

# A regular commensal foraging interaction between cranes and raptors on the Gulf Plains of north-western Queensland

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**Abstract.** A regular foraging interaction between cranes and raptors in grasslands and savannahs of the Gulf Plains, north-western Queensland, is described. Cranes (both Brolgas *Antigone rubicunda* and Sarus Cranes *A. antigone*) foraging for insect prey (largely locusts) in tall grass were frequently followed by raptors (five species observed), which fed on insects disturbed by the cranes.

## Introduction

Surveys for cranes *Antigone* spp. were conducted on the floodplains of the southern Gulf of Carpentaria in north-western Queensland (hereafter Gulf Plains) in the late wet–early dry seasons of 5 years (2017–2019, 2021 and 2024). During these surveys, a series of observations revealed a regular, undescribed ecological relationship between cranes (Brolga *A. rubicunda* and Sarus Crane *A. antigone*) and raptors. As cranes foraged in grasslands or open savannahs, birds of prey commonly followed them and took advantage of the opportunity to feed on large orthopterans (grasshoppers or locusts) that were flushed from the grass by the walking cranes, in a technique known as mediated flushing (e.g. Debus 2022).

## Observations

Five species of raptor were recorded following foraging cranes and preying on insects that were flushed. Both Australian crane species were involved in these interactions, which were observed in each of the five survey years. Black Kites *Milvus migrans* and Whistling Kites *Haliastur sphenurus* were the raptor species most commonly observed engaging in this behaviour (22 observations), sometimes in mixed groups, but Nankeen Kestrels *Falco cenchroides* (five observations), Brown Falcons *F. berigora* (three observations) and an Australian Hobby *F. longipennis* (one observation) were also seen to forage in this manner.

These interactions were observed when cranes were actively moving as they foraged, and in many cases it was clear that the orthopterans were present in large numbers and were the object of the cranes' foraging (as reported by Scambler *et al.* 2023). Large orthopterans including the Spur-throated Locust *Austracris guttulosa* occur in great abundance on the Gulf Plains, reaching plague proportions periodically (Hunter & Spurgin 1999; Szabo 2005). During the early dry season (May–June) when the current observations were made, adult Spur-throated Locusts were found congregating in long grass on clay soils, as is characteristic of that species (Hunter & Spurgin 1999). These concentrated sources of protein-rich insects

often attracted the attention of cranes, particularly families and flocks that included juveniles, at this time still growing to maturity (Sundar *et al.* 2019). Cranes were seen actively pursuing locusts, walking quickly as they snatched them from vegetation and sometimes attempting to take them as they flew ahead of the birds. On several occasions, adult cranes were seen to feed captured locusts to juvenile birds, as reported by Scambler *et al.* (2023).

Groups of cranes seen foraging in this manner ranged from families of three or four birds to flocks of up to 88 birds, with the number of attending kites varying in proportion to the size of the crane flock. Of the 22 recorded observations of kites attending crane flocks, the maximum number of kites seen was nine (all Black Kites), at a flock of 88 Brolgas, but single kites or groups of two to four were most commonly observed with smaller crane flocks. The vast majority of kites were Black Kites with just four instances of Whistling Kites among them. Kites engaged in this behaviour usually cruised slowly over the crane flock at a height of 3–5 m above the ground (Figure 1), accelerating and changing direction to chase locusts as opportunities arose. In contrast, individual Nankeen Kestrels and Brown Falcons were seen to soar up to 25–30 m above crane flocks, making repeated rapid dives to pick up insects from 1–2 m above the ground. In a single observation, an Australian Hobby was watched flying in repeated dashing forays just above the heads of a flock of cranes (crane head height ~1.5 m), circling at the same height between passes.

## Discussion

Locusts are well known to feature in the diet of many Australian raptors (see review by Szabo 2005), and cranes have long been noted to feed on orthopterans (see review by Scambler *et al.* 2023), but the regular interactions observed here between raptors and cranes appear to be undescribed. In some respects, the role of cranes in this scenario is reminiscent of large-bodied ungulates in grassland and savannah ecosystems elsewhere, where invertebrates disturbed by grazing animals are preyed upon by followers such as Western Cattle Egrets *Ardea ibis* and Wattled Starlings *Creatophora cinerea* in Africa



**Figure 1.** Three Black Kites following a flock of foraging Brolgas on the Flinders River floodplain, Gulf of Carpentaria, June 2024. The Brolgas were foraging for locusts in the long grass, and the Kites were seen to pursue locusts that flew out of the grass when disturbed by the cranes. Photo: John D.A. Grant



**Figure 2.** An adult Brolga looks upwards in response to close passes by two Black Kites feeding on disturbed locusts. Photo: John D.A. Grant

(Zimmerman *et al.* 1996), various mynas and starlings in Asia (pers. obs.), and cowbirds and their relatives (family Icteridae) in the Americas (Ridgely & Tudor 1989). Although native ungulates are absent from Australian grasslands, introduced grazers such as cattle and horses are followed by raptors including Black Kites and Brown Falcons (Debus 2019). The same species, as well as Whistling Kites and Black Falcons *Falco subniger*, are well known to patrol fire fronts, where they hunt flushed insects and other animals

(Marchant & Higgins 1993; Debus 2019, 2022).

