

# Capture myopathy ('cramp') in waders

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This problem, discussed in *Bulletin* 24: 24 and 27: 19, relates chiefly to certain long-legged waders which 'go off their legs' on capture and are reluctant to fly when released. They generally recover given a long enough period (often prolonged – may be hours or days) of quiet and, if necessary, an adequate food supply. The damage to the birds appears to be caused when they struggle in the net in which they are captured and may be exacerbated by further restraint in *small* bags or *low* keeping cages in which the birds cannot stand. Dr P.R. Evans has drawn our attention to a relevant paper and this is reviewed below followed by a report on a cannon net catch of Bar-tailed Godwits *Limosa lapponica* from Dr C.D.T. Minton.

The paper mentioned by P.R. Evans is by J.R. Henschel and G.N. Louw (1978) 'Capture stress', metabolic acidosis and hyperthermia in birds', *South African J. Sci.* 74: 305–306. The authors refer to reports of severe losses during capture of wild ungulates due to 'capture myopathy' (basically

loss of structural and functional integrity of muscle fibres when muscles are severely over-strained) and to irreversible leg paralysis in flamingos after pursuit, capture and transport (Young 1967). To study the problem in birds a series of species of doves were restrained in a mist net for an hour and then in a dark box for five hours. During this period rectal temperatures were checked and the levels of several enzymes likely to be liberated into the blood if muscle fibres were damaged were monitored. Temperatures dropped sharply on capture then rapidly rose above normal before returning slowly to normal. Enzyme levels increased significantly indicating muscle damage and enzyme leakage into the blood. Most of the birds were unable to fly when released one to six hours after capture but had recovered by next day. The author suggests that capture myopathy can develop in routine procedures and it seems likely that some species are more prone to the conditions than others.

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## Occurrence of 'cramp' in a catch of Bar-tailed Godwits *Limosa lapponica*

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Further to the recent note (Stanyard 1979) on 'cramp' in Curlew *Numenius arquata* the occurrence of a similar condition in a cannon net catch of 186 Bar-tailed Godwits in Victoria, Australia may be of interest. Twenty birds were affected by cramp – a far higher percentage than in any previous group in the UK of between 100 and 500 godwits). Like those reported by Stanyard the affected birds were found to be sitting down in the keeping cages even though these were high enough for the birds to stand. Although most gradually improved after release one bird did not recover and the fate of several others is uncertain.

The main difference between this and other godwit catches was the length of time taken in covering the birds after firing the net. (Only five of a team of eleven people were immediately available and the covering material was located about 200 metres from the net.) Further differences were that the leading edge of the net reached the sea, necessitating lifting ashore (the large UK catches of godwits have been on fields) and a larger mesh size which allowed the birds greater freedom to struggle so they became more

entangled in the net than usual. However, the birds were extracted reasonably quickly from the net and banding (ringing) and processing proceeded expeditiously in warm (25°C) dry conditions.

This experience supports earlier conclusions, including those of van Heerden (1977). In particular they suggest that (a) 'straining' is the prime cause of 'cramp'. Minimising this during and after capture is the most important potential remedy; (b) the condition has probably taken effect before the birds are placed in keeping cages. (Tall keeping cages are not therefore considered a total remedy although they probably help recovery and reduce the chance of further development of the conditions which might occur if the birds strained against the confines of small low cages); and (c) it is vital that birds which exhibit cramp on release are not immediately recaptured and replaced in keeping cages. Chances of recovery are probably maximised if the birds are left to recover quietly and gradually without further harassment. Subsequently someone walking slowly on the down-wind side of the bird may help provide the extra stimulus for final

