starting to assume breeding dress, whereas most male Bartails were reddening and, indeed, some already appeared to be fully red. This was the last occasion on which these two Black-tailed Godwits were seen, and they evidently left the Miranda coast. As it happened, the number of godwits which wintered in the Firth was abnormally small; and it is felt that in view of the special watch which was kept for the Blacktails by several observers, they would not have escaped notice. If, as seems likely, they were first-year birds, they may well have wintered somewhere in northern New Zealand.

SHORT NOTES

STARLINGS (*STURNUS VULGARIS*) IN THE ROLE OF POLLINATORS

Birds, in their search for food, frequently assume the role of pollinators and dispersal agents for the plant world. Starlings, although almost omnivorous, periodically fill the role of pollinating agents in their search for nectar. In some countries, migration of the vast hoards of starlings, it has been noted, coincides with the flowering season of certain families of plants, such as the *Malvaceae, Bombacaceae* and some of the large-flowering *Leguminosae.* Although many of these flowers are adapted to the needs of other visitors, the starlings frequent them for the copious nectar produced and in doing so may cross-pollinate the flowers by-passed by the normal pollinators. Likewise, the completion of the flowering season marks the disappearance of the starlings.

In New Zealand, as is well konwn, starlings were introduced to cope with some agricultural pests, but unfortunately their keen appreciation for fruit has relegated them to the 'black list' of pests, in spite of their appetite for nocuous insects. However, it is not in this role that I wish to discuss them, but as pollinators. Of recent weeks (December-January) I have frequently noticed the forehead, crown and throat of starlings besmeared with pollen. At first I was under the impression that the birds had been fighting and that the discoloration on the head was due to wounds. But in view of the sociable nature of the species, fighting had to be ruled out as a cause. Closer examination revealed masses of pollen. The source of the masses of pollen had now to be located and the plant or plants identified. Observation soon revealed that numbers of starlings visited the flax bushes in swamps and elsewhere. The discoloration was due to flax pollen (*Phormium*).

The question which arises from this small observation is: 'What effect will this mass feeding of starlings on the flax nectar have on the distribution of the Tui (*Prosthemadera novae-seelandiae*) in course of time?' Flax is one of the many sources of food of the Tui. Both species are pugnacious, but since one is 'solitary' and the other gregarious, will the starling exclude the Tui from such areas? Again, the habitats of the two birds are 'normally' different; the Tui is more or a forest bird only coming into the open to feed, whereas the starling is a bird of the open country, seldom if ever invading the bush. These are questions which only the future can answer.

C. McCANN

[In the vicinity of Auckland, starlings have frequently been seen feeding on the flowers of flax (*P. tenax*) and pohutukawa (*M. excelsa*). The Tui here is increasing as a bird of gardens and parkland.—Ed.]

BIRDS ON OAIA 1953-4

Oaia Island lies nearly a mile offshore at the south end of Muriwai beach. The following notes were made during visits which I made with members of the Muriwai Surf Club.

Gannet (*Sula serrator*). 29/11/53. Eggs 151. Black chicks 26. White chicks 163. Fluffy chicks 7. 21/9/54. Nesting mounds 295. Eggs new-laid 2. 30/10/54. Most nests occupied. First eggs chipping. Three eggs had been cast out. 31/10/54. First chick hatched.