eat.

सूखे क्षेत्रों में गोरबी एवं बिगुल जहाँ इन्हें टिड्डे खाने को मिल जाते थे।



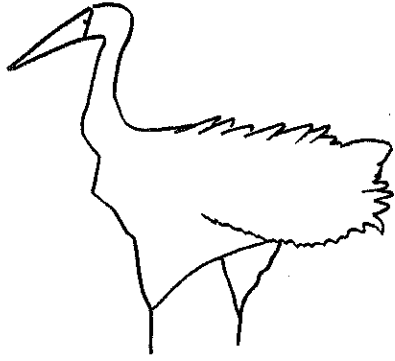
Billy in Aghapur region, outside KNP, digging for *Nymphaea pubescence* and *Scirpus tuberosus* (11.7.95).

11.7.95 को बिली पार्क के बाहर अघापुर क्षेत्र में जहाँ वह कमल एवं मोथा घास के पौंदे में स्थित गांठों को कुरेद कर बाहर निकाल कर खा रहे हैं।



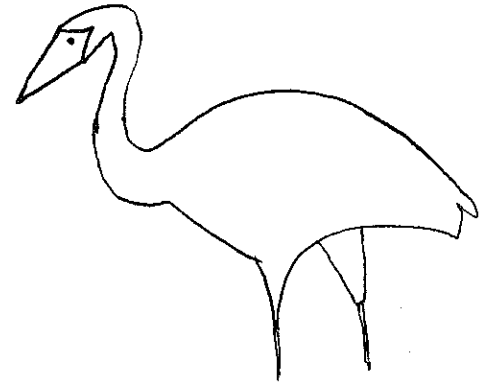
Gorby and Bugle feeding inside the Ajan Bund (20.7.95) in association with 16 Indian Sarus Cranes. This place is about 10 km south of their natural territory in KNP.

गोरबी एवं बिगुल पार्क से बाहर जाने लगे हैं, 20.7.95 को अजान बांध में 16 भारतीय सारस क्रेन के समीप अपना भोजन तलाश करते हुए।

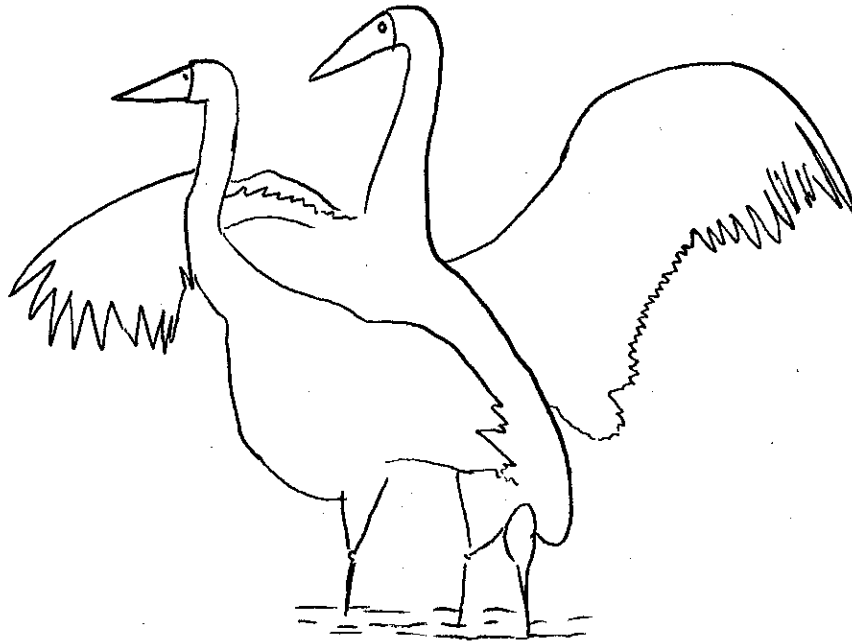


Billy is stirred in E block of KNP because it heard unison call of the Indian Sarus Crane in the same territory; it felt isolated without a male.

