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Interspecific aggression in the Beach Stone-curlew *Esacus magnirostris*

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Introduction

Most waders (Aves: Charadriiformes) are small and not noted for their interspecific aggression. However, the relatively large Masked Lapwing *Vanellus miles* is well known for its vigorous defence of nests and young including diving attacks on humans. Agonistic displays in defence of nests or young are also widely reported amongst stone-curlews (Charadriiformes: Burhinidae) (Marchant & Higgins 1993). The Beach Stone-curlew *Esacus magnirostris* is a large, heavily built (*c.* 1 kg) resident shorebird and, unlike all other members of the Burhinidae family, can be readily seen feeding by day (Hume 1996). Strictly coastal, it has been recorded along the entire Northern Territory coast and most offshore islands (Chatto 2003). The species is mostly found singly or in pairs, but remarkably little is known about its behaviour (Marchant & Higgins 1993). In this note, we describe displays resembling the aggressive defence of young found in stone-curlews in general, and aggression directed towards a raptor.

Aggression directed at an observer

This account relates to a pair of Beach Stone-curlew that nested at East Point, Darwin, Northern Territory (12°24'S, 130°48'E). On the morning of 8 October 2006, the nest, a simple depression in the sand lined with leaves and twigs, contained a single egg, the usual full clutch size for the species (Marchant & Higgins 1993). Late on 10 October, the pair was observed with a small chick. The chick was again observed on 25 November, by which time it had grown significantly, having lost most of its downy feathers and developed the facial pattern of a juvenile.

At 7:14 am on 21 October 2006, one of the pair of stone-curlew was observed (by TC) in an elaborate display over a period of about four minutes. At first, and while making its weak 'quip quip' alarm call, the stone-curlew ran directly towards the observer from a distance of about 20 m, stopping about 15 m away (Figure 1a). It spread and flapped its wings while wagging its tail (Figure 1b), and then, with its wings

raised, back arched and raised tail fanned, kicked sand (Figure 1c). Then it again ran directly towards the observer while making an alarm call, this time stopping about 10 m away, and repeated the display. After a brief interval, the stone-curlew again briefly repeated the display, after which it walked slowly away from the observer. Neither the chick nor the other adult bird was observed during the encounter.

