

The current statuses of the black crowne crane (*Balearica Pavonina Ceciliae*) in central Darfur state.

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Abstract

This study was conducted in Zalingei area in the year of 2021, to identify the current status of the Black Crown-crane. The statistical analytical method was used. The results showed that 97.8% of the respondents had seen a Crowne crane and 12.2% of them were not see the Crowne crane, while 2.2% had neither seen nor known the Crowne crane. 70.4% of the observed birds were large birds leads their young's, although the observation of young represented 21.3% and the adults 6.0% and 68.4% of them have not seen their nests, while 16.4% out of them seen the nests. The nests were built in the rainy season, while no observation in the other seasons. The study was recommended that: Addition studies in the field of Crowne crane habitats and breeding status will be done. More concern and protection to Crowne crane in the Sudan at all and Darfur especially will be Important.

Keywords: Crowne crane, Darfur, Sudan, Korssi, Zalingei.

Introduction

The Black Crowne Crane (*Balearica pavonina*) is a bird in the crane family Gruidae. It was once called also Kaffir Crane. It occurs in dry savannah in Africa south of the Sahara, although it nests in somewhat wetter habitats. There are two subspecies:

B. p. pavonina in the west and the more numerous *B. p. ceciliae* in east Africa. The Sudan Crowne Crane occurs in eastern Africa, with its largest concentration in Sudan. It prefers wetter habitats for foraging, its only crane that can nest in trees. This habit, amongst other things, is a reason why the relatively small Balearica cranes are believed to closely resemble the ancestral members of the Gruidae. It is about 1 m long, has a 1.87 m (6.2 ft) wingspan and weighs about 3.6 kg. Like all cranes, the Black Crowne Crane eats grass, insects, reptiles, and small mammals [1]. It is endangered, especially in the west, by habitat loss and degradation. It is classified as Near Threatened. Current population estimates are 15000 for *B. p. pavonina* and 43000-55000 for *B. p. ceciliae*. Due to the rapid decrease of populations in certain areas and a lack of knowledge about status in other areas, the International Crane Foundation (ICF) and Wetlands International launched the Black Crowne Crane Programme in 1999 in order to determine the species' conservation status and to prepare an action plan for its conservation [2].

Objectives

This study aims to identify the current status of the Black Crown-crane (*B. p. ceciliae*) in Central Darfur state.

Materials and Methods

Study area

Study area lies in the western slope of Jebel Marra according to Hunting Technical Serves (HTS, 1995). It covers about 4480 square kilometers in the poor savanna zone between latitudes 12o30 and 13o30 North, and longitudes 22 o20 and 23o45 East according to Hunting Technical Services, (HTS, 1995) The study areas are covers alluvial channels, floodplains and terraces forming the drainage basins of the seasonal large to the streams known locally as Wadis such as Wadi Areebou and Wadi Azoom. The altitude ranges from 500 to 1200 meters above sea level. Many seasonal Wadis and Khors coming down from the higher reaches of Jebel Marra (Wadi Azoom, Wadi Areebou) in rainy season, but in dry season they leave many permanent water pools in the bed and edage of Wadi. These wetlands are important habitats for migratory and residential birds, especially water birds, for drinking, nesting, resting and feeding. The methods of this study are following: Questionnaires and interviews with some peoples in the area were made. The crosstab and percentage were used to analysis data [3].

Results

The results in **Table 1** showed that 97.8% of the respondents had seen the Crowne crane in the area. 74% of them saw the bird stands on the ground, while 18.9% of them said that the birds were flying in the air and did not land on the ground or trees. From **Table 2**, showed that 62.4% of the respondents saw the bird in the rainy season, while 27.1% of them said that

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the observation was in the summer season, the observation in the winter is so very little only 8.2%. The results showed in **Table 3** that 70.4% of the observed birds were large birds lead their young's, although the observation of young represented 21.3% and the adults 6.0%. The results in **Table 4** showed that 17.6% of the respondents saw the nests, 15.3% out of them were saw the nest on the ground, while 2.2% of them were saw the nest over the trees. From **Table 5** we notice that the nests were built in the rainy season, while no observation in the other seasons. The results in **Table 6** showed that 97.8% of the respondents had seen a Crowne crane and 12.2% of them were not sure that it was a Crowne crane, while 2.2% had neither seen nor known a Crowne crane [4].

The results in **Table 7**, note that 84.9% of the respondents known the Crowne crane and 68.4% of them have not seen their nests, while 16.4% out of them seen the nests. The results were shown that in **Table 8** 78.0% of the respondents did not see dead birds, while 6.0% saw parts of dead birds, and 0.2% of them were hesitant in their answers and were not sure whether they were Crowne cranes or other birds. A bout 249 responders showed the Crowne crane in flocks between (6-10) individual birds, these represented 55.3%. other (179) responders seen the birds flocks in low number only about 5 individual proximity 38.7% of the Crowne crane numbers in Zalingei area 2021 (**Table 9**) [5,6].

Table 1. The percentage of status when the responders sow the Crowne crane.