बिली ई ब्लॉक में चौकन्नी हो गई : भारतीय सारस क्रेन के जोड़े ने समीप में ही अपनी सुरीली धुन छोड़ी थी, बिली को अपना अकेलापन अखरने लगा।

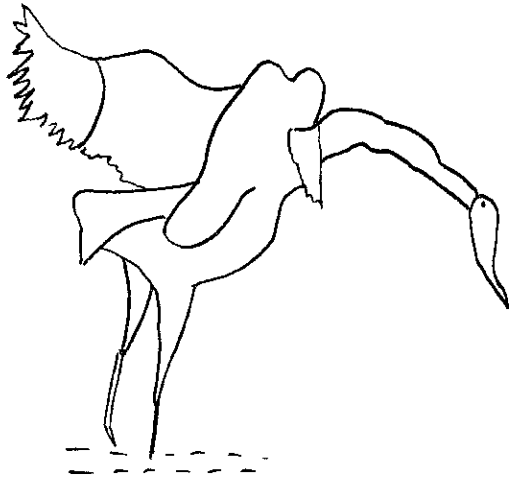


One of the captive bred Sibes in a dry area of KNP, searching for eggs of Stone Curlew and Redwattled Lapwing. He was observed eating their eggs on 6.5.95. साइबेरिया के सारस का एक शिशु 6.5.95 को पार्क के सूखे क्षेत्र में स्टोन करल्यू एवं रेडवैटल्ड लैपविंग के घोंसलों में से अण्डे उठा-उठा कर खाते हुए।

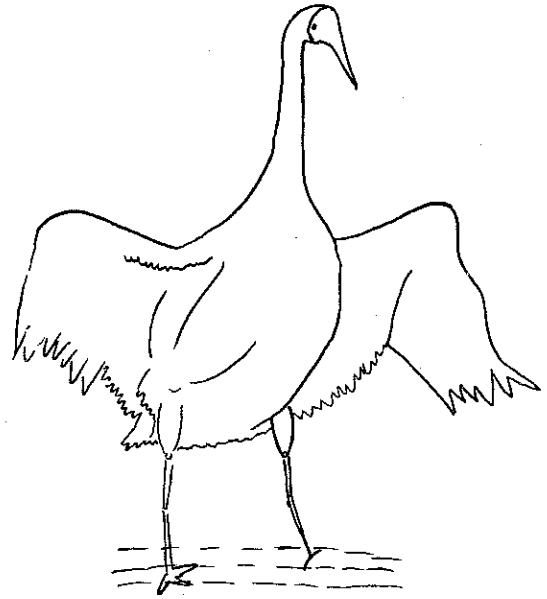


Bugle and Gorby roosted in Ramnagar region, outside KNP (27.8.95).

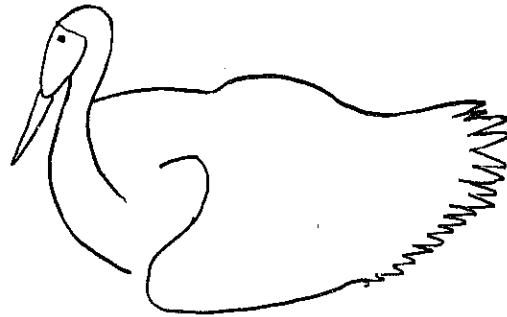
पार्क के बाहर रामनगर क्षेत्र में (27.8.95) बिगुल और गोरबी रात-रात भर रूस्ट करते थे।



An animal or a big bird was daring to come too close. So Bugle prepared to unleash its final attack (6.11.94).
 शायद कोई जानवर या बड़ा पक्षी समीप आने का प्रयास कर रहा था, अतः बिगुल ने उस पर 6.11.94 को अपना आक्रमण यों किया।

