## WADERS KILLED BY HAILSTORM by Frank Mawby

During the afternoon and evening of 7 June 1983 several severe thunderstorms passed over the Ribble estuary in north-west England. These storms were accompanied by rain and hail. In some localities the hailstones were reported to be as large as golf-balls (i.e. about 3 cm in diameter), and extensive damage to commercial glasshouses was reported in some parts of Lancashire, including the Fylde area (close to the Ribble estuary).

On the following day, many birds were found injured or dead at Lytham St. Annes on the north shore of the estuary (see Figure 1). Most of these were Knots Calidris canutus, but there were also some Grey Plovers Pluvialis squatarola, Bar-tailed Godwits Limosa lapponica, Sanderlings Calidris alba, Dunlins Calidris alpina and Shelducks Tadorna tadorna. Several birds were found in Lytham town centre. At least 100 Knots, 6 Grey Plovers, 6 Bar-tailed Godwits, 2 Sanderlings, 8 Dunlins and 1 Shelduck were found dead along the foreshore with injuries consistent with having been hit by hailstones (E. Stirling pers. comm.). Up to 300 Knots may have died. At the time there were about 6000 Knots on the estuary, so this represents mortality of around 5% of the Knots.

At the time of the storm there were over 300 pairs of Common Terns Sterna hirundo and 3000 pairs of Black-headed Gulls Larus ridibundus nesting on the Ribble Marshes National Nature Reserve (NNR) on the southern shore of the estuary. Although the storm passed within 1 mile of many of the nesting birds, there was no mortality within the colonies. In case any cattle had been struck by the very severe lightning that occurred during the storm, we checked the NNR marshes the following day. No wader corpses were found.

It was only when a gale and high tide on 13 June washed up wader corpses onto the NNR that I realised that unusual mortality had occurred. One Knot amongst these birds had been ringed as a first-year bird in late September 1982 in north-eastern Scotland. No ringed birds were found amongst those at Lytham. After 13 June there were also more gull corpses in the tidal detritus on the southern shore of the estuary than is usual for that time of year. These birds had presumably died near the northern shore of the estuary, and had been washed subsequently south by tidal and wind action.

It is not unusual for a thunderstorm to be contained within a major estuary. Such storms often pass up one side of the estuary rather than across it. In this instance, such a storm killed large numbers of waders on a small area of the northern shore of the estuary, whilst leaving the southern shore unaffected. I know of no other reported instance of waders being killed by hailstones.

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(I would welcome other reports of such unusual mortality. Ed.)

