ECOLOGICAL STUDIES ON THE WHITE-FACED HERON

(*Ardea novaehollandiae novaehollandiae* LATHAM 1790)

IN THE MANAWATU

A thesis presented in partial fulfilment of
the requirements for the degree of
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Frontispiece : White-faced Heron on the nest incubating eggs. Adults have a white face and lanceolate plumes on the back.

ABSTRACT

White-faced Herons were studied near Pukepuke Lagoon, Manawatu, from March 1980 to February 1981, and at Palmerston North between April and June 1980. Usually three days a week were spent in the field to observe herons, sample feeding areas, and to visit roosts and nests.

Diurnal and seasonal time budgets and feeding ecology patterns were compiled for herons feeding in pasture, from 39 581 bird observations and 5004 recordings of feeding rates respectively. The influence of time of day, season, food availability, breeding, and moult, on the time budget and feeding ecology is discussed. Data from Pukepuke and Palmerston North are compared. The location of herons in fields was plotted to determine whether certain areas of pasture were favoured as foraging sites.

Feeding areas at Pukepuke were sampled weekly with a sweep net and a soil quadrat to determine the potential prey for herons foraging in pasture. A comparison was made between the number and dry weight of animals collected at different times of the day, in different seasons, and between feeding and non-feeding areas. The diet was assessed by direct observation of prey, analysis of regurgitated pellets and food, and from the stomach contents of one heron. A total of 30 748 prey animals were recorded, with the great majority of them from pellets. Monthly and seasonal changes in the diet are discussed in relation to changes in the relative availability of prey species.

Some breeding data were obtained, including the measurements of 21 eggs. The biology of herons is summarized and discussed as it relates to White-faced Herons.

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