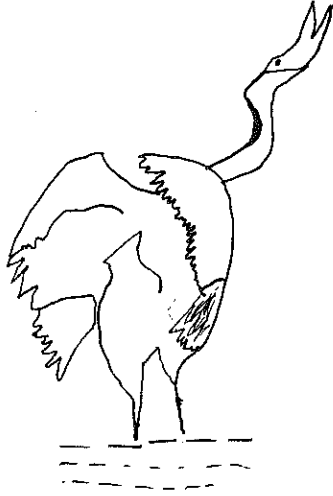


Faced with a jackal or a turtle in front, Bugle spreads its wings to enlarge its size to ward off the danger. The opponent did slip away from the bird (3.2.95).
 अगर सामने गीदड़ या कछुवा आ जाए तो क्या करें ? बिगुल इस प्रकार अपने पंखों को चौड़ा करके अपना आकार विशाल करता है ताकि आगन्तुक परे हो जाए (3.2.95)

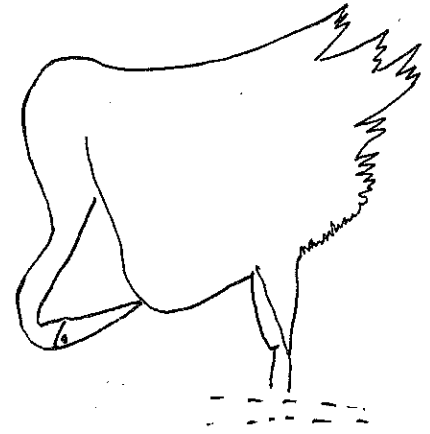


The Sibe would sit down and stand up intermittently to declare that it was his territory : do not come close, please (3.12.94).

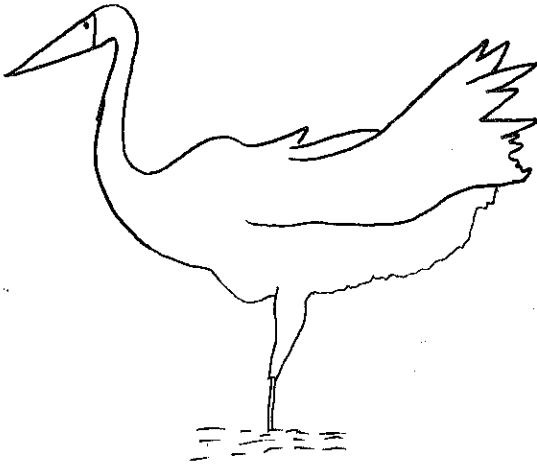
जब परीक्षण के लिए हम तनिक नजदीक पहुँचते तो साइबेरिया के सारस बार-बार उठ-बैठ कर यह जाहिर करते कि, यहाँ मत आओ, यह मेरा क्षेत्र (टैरिटरी) है (3.12.94).



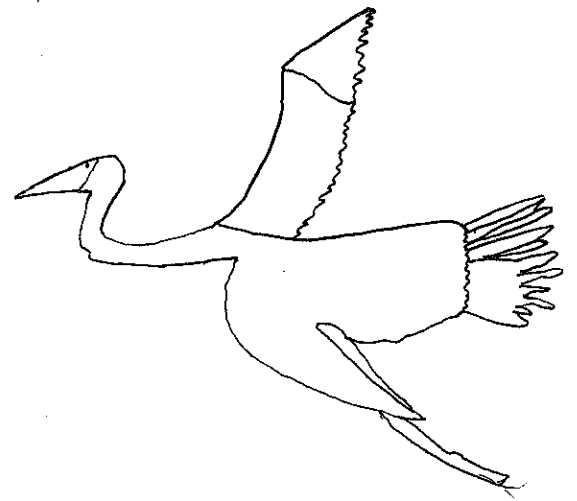
The Sibe expresses jubilation and gives its call, after driving away the intruder in its territory.
 विजेता की भांति साइबेरिया का सारस अपनी प्रसन्नता व्यक्त करता है क्योंकि उसने अपने क्षेत्र (टैरिटरी) में से किसी अनावश्यक जानवर को खदेड़ बाहर कर दिया है।