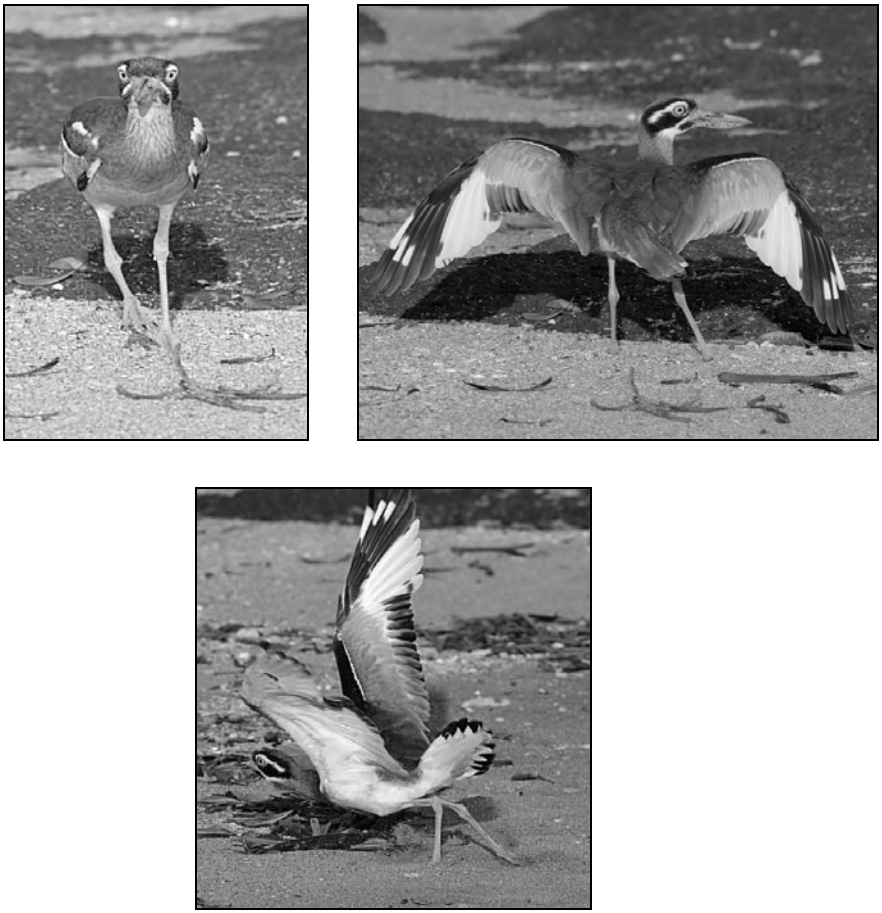

Figure 1. A Beach Stone-curlew *Esacus magnirostris* charges the observer (upper left panel). The Beach Stone-curlew spreads and flaps its wings while wagging its tail (upper right panel). With its wings raised, back arched and raised tail fanned, the Beach Stone-curlew kicks sand (lower panel). (Trevor Collins)

Aggression directed at a raptor

This account is of an interaction between a Beach Stone-curlew and an Osprey *Pandion haliaetus* observed at Nightcliff Rocks, Darwin, Northern Territory (12°20'S, 130°54'E), just before midday on 14 March 2008, about 90 minutes after the peak of the high tide.

On arrival at the high tide wader roost, the observer (AK) noticed two Beach Stone-curlew loafing on the rocks, one of which had a bath in a small rock pool left by the receding tide. About 30 m away, an Osprey was eating prey which appeared to be a fish. A few minutes later, the observer's attention was drawn to the presence of a third Beach Stone-curlew by its alarm call. The bird was lurking among small mangroves about 50 m away from the other two stone-curlew and about 30 m in the opposite direction from the Osprey. Just afterwards, the third stone-curlew walked towards the Osprey, stopping about 2 m away and facing the raptor. The Osprey continued to feed, ignoring the stone-curlew.

After walking around the Osprey, the stone-curlew moved slightly closer and, when side-on to the Osprey, spread its wings and jumped in the air two or three times. The Osprey did not react and continued to feed. The stone-curlew then walked around to the other side of the Osprey, but still close to it, and repeated the display. The Osprey was seemingly unconcerned, soon returning to feed on its prey. Again, the stone-curlew repeated the display but with the same result. Each time the stone-curlew landed after jumping, it bobbed its head and fanned and wagged its lowered tail. After a few more minutes during which it remained in close proximity to the Osprey, the stone-curlew moved slowly away back towards the mangroves from where it came. The Osprey continued to feed.

Discussion

The behaviours observed both involved the spreading of wings and the fanning and wagging of the tail, a response typical of members of the Burhinidae family when threatened by a potential predator and in intraspecific interactions (Hume 1996; Marchant & Higgins 1993) and previously reported in the Beach Stone-curlew (Woodall & Woodall 1989). However, the two observations occurred in quite different circumstances. In the first case, there was no evident threat to the bird (it could simply have moved away), and it seems likely that its behaviour was a parental anti-predator strategy. Though the chick was not observed during the incident, subsequent observations showed it was alive; it would have been about 11 days old at the time. We suggest the behaviour should be interpreted as aggression intended to chase off the observer rather than distraction because it was directed towards the observer rather than an attempt to lure the observer away. Beach Stone-curlew have previously been reported to charge humans who approach a nest or young (Clancy & Christiansen 1980).

The evident aggression towards the Osprey is less readily explained. The Osprey was not threatening the stone-curlews, and the first two birds were unconcerned by it. Regardless, it seems the stone-curlew was intent on chasing off the Osprey. While Beach Stone-curlew are not known to eat fish (crabs and other marine invertebrates are their main prey; Marchant & Higgins 1993), one plausible explanation for the aggressive behaviour is the stone-curlew wanted to take the Osprey's food. Another possible explanation is the stone-curlew attempted to chase off the Osprey wrongly believing the Osprey was a threat to it, perhaps because it was inexperienced. We know of no reports of similar behaviour.

References

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