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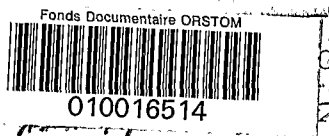
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## THE BLACK CROWNED CRANES IN THE SENEGAL DELTA

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### INTRODUCTION

The Senegal Delta has always been one of the privileged sites where Black Crowned Cranes (*Balearica pavonina*) live. Yet this environment has undergone very important changes during the last 30 years. The effects of these changes on the population of Black Crowned Cranes are not well known, since the only aerial censuses that have been completed quite regularly in this area were conducted mainly to provide duck counts and a large part of the crane population may not have been counted. Recent hydro-agricultural extensions seem to have induced a gathering in and around the Djoudj National Park, where cranes are easier to watch than in the past. In general, we have no proof of a decrease in the total population in Senegal. Outside the breeding season, important gatherings of up to 300 birds may occur in one place or another along the Senegal River in Senegal or Mauritanian. Teams from the Direction des Parcs Nationaux have now started regular censuses of the cranes they see and a few breeding attempts have been noted in November and January.

### THE ENVIRONMENT

A number of factors have affected the environment for the Black Crowned Cranes in Senegal.

- 1. Climatic changes.** According to a study by Claude *et al.* (1991), the climatic aridity has increased since the early 1970s under a drought characterized by its unusual length, severity, and large geographical coverage. In the north of Senegal, the annual rainfall has decreased from 350 mm per year to less than 200 mm annually.
- 2. Hydro-agricultural changes.** Two dams have been built recently on the Senegal River. The Manantali dam, in Mali, retains floodwaters and permits the irrigation of a huge area for agricultural development. The Diama dam prevents saltwater intrusion upstream from the sea. Year-round water availability now permits the development of numerous rice schemes, often in marshes and other wetlands that were good crane habitats.
- 3. Human pressure.** Wetlands are being settled by displaced people from other parts of Senegal and southern

Mauritania, especially for producing irrigated rice. Black Crowned Cranes often feed on rice fields during the non-growing season, and the extension of cultivated land may be good for cranes if marshes are still available not too far away for roosting.

- 4. Chemical spraying.** The spraying of locusts and pest birds with chemicals may affect the population of Black Crowned Cranes. The poisoning of cranes by direct spraying is probably not occurring, but the disappearance of locusts may reduce the amount of food available for cranes. In Senegal, spraying is nevertheless quite limited in comparison to other Sahelian countries where about 2.5 million ha. are sprayed each year.

### CENSUS DATA

Black Crowned Cranes were counted in some years during duck censusing in and around Djoudj National Park. Because of the war with Mauritania, planes have not been used since 1989, so southern Mauritania has not been censused. Figure 1 shows the results of these January censuses. The total number of birds counted seems to be quite stable. Morel and Morel (1990) give a figure of about 2,500 cranes for the whole of Senegambia of which about 1,000 occurred in the Senegal Delta prior to 1980 - much greater than the maximum of 549 Black Crowned Cranes counted recently. However, there may well be more cranes across the entire Senegal Delta, because only the wetlands were flown over during the censuses.

The new Diawling National Park (15,000 ha.) in South Mauritania, adjacent to the Djoudj National Park (16,000 ha.) in Senegal may help cranes find suitable habitat to live and breed. A canal has been dug to fill again the N'Diael Birds Reserve (46,500 ha, Hughes and Hughes 1992). The N'Diael Reserve should be filled up more each year, but the canal is probably not large enough to fill it to capacity. The area south of Guiers Lake has already filled up with water, which now extends more than 60 km southeast of Keur Momar Sarr. These two areas are complementary to the Djoudj National Park and will help compensate for loss of habitat in other parts of the delta. In other areas of Senegal, cranes have been seen regularly but in small parties. In the Niokolo-Koba National Park, no more than 20 have been seen at one time. In Casamance, southern Senegal, 400 were

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Au besoin, joindre une copie de la page de titre du document dont est extraite votre contribution

seen together in December 1992.

Figure 2 shows the monthly number of groups encountered and mean group size during the period 1990-91. Black Crowned Cranes wander in small parties during the breeding season (from September to December/January) and gather in larger flocks during the dry season. At that time, rice fields have been harvested and cranes are often seen on these fields especially after they have been plowed (Birane Faye *pers. comm.*).

### BREEDING

Evidence of breeding is very difficult to obtain for Black Crowned Cranes, but in Djoudj National Park, young birds have been found in late November and early December in different years. Some nests have also been found: one at the end of 1985 and one in early January 1993. Unfortunately, this last nest failed when the eggs were eaten by some animal.

### CONCLUSION

These very few data expose the need for more work to

understand this beautiful species in Senegal. Regular crane observations were initiated only recently after the Conference on Black Crowned Cranes and their Wetland Habitats in West and Central Africa, held in Kano, Nigeria in February, 1992. In the future, we hope to determine the exact status of the cranes in Senegal.