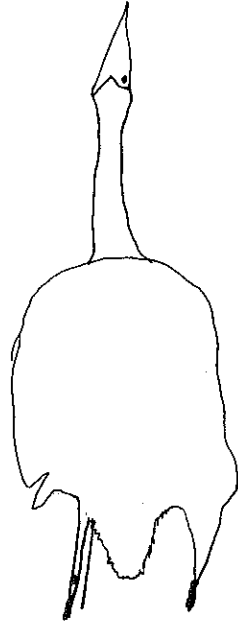
It bends its neck and touches the breast with its beak, before giving the unison call (4.6.94).
 बांसुरी की महीन तान जैसा अपना गायन आरंभ करने से पहले, यह क्रेन अपनी लम्बी लाल चोंच को झुका कर सीने से स्पर्श कराता है, फिर चोंच तथा गरदन को आकाश की ओर ले जाता है (4.6.94).



After driving away the intruder, the Sibe is in full command of its territory. The male displays such a habit (4.6.94).
 अनावश्यक तत्व को बाहर निकाल देने के बाद यह साइबेरिया का सारस पार्क में अपने क्षेत्र (टैरिटरी) पर अपना पूर्ण अधिकार जताते हुए (4.6.94).

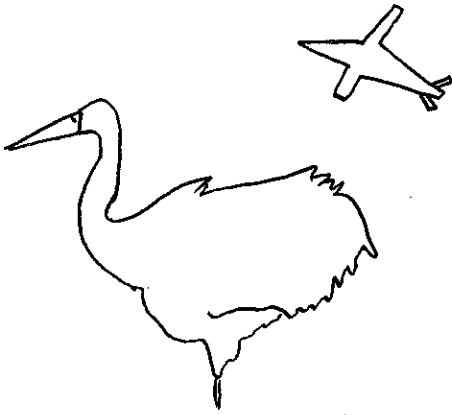


Taking a flight to drive away other birds in its territory (4.6.94).
 प्रतिद्वन्द्वी पक्षियों को पार्क में अपने क्षेत्र (टैरिटरी) से बाहर निकालने के लिए उड़ान भरते हुए (4.6.94).



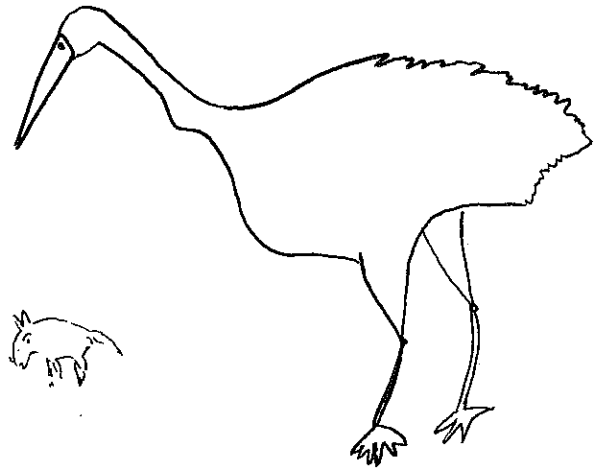
Taking such a stand prior to taking off for migration
(9.7.95).

9.7.95 को उड़ान भरने से पूर्व ऐसा शरीर बनाते हुए।



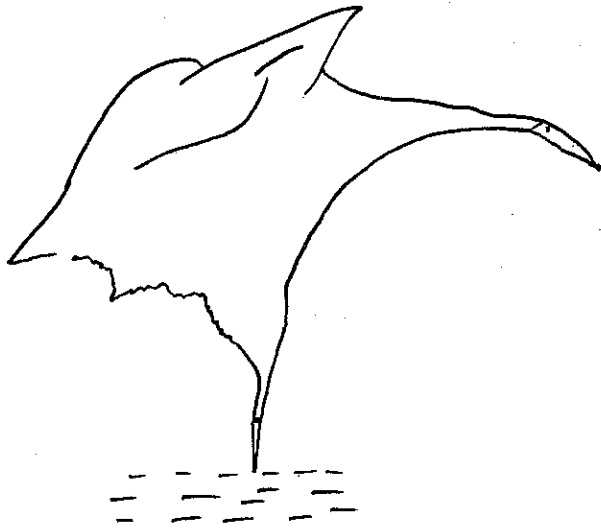
On 5.4.94, Billy, Bushy, Boris and Gorby, all the four in Jaipur Zoo started calling when they heard an aeroplane flying high above their cage. Figure shows one of them.

