Grey Crowned Cranes *Balearica regulorum* in urban areas of Uganda

The greatest threat to birds in tropical Africa is habitat change; often a result of unsustainable agricultural practices (BirdLife International 2013a) and this certainly applies to Grey Crowned Cranes *Balearica regulorum*, whose primary breeding habitat — seasonal swamps — is increasingly being converted into cultivation and other land uses. Cranes are also caught, often as small young, for the wild bird trade, and to be kept as pets by individuals as well as hotels and other institutions (Muheebwa-Muhoozi, 2001). Less often, some are caught for traditional uses. Cranes typically roost on tall trees, and feed in a wide variety of open habitats, where human disturbance is also increasing. In recent years, cranes have found places to feed, roost and even breed in urban parts of Uganda, where they seem to have adapted to human disturbance.

Grey Crowned Cranes in Uganda are found most commonly in the steep valleys of the south-west and the very shallow valleys of the south-east (Gumonye-Mafabi 1989, Muheebwa-Muhoozi 2001, Olupot *et al.* 2009). But over the past 30–40 years, their population in Africa has declined by about 70% (Beilfuss *et al.* 2007), and probably by a similar amount in Uganda (SN unpublished data), and the species is now considered to be Endangered (BirdLife International 2013b).

This study was conducted at two feeding and roosting sites: 1) Kiteezi, which is the Kampala landfill site located at about 12 km north of the city, from September 2010 to December 2014 and 2) the main campus of Islamic University in Uganda located at Nkoma approximately 3 km from Mbale Town, 26 May 2013 to 28 July 2014. Total counts of birds were made at these sites.

Observations in Kampala

Grey Crowned Cranes remain widespread in central Uganda, although usually in small numbers. However, during the 1970s, a flock of more than one hundred was regularly seen at two large farms about 20 km north of Kampala (Pomeroy 1980a), and some bred in nearby swamps then. Kampala has now grown into a city of some 1.7 million people (www.ubos.com), and in recent years a flock of up to 96 birds has frequented the main Kampala landfill site at Kiteezi, about 12 km north of the city centre (Fig. 1). These birds also spend time in a nearby valley, where they forage in the pasture, and at night most of them roost on high voltage pylons 2–3 km to the west of the landfill site. From the study of 2012 to 2013, this flock at Kiteezi included up to five fully-grown immature birds. There are no recent records of cranes roosting on trees in the Kampala area, but a few birds also roost on pylons near the Kampala northern bypass.

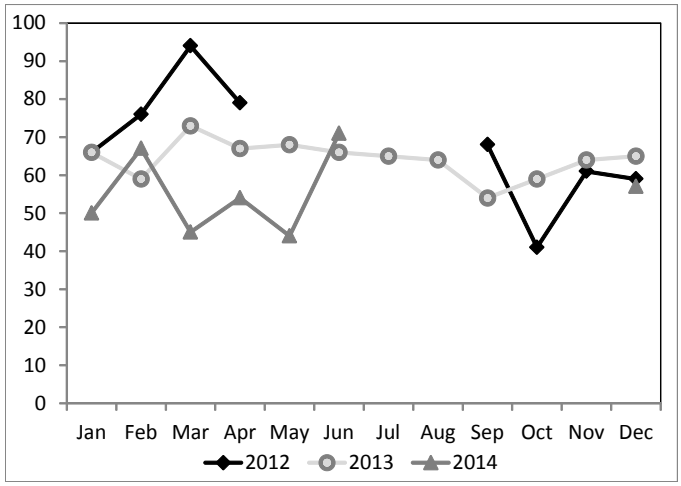

Figure 1. Numbers of Grey Crowned Crane at Kiteezi landfill. Gaps indicate months when surveys were not conducted.

The habit of feeding on Kampala's rubbish dumps dates back to the 1970s (Ssemmanda & Pomeroy 2010), and up to 25 birds were found roosting on pylons in central Kampala in the late 1990s and early 2000s. Therefore this habit also dates back about 15 years. Roosting birds always select the highest arms of the pylons, which are much higher than any nearby trees. It is perhaps for the height, with its presumed safety from possible predators that attracts them. Before roosting, they often fly around the pylons, and move from one to another, but, unlike Marabou Storks *Leptoptilos crumeniferus*, manage to avoid fatal collisions with the power lines (Kibuule & Pomeroy 2015). In addition to Grey Crowned Cranes, some 7000 Cattle Egrets *Bubulcus ibis* currently roost in central parts of Kampala, and small numbers of Pink-backed Pelicans *Pelicanus rufescens* have also roosted there in the recent past.

