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## Cranes of Bharatpur

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**K**oladeo National Park popularly known as Bharatpur Bird sanctuary is one of the World Heritage Sites famous for the large congregations of waterfowl comprising mostly migratory ducks, teals, geese and coot; massive colonies of breeding fish-eating birds such as cormorants, egrets, storks, herons, Ibis and spoonbill. The Great-white or Siberian Crane, which is endangered species, forms one of the major attractions of the park as this is the only regular wintering area for this species in India.

All the four species of cranes, namely the Indian Sarus, Siberian, Common or Eurasian and the Demoiselle which are found in the plains of India, are recorded from the park. The first two species are common inside the park, the Sarus allthrough the year and the Siberian during the winter. The Common Crane is never common inside the park. They are found flying above occasionally in small flocks or coming to roost in the shallow pools or surrounding grasslands in flocks of 2 to 80 birds during the winter. The Demoiselle is a still rarer visitor to the park, found in very small numbers (2 to 6) accompanying the Common Crane during winter.

One of the exquisitely graceful and the tallest of all the flying birds waiting for you in the park at any time of the year is the Indian Sarus which adorns the emblem of the park. The trumpeting call (duet) of the Sarus echoing in and around the wetland at dawn and dusk is exhilarating, especially in winter with the background music of quacks of thousands of ducks and geese.

Population of the Sarus inside the park fluctuated from 26 to about 300. An intensive study during 1984-85 by Ramachandran of our Research Centre has brought out the annual cycle of this species and its requirements. A certain number of pairs breed inside the park during Autumn when the area gets flooded and remain inside during all the seasons, whereas a large number of them congregate in the shallow pools during the summer when the surrounding areas in and around the park are bone dry. The breeding population varied from zero to 16 pairs during 1980 to 1989. The timely arrival of monsoon and the extent of flooding of the wetland and have profound influence in determining the breeding population. They have a subseason for breeding, February to May; two to 8 pairs nested in different years mainly depending on the waterspread. A declining trend in the breeding population was found in the eighties; only 11 pairs bred in 1985 when the park was flooded to the maximum while it was 16 and 14 in 1980 and 1982 respectively. Drought has its deleterious impact on the cranes as on other inhabitants of the wetland. There was no breeding in 1987 and 1989. With a moderate level of rainfall and flooding, 1988 saw 10 pairs breeding with a better productivity of one juvenile per pair.

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The Sarus, though widely spread in the central and northern India, occurring in large numbers at least in the north and northwestern regions is supposed to enjoy protection by way of people's veneration for it as a symbol of filial love and devotion. However, we cannot take its conservation to be granted. The problems faced by the sample population in Bharatpur Bird Sanctuary is discernible : the severe problem of periodic drought which is more frequent in the recent years, degradation in the quality of habitat for feeding as well as breeding, disturbance to the nest, higher mortality probably due to pesticides. If it is allowed to continue at this rate, this species will be endangered before long.

The Siberian Crane called as "the snow-wreath" or "the lily of birds" by A.O.Hume, is the most magnificent winter visitor to the park. Salim Ali and Ripley have reported it to be visiting some jheels in Uttar Pradesh and straggling up to Bihar and Madhya Pradesh. But in the recent years there has been no authentic record of it from the gangetic basin as brought out from the survey conducted by Ron Sauey and others in 1983. However, one individual was found to winter in Dihala Jheel in Madhya Pradesh during 1988-89 by Vibhu Prakash.

The Siberian Crane arrives here in flocks of 2 to 10 during late October to November or December and settles in the preferred areas up to the time of departure, usually from late February to middle of March. The news of its arrival in the park forms a great impetus to the inflow of tourists from all over the country and abroad. They are usually found as pairs with or without one young, or in groups of 3 to 8. There are traditional areas in the park where one can find them; that is the zone bordering the wetland and the woodland where the depth of water is less than 40 cm with sedges growing in plenty. These sedges have peanut-like tubers, larger in *Scirpus tuberosus* and smaller in *Cyperus rotundus*, which are their best favoured food items in the park. The rhizomes of water lilies are equally relished by them. They also feed on the comparatively smaller rhizomes of another reed, *Elocharis* sp. and its tender culms. Though mainly vegetarian, in between they go for animal food such as insects, molluscs and worms. Most of the feeding is by probing or digging in the soil and at times by walking and pecking.

The Siberian Cranes spend more than half of the daylight hours for feeding which goes up to 80 percent under stress conditions in a drought year. Under such circumstances they are restricted to smaller feeding areas which led to frequent altercation between groups resulting in less feeding time. When conditions are still worse, as in a second consecutive drought, certain flocks leave the park for some days or for the rest of the winter, as found in 1979-80 and 1987-88. It is disheartening to note that a few from the 17 that arrived in the park during the winter of 1989-90 could not remain here for the whole period. Besides the strain exerted on them by the marginal or drought conditions, various disturbance factors such as tourists and local people are also involved in forcing them to leave the park much earlier. Even though the Sarus is a larger and dominant bird, they chase the Siberian only at the beginning of the season before the Siberians settle in particular areas, or at the end of the season when the

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Sarus starts courtship and nesting activities. During the middle of the winter, the Siberian may chase away the Sarus from the feeding range. Many a times they are seen roosting or even feeding nearby.

The fluctuation in the population of the Siberian Crane in different countries and their probable origin and routes of migration have been discussed in detail by Ron Sauey in his thesis. The population wintering in India (less than 40) and in Iran (11-15) is believed to be breeding in western Siberia near Ob River while that going to China is believed to be from Yakutia in eastern Siberia. However, this has not yet been established either by banding or telemetry. The flock coming to India is supposed to have a stop-over in Afghanistan. The wintering population recorded in China during this decade has increased from about 250 to 3000. In spite of the increase in one population, the concern regarding the conservation of this species is still relevant and needs more attention as the number recorded in India is declining fast. A maximum of 200 have been recorded by Walkinshaw during 1964-65 (reported by Paul Johnsgard in "Cranes of the World"); but it was only 30 in 1980. Varying trends could be noticed in the two halves of this decade, an increase from 30 to 41 in the first half and a decrease to 17 in the second half. This might be due to various factors in the breeding ranges or outside. The Siberian Crane is supposed to have the lowest recruitment rate of all the cranes. However, the annual productivity in this population during this decade, as judged from the young birds, showed a higher rate, 13 to 21%, as against the 10% recorded by Paul Spitzer in early 70's and by Flint and Sorokin in the breeding area of the eastern population. But it is distressing to see that the population is not picking up at the same rate. Hence, the problems faced by this population might be because of the loss of birds on their arduous migration, changing the wintering area, hunting pressures on the migratory route as recorded from Pakistan and Afghanistan and possibly in India from areas outside the park, habitat changes in the park brought about by drought and other management problems and, its highly specialized feeding habits.

The concerted efforts of various governmental agencies, nature lovers and conservationists should keep the park in its original glory as a haven for the spectacular variety of wildlife along with the cranes.