

Behavioural imprinting by a Grey Plover *Pluvialis squatarola* chick

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A Grey Plover chick was observed, on the Taimyr Peninsula, walking with a limp apparently copied from its lame mother. Whilst the mother had broken its leg in the past, resulting in a limp, the chick was apparently healthy in all respects and limped as a consequence of behavioural imprinting on its mother. Such imprinting was likely to have been maladaptive in the presence of predators.

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On 28 July 1994 I observed a Grey Plover chick at Mys wastochnia, Taimyr Peninsula, Russia (74° 08'N, 86° 48'E).

During fieldwork on the tundra I watched a seven day old chick walking away from me. The chick walked as if it had a lame right leg. As it walked, it looked as though the chick could only lean on this leg, therefore it veered to the right. It could not achieve the normal running speed which Grey Plovers would normally attain. From a distance the right leg looked healthy.

Some tens of metres away, the female parent was walking in exactly the same difficult manner. The leg of the adult had obviously been broken a long-time before as it was visibly healed.

Because of the handicap, it was relatively easy to catch the chick. Handling it, it seemed that it was quite possible for it to have used its leg in a normal way, synchronously with the left leg. When the chick was picked up from the ground, it retracted its legs normally like other wader chicks in the same situation. The leg was anatomically healthy and not broken.

After ringing and measuring the chick, I released it. The first steps it made when walking away were normal, and then the bird started to walk with a limp once more. Because of the chick's slow walking speed and Pomarine Skuas *Stercorarius pomarinus* circling over the area, I

walked immediately away. The skuas came immediately to search for the chick, although because it hid itself rapidly it was not located by them.

Seven days previously I had ringed, in the nest, two other chicks from the same Grey Plover brood. The lame chick could have been a chick that had already moved out from the nest. I did not see the ringed chicks during the episode described above, not did I locate them afterwards.

The phenomenon of behavioural imprinting is not unknown and demonstrates the importance of the maternal contact during the first week for this species of wader. Like all other plovers, both Grey Plover parents help to bring up their chicks. Apparently, however, the mother has a greater influence on developing the behaviour of the chicks than the father, which in this family, walked in a normal fashion.

One can speculate that the parents may have different rôles in the rearing of chicks, with the mother more involved in immediate rearing and care, whilst the father is more concerned with detecting predators and thus protecting the area in which the family is occupying.

Several pairs of Pomarine Skua occupied a territory with one or two growing young of their own in the immediate proximity to the Grey Plover family. The skuas hunted intensively in this general area, and the behaviour of the chick most probably reduced its chance of survival.

