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## Predation on doves by Pied Crows, *Corvus albus*, on Aldabra Atoll

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Aldabra Atoll (9° 24'S, 46° 20'E) is a large, raised coral platform in the western Indian Ocean, some 400 km north of Madagascar and 1100 km southwest of the granitic Seychelles islands. The avifauna of Aldabra is relatively intact (but see Roberts 1987) and unlike any other islands in the western Indian Ocean, it has no alien bird species.

The Pied Crow, *Corvus albus*, is considered a recent, natural colonist of Aldabra (Benson 1967; Benson & Penny 1971), and is seldom found away from human settlements or turtle breeding beaches. The total estimated population does not exceed 100 individuals (Benson & Penny 1971; R. Wanless unpubl. data). The Aldabra Turtle Dove, *Streptopelia picturata copingeri*, is abundant around the research station, where 21 crows are resident. It exhibits remarkable 'tameness', or ecological naivety (*sensu* Quammen 1996) typical of many island forms. Doves and crows congregate in flocks of up to c. 100 and 20 individuals respectively, at places where people provide food (typically kitchen scraps or uncooked rice) and/or water.

Between September and December 1999 we observed crows preying on doves. Predation has been observed irregularly since 1996 (T.A.J., pers. obs.) but now appears to be regular. All predatory incidents took place in areas and at times when doves, crows and occasionally Turnstones, *Arinaria interpres*, gather to feed and drink. Out of a total of 26 known kills, crows were seen killing or consuming doves nine times and 17 kills are inferred from feathers littering areas where the birds congregated. All successful attacks witnessed were carried out by what we assume is a single crow, identifiable by its large size, numerous dominance interactions and absence of any brown wear on black feathering. To our

knowledge this is the first documented evidence beyond occasional or opportunistic events, of Pied Crows capturing adult birds (van der Heiden 1975; Drury 1980). We believe that this is a transient feature peculiar to the crows and doves of the research station on Aldabra.

### Method of attack

An attack was observed and photographed through the window of a house where food is provided on a daily basis, and a distinctive whistle given to announce the provisioning of food. Within minutes, a large group of doves (c. 80) and four crows converged and began feeding. Crows dominated access to food, and occasionally pecked at doves. These were clearly not of predatory intent, as crows often ended with feathers in their bills, yet no attempt was ever made to subdue the doves. After feeding for some time, the dominant crow lunged at a nearby dove with its beak. It secured a grip on the neck and immediately subdued it by standing on it. No attempt was made to kill the dove; the crow plucked feathers and started to eat the dove, the latter remaining conscious well after the crow began to eat it. Other crows did not interfere until T.A.J. disturbed the crow in order to euthanase the dove. Thereafter at least five other crows partook of the dove. If crows are undisturbed, a single kill is made every day that birds are fed.

### Discussion

All successful attacks seen or inferred from feathers were on doves. A single attempt on a Turnstone was witnessed, which was part of a feeding flock with other Turnstones and doves (M. Betts, pers. comm.). The Turnstone was rescued by the observer. A crow also attempted to attack two Aldabra Rail, *Dryolimnas*

*cuvieri*, chicks, but was driven off by one of the chicks' parents.

Despite the apparent simplicity of the attack, we believe the timing and judgement required to successfully capture a dove demand skill and practice. This contention is supported by the fact that only a few birds (possibly one) appear to have acquired predatory ability. Crows with worn feathers (possibly of low social status or in poor condition) have not been seen attacking, and doves show no fear of them. By contrast, the doves seem wary of large, aggressive crows in good condition.

Several factors may have contributed to the development of predatory behaviour by crows. The intelligence and adaptability of corvids is widely recognized, allowing them to exploit new resources (Brooke & Grobler 1973). The absence of any resident bird-eating predator large enough to prey on doves on Aldabra may explain the doves naivety. Humans play a role by creating close aggregations, where doves are frenetic in their feeding, or scrabbling to get at water, and are thus distracted from the proximity of marauding crows.

### Predictions

Two predictions follow from this. First, if people stop feeding and watering doves, crows will lack the opportunity to attack and predation will cease. Second, should attacks of this nature either continue or become more frequent, doves may become sufficiently wary of crows that 1) new strategies of attack will evolve, or 2) predation will cease.

Pied crows naturally colonized Aldabra, and have there evolved a unique predatory behaviour. Given the low number of crows on Aldabra and the very low predation levels by them on doves, there can be no significant impact by crows on dove population numbers. We strongly militate against the use of the data presented here as justification for the eradication or control of Pied Crows on Aldabra.

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