5.4.94 को जयपुर चिड़ियाघर में बिली, बुशी, बोरिस एवं गोरबी ने यकायक अपनी सुरीली तान छेड़ दी। कारण ? उस समय आकाश में से एक हवाई जहाज जो जा रहा था।



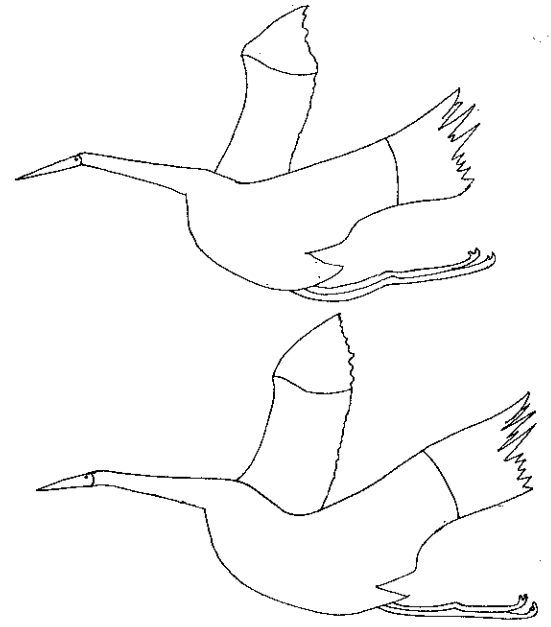
On 20.9.94, Boris watching entry of a rat inside its enclosure in Jaipur Zoo. He picked it up and swallowed it before other birds could witness the incident.

जयपुर चिड़ियाघर में रहते हुए 20.9.94 को इनके पिंजड़े में एक चूहा घुस आया। अन्य पक्षी इसे देख पाएँ इसके पहले बोरिस ने इस चूहे को पकड़ कर निगल डाला।

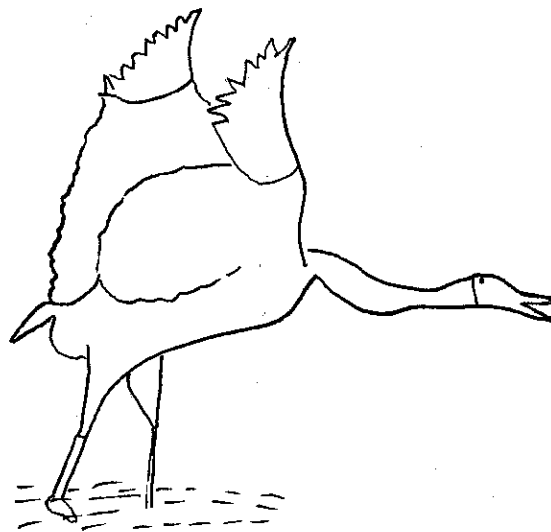


It is about to take off (9.7.95).

