

## SHORT NOTE

### Foot-trembling in the spur-winged plover (*Vanellus miles novaehollandiae*)

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A range of distinct foot and leg movements, associated with feeding behaviour, has been described in several Palearctic-breeding charadriids, and the possible adaptive significance of such movements in the search and capture of prey has been debated (Simmonds 1961a, b; Sparks 1961). The range of movements has been broadly divided into 'foot-trembling' (involving 1 leg at a time), and 'foot-paddling' (where both feet are involved), (Simmonds 1961b). Species in which this behaviour had been observed included Eurasian lapwing (*Vanellus vanellus*), little ringed plover (*Charadrius dubius*), ringed plover (*C. hiaticula*), Kentish plover (*C. alexandrinus*), and dotterel (*C. morinellus*).

In New Zealand, foot-trembling in the black-fronted dotterel (*C. melanops*) has been examined in detail by Heather (1977) and Tarburton (1989), and reports of related behaviour in the New Zealand dotterel (*C. obscurus*) were recorded by Searle (1984, with editorial comment by Heather) and Tarburton (1989). Heather (1977) proposed a useful subdivision of 'foot-trembling' into 'foot-tapping' and 'leg-shaking', the former involving contact with the surface of ground or water, the latter involving no such contact.

On 31 August 1998, I observed foot-trembling in the spur-winged plover (*Vanellus miles*) at Clifton Beach, Turanga Estuary, near Whitford. Excellent light conditions and an uncharacteristically tolerant flock of 9 birds enabled me to watch their feeding on wet mud for several minutes, at a distance of c.35 m, using both binoculars and telescope. Two birds, and 1 in particular, foot-trembled throughout the period of observation, a behaviour I had not witnessed before. The foot was held in 'balletic' pose, toes together and pointed forward and downward, then vibrated vertically. Sometimes the same foot was trembled consistently; at other times, both feet

alternately. It was not clear whether or not the foot made contact with the mud, though at times it appeared to be 'leg-shaking' rather than 'foot-tapping' that was involved. There was no obvious correlation between the foot movement and any subsequent capture of prey.

While, amongst the lapwings (Subfamily *Vanellinae*), similar behaviour is well documented in the Eurasian lapwing (Cramp 1983), perusal of literature on the spur-winged plover/masked lapwing yielded only 2 references: Barlow (1983), in describing elements of feeding behaviour which must be learned by juvenile plovers, refers to 'the foot tremor, the lunge, the stab'; and Frith (1969) states that 'on wet ground they shuffle 1 foot and stand on the other, and they thus flush prey animals.' Frith makes a similar comment on the banded plover (*V. tricolor*) that 'like masked plovers they also shuffle one foot to flush prey on damp ground.' From her many years of close study of spur-wings in Southland, Barlow (pers. comm.) recalled 'the trembling foot, held out in front of the body a centimetre or two above the ground, and followed by the lunge and bill-stab'. Notably, Marchant & Higgins (1993) make no mention of this behaviour in *V. miles*.

The apparent scarcity of records of foot-trembling in the spur-winged plover, both here and in Australia, may be explained in part by the general wariness of the species towards human intrusion, and by its frequenting of grassed areas where such behaviour may easily be hidden from clear observation.

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