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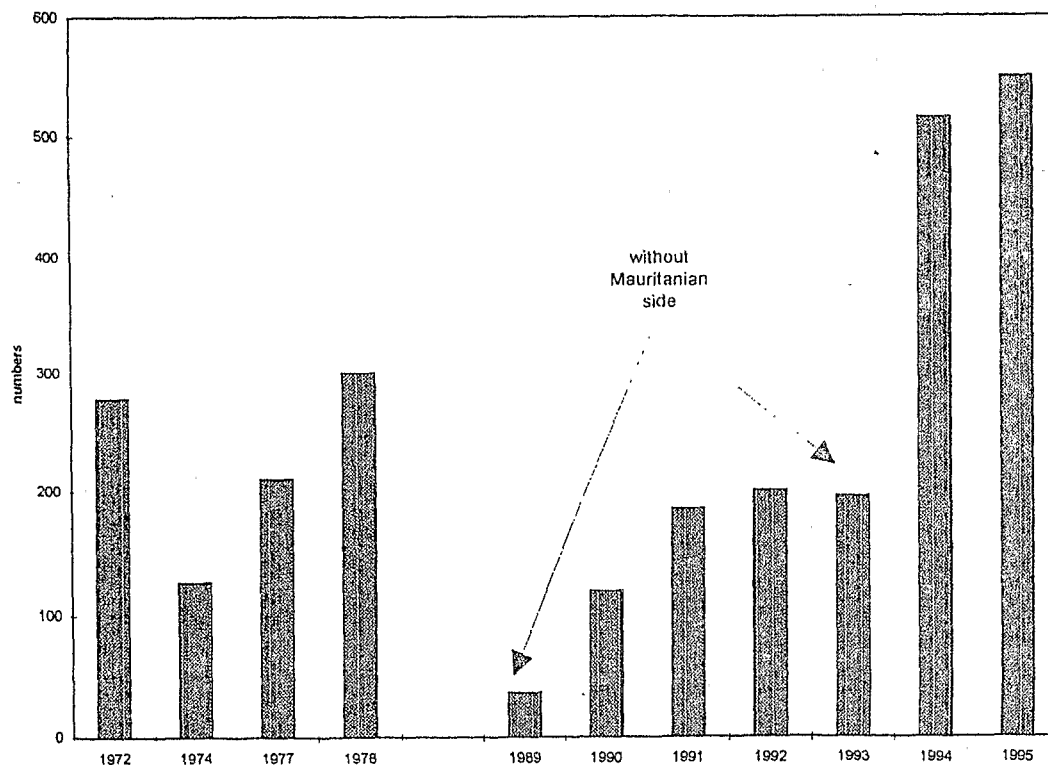


Figure 1. Total number of Black Crowned Cranes observed in the Senegal Delta during January censuses. Cranes were not censused on the Mauritanian side of the Delta during period 1989-93.

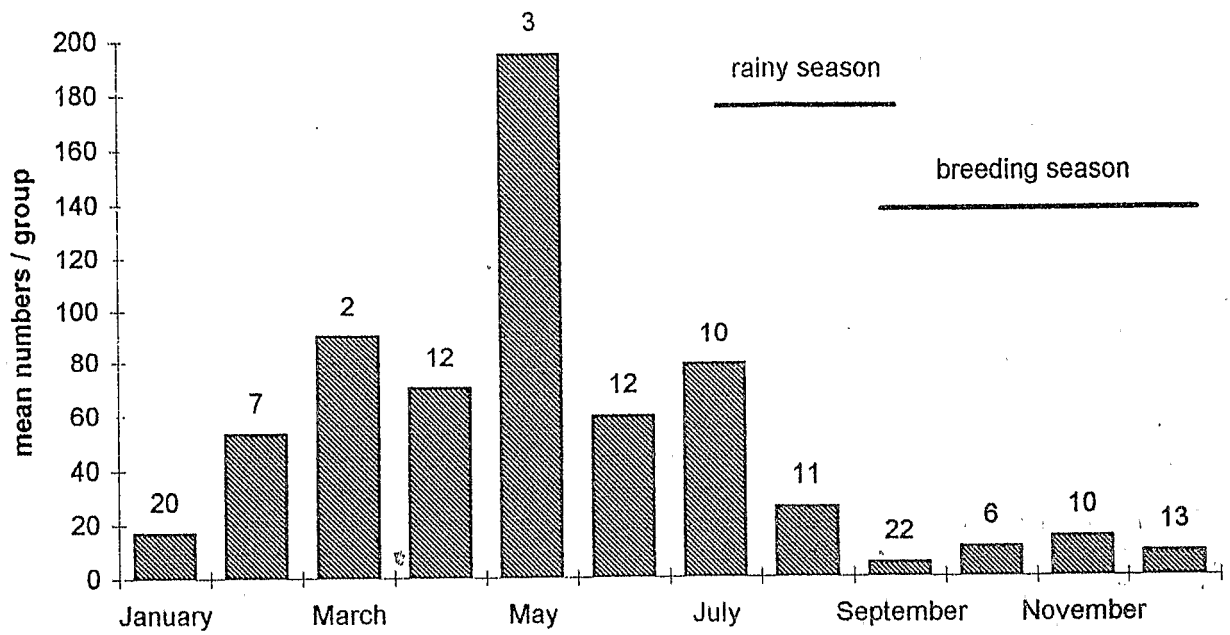


Figure 2. Mean size of groups and number of groups encountered per month during the years 1991 and 1992.