9.7.95 को साइबेरिया का सारस बस अब हवा में उठने को ही है।

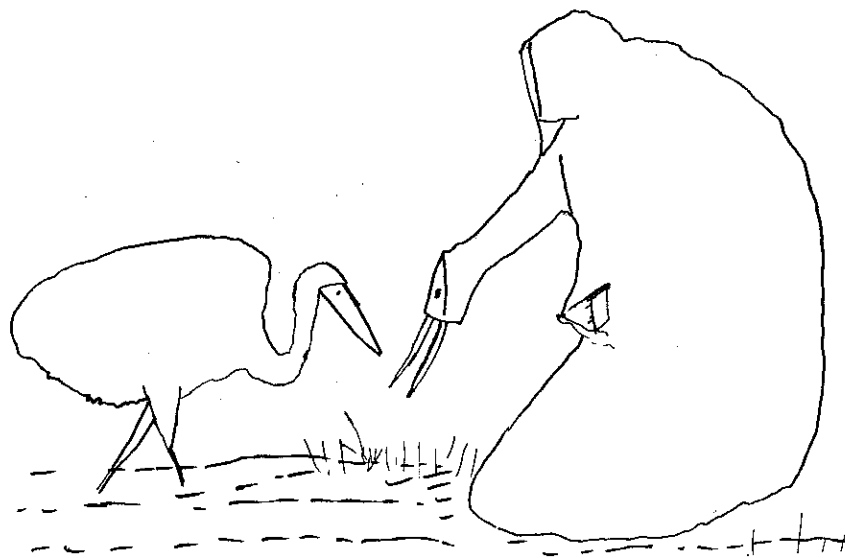


The Sibes soaring high in the KNP sky. Farewell !
साइबेरिया के सारस हवा में उड़ान भरते हुए। अलविदा !



Another stance of actions prior to the migration flight (9.7.95).

9.7.95 को ही उड़ान भरने से पूर्व शरीर को ऐसा बनाते हुए।



Billy (left) being taught feeding by the mother bird (right). In fact, it is Dr. Mini Nagendran in a crane-costume (right) sounding the mother's call through a taperecorder, to give lessons to the young ones in KNP's wild.

बाएं है बिली। और दाएं है इसकी माँ ! न, न। दाएं है डॉ. मिनि नगेन्द्रन जिसने साइबेरिया के सारस जैसी ड्रेस पहनी हुई है और माँ की पुकार जैसी आवाज एक टेपरिकार्डर से निकाल कर बिली को खोद-खोद कर अपना भोजन तलाश करना सिखा रही है।

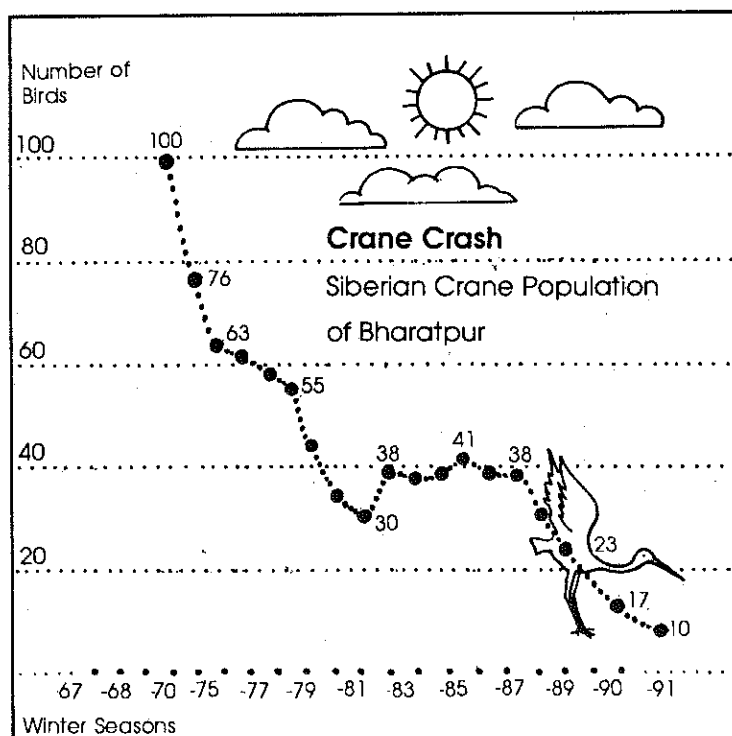


Chart by B.K. Sharma : Courtesy India Today 15 May, 1989