

## STARLINGS BATHING IN FLOCKS

On 12 March 1978 I spent an hour during mid-afternoon at a small dune lake near Foxton in the Manawatu. The lake is surrounded by farmland. At one end an area of mud merged into marshy pasture on one side and into shallow water on the other. A fence crossed the mud about three metres from the water's edge.

Small flocks of Starlings (*Sturnus vulgaris*) were bathing in the water near the fence. Flocks of several hundred birds flew in from the north, splitting into smaller groups as they landed on the fence, the mud, on pasture by the fence or directly in the shallow water.

The birds in the water bathed in the normal manner, keeping very close together (almost touching each other) and all facing the same way. A continuous chattering was made by the bathing birds. At times two or three flocks of thirty or more birds each were bathing at once, with a few birds spread out between. Birds kept flying from the back to the front of the flock and to and from the shore and fence. These short flights were the same as in a feeding flock on pasture, passing over the flock to land in front of the leading birds or else away from the flock in a rapid, banking flight. Eventually the water became too deep and the flock stopped moving forward.

As well as the individual movements, whole flocks would suddenly move from fence to water or vice versa. Occasionally, birds from fence, shore and water flew away from the lake in one large flock. Flocks arrived from one direction and left in another, perhaps towards a roost.

The interesting feature of these observations is the similar behaviour of Starling flocks when feeding and when bathing. Powell (1974, Anim. Behav. 22 (2): 501-505) found that individual Starlings spent less time watching for predators and responded more quickly to the appearance of a model hawk when in a group of ten than when in smaller groups. Flocking in birds has several possible functions. It is not known how frequently Starlings bathe in flocks or how valuable this behaviour is to each bird.

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PRE-MIGRATION DISPLAY BY MONGOLIAN DOTTEREL  
TO BANDED DOTTERELS

On 22 April 1978 J. A. Brown and I were at Karaka Shellbanks, south Manukau Harbour, when rapid *pit-pit* calls of Banded Dotterels (*Charadrius bicinctus*) drew our attention to a cluster of about 20 birds. A Mongolian Dotterel (*Charadrius mongolus*), which had spent the southern winter in the Karaka vicinity, was displaying to about 15 Banded Dotterels. Mongolian and Banded Dotterels, which breed in Asia and New Zealand respectively, are very alike in size and