However, to my knowledge the only recorded observations of Australian raptors feeding on prey flushed by ground-feeding birds are of a group of Black Kites and one or two Black Falcons catching grasshoppers disturbed by a family of Emus *Dromaius novaehollandiae* (Veerman 1985; Debus 2022). The crane flocks that are characteristic of the Gulf Plains provide abundant opportunity for raptors as their foraging movements increase the availability of

an important insect resource. The significance of locusts as raptor prey was indicated by a separate observation near Burke and Wills Roadhouse (also in the Gulf Plains bioregion) in August 1996, where an estimated 800–1000 Black Kites and 20 Black Falcons gathered to feed on a large swarm of locusts (pers. obs.).

The cranes observed were predominantly Brolgas, which are generally the commoner of the two crane species in the more open habitats where these observations were made (Sundar *et al.* 2019), but on several occasions families and small flocks of Sarus Cranes also took locusts with kites in attendance. Usually the foraging cranes showed no reaction to the close swoops of raptors, but on several occasions a crane was seen to duck its head in response to a particularly close pass, and on at least one occasion an adult Brolga raised its head for a prolonged look at Black Kites that had just swooped nearby (Figure 2). Sheldon (2004) reviewed the literature on vigilance in cranes and found that cranes showed little response to predators while flocking (generally outside the breeding season). This may be because fully-grown young cranes, as in the flocks observed here, are not potential prey of kites and smaller raptors, but it is possible that raptors could prey on small crane chicks, so vigilance is likely to change with chick age and with the type of predator. On one survey, a Wedge-tailed Eagle *Aquila audax* was observed swooping several times at a family of Sarus Cranes with a chick c. 1 month old (roughly half adult height). In this instance, the adult cranes responded vigorously, calling and spreading their wings while standing close to the chick to successfully shield it from the eagle.

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## References

- Debus, S. (2019). *Birds of Prey of Australia: A Field Guide*, 3rd edn. CSIRO Publishing, Melbourne.
- Debus, S. (2022). *Australian Falcons: Ecology, Behaviour and Conservation*. CSIRO Publishing, Melbourne.
- Hunter, D.M. & Spurgin, P.A. (1999). Origin of outbreaks of *Austracris guttulosa* (Walker) in Australia and *Nomadacris septemfasciata* (Serville) in Southern Africa and its implications for their management. *Insect Science Applications* **19**, 307–311.
- Marchant, S. & Higgins, P.J. (Eds) (1993). *Handbook of Australian, New Zealand & Antarctic Birds, Volume 2: Raptors to Lapwings*. Oxford University Press, Melbourne.
- Ridgely, R.S. & Tudor, G. (1989). *The Birds of South America, Volume 1: The Oscine Passerines*. University of Texas Press, Austin, Texas, USA.
- Scambler, E.C., Nevard, T.D. & Grant, J.D.A. (2023). New records and a review of animal foods in the diets of the Brolga *Antigone rubicunda* and Australian Sarus Crane *Antigone antigone gillae*. *Australian Field Ornithology* **40**, 34–45.
- Sheldon, R. (2004). Characterisation and modelling of Brolga (*Grus rubicundus*) flocking habitat in south-western Victoria: Relationships between habitat characteristics, Brolga abundance and flocking duration. BAppSci Thesis. University of Ballarat, Ballarat, Vic.
- Sundar K.S.G., Grant, J.D.A., Veltheim, I., Kittur, S., Brandis, K., McCarthy, M.A. & Scambler, E.C. (2019). Sympatric cranes in northern Australia: Abundance, breeding success, habitat preference and diet. *Emu – Austral Ornithology* **119**, 79–89.
- Szabo, J.K. (2005). Avian-locust interactions in Eastern Australia and the Exposure of Birds to Locust Control Pesticides. PhD Thesis. Texas Tech University, Lubbock, Texas, USA.
- Veerman, P. (1985). Report on the prey record scheme. *Australian Raptor Association News* **6**, 44–50.
- Zimmerman, D.A., Turner, D.A. & Pearson, D.J. (1996). *Birds of Kenya and Northern Tanzania*. Helm, London.

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