ranges and Dr. P.H. Smith offered local advice. Drs. Smith, R.P. Prys-Jones and J.J.D. Greenwood improved earlier drafts of this paper with their comments.

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ANTI-PREDATOR RESPONSES BY JACK SNIPE TO HUMAN INTERFERENCE

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Jack Snipe *Lymnocryptes minimus* are known to flush from the ground at a short distance when disturbed, often just before being stepped on. Instances have been recorded where birds are trampled to death or caught by hand (Sack 1965, Cramp *et al.* 1983). Although Jack Snipe may rely on the camouflage colouration of their back plumage (Hollyer 1984), this obstinate behaviour makes Jack Snipe vulnerable to terrestrial predators. Hence an avoidance response to intruders is required. A possible response is described by Glutz *et al.* (1977), in which the bird attempts to turn its back towards an intruder just before being flushed. Observations from Denmark verify this as a common response when birds are disturbed but not necessarily flushed.

In the years 1976-87 snipe studies were carried out in a 1.5 ha wetland in western Denmark. During the last two years of the study a total of 49 Jack Snipe were flushed. Of all individuals, 44 birds (90%) flushed in front of the observer. 42 birds (86%) flushed within 2 metres from the observer. All birds flushed at a distance of less than 6 m. Birds flew more or less direct away from the observer on 43 (88%) occasions.

Jack Snipe were regularly found when they were still hiding on the ground. On 7 March 1986 one Jack Snipe was found on a waterlogged mudflat on a riverbank, sitting with its back towards the observer. The bird was passed at close distance (<0.5 m) and remained on the ground. When the observer had passed the bird and was 3-4 metres beyond it, the bird turned so that its back again faced the observer. Shortly afterwards the bird was again approached. It had remained with its back towards the departure direction of the observer. Once again the bird turned to keep its back towards the observer after it had been passed. To check whether this behaviour was a regular response to the intruder, the bird was subsequently approached from a variety of directions. In almost every case the bird was found with its back towards the observer. Only when the bird would have been facing the sun did it turn its side towards the observer.

The back-turning behaviour may be a general defence against terrestrial predators. By turning its back in the direction from where an intruder is approaching or may be expected to approach, a Jack Snipe can fly away most directly and rapidly.

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