		Where you see		Total	Stand on the ground	on the tree	I don't see
		Flying					
Did you see the Crowne crane	Yes	18.90%		74.40%	4.40%	0.00%	97.80%
	No	0.00%		0.00%	0.00%	2.20%	2.20%
Total		18.90%		74.40%	4.40%	2.20%	100.00%

Table 2. The watching the crowne crane.

		Which season do you see		Total	Autumn	Winter	No
		Summer					
Did you see the Crowne crane	Yes	0.271		0.624	0.082	0	0.978
	No	0		0	0	0.022	0.022
Total		0.271		0.624	0.082	0.022	1

Table 3. The percentage of the Crowne crane age.

		The age		Total	Young	Old and young	I don't see
		Old					
Did you see the Crowne crane	Yes	0.213		0.06	0.704	0	0.978
	No	0		0	0	0.022	0.022
Total		0.213		0.06	0.704	0.022	1

Table 4. The Crowne crane nesting place.

		Nesting place		Total	on the ground	on the tree
		I don't see				
did you see their nests	Yes	0.00%		15.30%	2.20%	17.60%
	No	82.40%		0.00%	0.00%	82.40%
Total		82.40%		15.30%	2.20%	100.00%

Table 5. The Crowne crane nesting season.

		Nesting season		Total	Autumn	Winter	Summer
		I don't see					
did you see their nests	Yes	0.00%		17.60%	0.00%	0.00%	17.60%
	No	82.40%		0.00%	0.00%	0.00%	82.40%
Total		82.40%		17.60%	0.00%	0.00%	100.00%

Table 6. The percentage of known and seen the Crowne crane.

		Did you see the Crowne crane		Total	No
		Yes			
do you know the Crowne crane	Yes	84.90%		0.00%	84.90%
	neutral	12.90%		0.00%	12.90%
	No	0.00%		2.20%	2.20%
Total		97.80%		2.20%	100.00%

Table 7. The percentage of known the Crowne crane and seen their nests.

		Did you see their nests		Total	No
		Yes	No		
do you know the Crowne crane	Yes	16.40%		68.40%	84.90%
	neutral	1.10%		11.80%	12.90%
	No	0.00%		2.20%	2.20%
Total		17.60%		82.40%	100.00%

Table 8. The percentage of known and death the Crowne crane.

		Did you see the death of the birds		Total	No
		Yes	No		
do you know the Crowne crane	Yes	6.90%		78.00%	84.90%
	neutral	0.20%		12.70%	12.90%
	No	0.00%		2.20%	2.20%
Total		7.10%		92.90%	100.00%

Table 9. The percentage of the bird numbers that recorded in Zalingei area 2021.

		How many number of birds that seen		Total	less than 5	6-10 birds	11- 20 birds	21-50 birds	more than 51 birds
		I don't see	Count						
Did you see the Crowne crane before	Yes	Count	0	174	249	4	6	7	440
		% of Total	0	0.387	0.553	0.009	0.013	0.016	0.978
	No	Count	10	0	0	0	0	0	10
		% of Total	0.022	0	0	0	0	0	0.022
Total		Count	10	174	249	4	6	7	450
		% of Total	0.022	0.387	0.553	0.009	0.013	0.016	1

Discussion

This study was conducted in the natural conditions when the residents presented in their farms and villages, and leading animals in the field [7]. The results indicate that the Crowne crane is one of the birds that resides in areas of west Jebel Marra, with a percentage of 97.8% confirming what was observed by, also the Walkinshaw 1964, 1973, Johnsgaard 1983 recorded that the Crowne Crane (*B. p. ceciliae*) occurs in eastern Africa, with its largest concentration in Sudan [8]. This is indicated that the bird is in a stable condition that is not exposed to dangers and that it exercises its normal activity in natural environments without any disturbance or being exposed to the threat. The Crowne crane, also considered one of the migratory birds in Africa, but the observation rate was high in the rainy season, as it reached 62.4 percent [9]. It was also clarified that the percentage of watching in winter season are recorded 8.2%, this indicated that Crowne crane is one of the wintering migratory birds in the Sudan, some of which hatch eggs and raring them until the flight stage and then lead them to neighbor countries in Africa, include Chad and the Central African. It is certain that their numbers are steadily increasing [10]. because the viewing rate was higher among young than in adults 21.3% and 6.0%, respectively, and 70.4% of the watched birds were large birds drawn with their young, with reference to the Korssi, (2019b) he recorded a little number of nests out of the numbers of birds and their nests in the area [11-13]. In this study, those who viewed the nests confirmed by 16.4% that are Crowne crane nests (**Table 9**) [14,15].

Conclusion

According to Korssi (2019b) he mentioned that it is one of the birds that breed in the autumn season in this region, and in this study 84.9% out of them were watched repairing and building their nests in the autumn season. Because it's one of the water birds associated with wetlands sides to looking for provide food and shelter for young after hatching the eggs. Also 15.3% seen showed that the nests were built on the ground, while 2.2% builds their nests on trees. More flocks of Crowne crane between (6-10) individual were recorded by 249 responders in wetland sides of Zalingei area 2021, these represented 55.3%, While 179 responders seen the birds flocks in low number only about 5 individual proximity 38.7%.

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