Siberian Crane project: A five-year plan

Soviet Working Group for Crane Research

Objectives 1990

1. Study on the breeding behavior, social interactions, and diet of the breeding population of Siberian Cranes at the Ob River

Five to eight nesting pairs of wild Siberian Cranes should be monitored every year to learn more about their basic biology and to provide for their conservation needs. Studies on the breeding populations of wild Siberians will provide basic data, which may be utilized to promote breeding in non-reproductive pairs in captivity. In particular, changes in the diet associated with the arrival on the breeding grounds may provide physiological cues, which stimulate egg laying and semen production. A comparison of the food of captive and wild cranes may reveal ingredients which are vital for reproduction but are lacking in the captive diet.

2. Location of the migration route and wintering grounds of Common Cranes, which nest in sympatry with Siberian Cranes

After having been given an oral tranquilizer, Common Cranes will be captured at their nests and marked with satellite transmitters, radio transmitters, or colour bands. Based on the results of this research, a decision will be made in 1991 regarding the application of the same or modified techniques to the radio-marking of the Ob River Siberian Cranes.

3. Location of a staging area for Common Cranes south of the breeding grounds of Siberian Cranes, where Siberian Cranes can be reared and released isolatedly.

The rarity of the Siberian Crane makes it improbable that its staging grounds can be located. To get information about its migration route, isolatedly reared Siberian Cranes could probably be encouraged to join flocks of Common Cranes, which breed close to the wild Siberians.

4. Formation of a population of Ob River Siberians at Oka

One egg will be collected from the nests of wild Siberian Cranes with two eggs. The other egg will be left with the parents. Almost all Siberian Cranes in captivity originate from the Yakutia flock. The proposed egg transfer from the Ob River to Oka will provide for the representation of both populations in captivity.

5. Determination of the genetic differences between the Ob River and Yakutia populations of Siberian Cranes

DNA fingerprinting studies will be conducted at the Institute for Nature Conservation and possibly the San Diego Zoo, and blood samples will be taken from captive birds at Oka and the ICF, including birds reared from eggs according to Objective 4 (1990). The information is necessary for a sound genetic management of captive and wild populations (see Objective 5, 1991).

6. Development of techniques for isolated rearing at the Oka Reserve

Several Common Crane eggs will be collected from the wild birds and hatched in captivity. The chicks will be isolatedly reared based on an adaptation of the techniques observed at the ICF, Patuxent, and St. Catherine's. The chicks will be released back into the wild at the Oka Reserve.

Objectives 1991

1. Further studies on wild Siberian Cranes

Familiarity with the breeding population will facilitate the evaluation of interactions between wild and Siberian Cranes, which might be released to bolster the wild population.

2. Location of the migration routes and wintering grounds of Common Cranes marked in 1990

Information concerning the migration routes and wintering grounds of Common Cranes may indicate how these cranes might be used in Siberian Crane management.

We will monitor: (a) isolatedly reared Common Cranes released at Oka, (b) Common Cranes on the breeding grounds with Siberian Cranes, and (c) if possible, Common Cranes staging south of the breeding area of Siberian Cranes.

3. Development of techniques for IR and release of Common Cranes in the Tyumen Region

This work will provide valuable experience with reintroduction at the location proposed for the release of Siberian Cranes.

4. Development of techniques for rearing Siberian Cranes isolatedly at the Oka Reserve

Resulting birds might be: (a) kept in captivity for breeding, (b) released with Common Cranes in the Tyumen Region, or (c) released with Siberian Cranes on their wintering grounds in India.

5. Transfer of birds from the eastern into the western flock

The procedure will depend on the results of the genetic analysis from Objective 5 (1990). If the two populations have not diverged significantly, eggs of the Yakutia population will be substituted into Ob River nests to bolster genetic diversity in this tiny population. If there are significant genetic differences, it may be decided not to introduce eastern birds into the western flock. However, even if there are significant genetic differences, it still may be advisable to avoid the negative effects of inbreeding by introducing Yakutia eggs into the Ob River population. Geneticists will be consulted to determine the best course of action.

6. Further formation of a population of Ob River Siberians at Oka

Procedures as in Objective 4 (1990).

Objectives 1992-1994

1. Further studies of nesting Siberian Cranes

2. Monitoring of the movements of birds released in former years

3. Isolatedly rearing and release of Siberian Cranes in the Tyumen region

Eggs will originate primarily from Oka and the ICF and possibly from Vogelpark Walsrode and Japanese zoos.

4. Further egg transfer to and from Oka as in Objective 4 (1990) and Objective 5 (1991)

Cooperative management of captive cranes

Objectives 1989

1. Transfer of one female Red-crowned Crane from Oka to the ICF and of one male Red-crowned Crane from the Moscow Zoo to the ICF

2. Transfer of two Hooded Cranes reared in captivity at Oka to the New York Zoological Park in exchange for a computer system for the reserve

3. Oka will initiate a genetic and demographic analysis of the worldwide population of Siberian Cranes (the inclusion of China will depend on studbook response). The ICF will provide technical assistance and computer analyses based on updated studbook data. A masterplan will be developed for the captive population including breeding objectives, recommended moves, research objectives, husbandry guidelines, proposed releases, and egg collection objectives.

4. The Soviet side will identify an appropriate institution within the USSR to participate in a staff exchange with the New York Zoological Society's Wildlife Survival Center at St. Catherine's Island.

Objectives 1990

1. Transfer of Hooded Crane chicks reared in captivity at Oka in 1989 or 1990 to the NYZS in exchange for needed scientific equipment (i.e. - cryogenic equipment necessary for the establishment of a genetic bank for key birds at Oka)

Objectives 1991

1. Exchange of Siberian Cranes bred in captivity at the ICF and Oka

2. Dr. Panchenko will attend an International Captive Crane Management Workshop to be held at the ICF. He will present a summary of the management of Siberian Cranes in captivity.