In the early 1970s, flock sizes of cranes north of Kampala varied seasonally (Pomeroy 1980a), being somewhat smaller in the main breeding seasons of October to December, and again from April to June. It was assumed that the cranes bred in nearby seasonal wetland areas at the times of year when these wetlands are drying up. In our recent counts (Fig. 1), numbers were a little lower from September to November, but not in April to June. However, in 2013, cranes were discovered to have bred in two wetlands in the northern outskirts of Kampala, and at one of these, Walufumbe, two newly-hatched young were found in July, suggesting egg-laying in June. Both young survived for at least two months, when observations there ended. Two young were also fledged by a pair at Lubigi swamp, being well-grown by November and thus with a similar egg-laying date to the other pair.

Crane and other species sightings in Mbale

In Mbale, a town in eastern Uganda with a population of only 0.44 million people in 2012 (www.ubos.org), a number of species have often been recorded roosting together at the campus of the Islamic University in Uganda, which is only 3 km from the town centre. For example, one large mvule tree *Milicia excelsa* had the following birds roosting on it as recorded in a single count on 26 May 2013: 24 Grey Crowned Cranes, 2 Pink-backed Pelicans, 25 Marabou Storks, at least 150 Open-billed Storks *Anastomus lamelligerus*, 8 Yellow-billed Storks *Mycteria ibis*, 12 African Spoonbills *Platalea alba*, 16 Sacred Ibis *Threskiornis aethiopicus*, 15 Black-headed Herons *Ardea melanocephala* and 5 Little Egrets *Egretta garzetta* (Fig. 2). However, these observations were made during the university vacation; when students returned, and the area around the tree became very busy, numbers of roosting cranes progressively reduced to two, suggesting that their tolerance of people is limited, compared to the other species, whose numbers did not decline.

Figure 2. *Balearica regulorum* roosting on a *Milicia exclesa* tree located in close proximity to the IUIU main gate. Photograph taken on 8 June 2013 at 18:25.

Of the species mentioned above, Marabou Storks and Pink-backed Pelicans also nest successfully in various towns and villages in Uganda (Pomeroy 2002, Nachuha & Quinn 2012), although the pelicans must sometimes fly considerable distances to feed, whilst the Marabous mainly feed in towns.

Conclusions

The occurrence of Grey Crowned Cranes and other large waterbirds in urban areas dates back at most 50 years, and presumably results from the birds feeling more secure in these urban centres than in the surrounding rural areas. When feeding at the rubbish dump, cranes can be as close as 10 m to the people working there; to a large extent, birds and people ignore each other, although a few birds with damaged legs and other injuries suggest that occasionally sticks or other objects are thrown at them.

Although cranes may feed and roost safely in urban areas, they find very few places to breed, because undisturbed swamps used for nesting and protecting the young before they can fly are becoming increasingly rare. It is likely that the loss of secure breeding sites contributes significantly to the steep decline in crane numbers. To halt this decline, more suitable wetlands need to be protected. It is estimated that only 20–30 pairs of cranes nest in Uganda's National Parks, with a few more in wildlife reserves, but together these constitute a very small proportion of the population in the country as a whole, currently estimated at about 13 000 (Muheebwa-Muhoozi unpublished data). Conservation must therefore focus on unprotected areas and in the southwest of Uganda, conservationists, working with local communities, have been very successful in getting people to provide this protection with fledging success increasing from 1.2 per pair in 2007 to 1.7 in 2011 (Muheebwa-Muhoozi unpublished data).

Sites for feeding, roosting and breeding are the three main requirements of cranes,

and among these the last remains the biggest problem, which is unlikely to be solved without better protection of the important wetlands. But the adaptability of cranes as shown in this article suggests that it may be possible to halt the decline of Uganda's national bird. However, more effort will be required if the species is to remain a familiar bird over most of the country. The Species Action Plan for Grey Crowned Crane, currently being prepared in co-operation with *Nature*Uganda, could take account of these findings.

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