

decrease in body weight during the time the chick was alive was about 35 to 45g, or about 1g/hour. Post-mortem examination revealed a yolk-sac containing 86.5g yolk and analysis showed this yolk to contain 43.55% water and 56.45% solids; and to have an energy value of 18.34 kilojoules (4.38 Kcal.) per gram wet or 32.49 kilojoules (7.76 Kcal.) per gram dry weight.

The very close agreement between the proportions of solids and between the relative energy values of yolk in kiwi eggs and in a kiwi chick would indicate that the composition of the yolk, at least in so far as these criteria are concerned, probably changes very little during embryonic development.

Another chick that died between the ages of 12 and 15 hours had then a yolk reserve weighing 111.9g (Reid 1972; *Notornis* 19 (3): 261-266). This second chick, therefore, lived for about 24 hours less and carried about 25g more yolk in its sac than the chick mentioned above. Data from both chicks would indicate that young kiwis lose weight at a rate of approximately 1g/hour during their first 24-36 hours following hatching and this, in turn, implies that both of these chicks emerged from their shells carrying a yolk reserve considerably greater than shown by the dissections i.e. about 120-125g yolk with an energy value of approximately 2235 kilojoules (535 Kcal.) in the case of the first (351.3g) chick.

The data given by Calder & Rowe show that a fresh egg having the same dimensions as the egg from which this chick hatched would have an energy content of about 5140 kilojoules (1225 Kcal.). Hence, it seems that the prolonged developmental process within the kiwi egg utilizes only 56 or 57% of the stored energy — and the disproportionately large surplus (when compared with that available to chicks of other species) is available to nourish the young kiwi during its first week, or more, of life.

I am indebted to Trevor Daly, Chemistry Division, DSIR, for calorimetric analysis of the yolk sac, and to Tony Caley and Colin Roderick for weights of chicks hatched at Mt. Bruce.

BRIAN REID, *Wildlife Service, Department of Internal Affairs, Private Bag, Wellington*



NEW ZEALAND FALCON EATING CARRION

On 17 January 1977, at Jackson Bay, south of Haast, I observed a New Zealand Falcon flying low over the wharf. It landed on the boulder beach and began eating a fish head. This is unusual in that they are usually stated not to be carrion eaters. I was able to approach

to within 10 m of the bird and watched it for several minutes before it flew off into the bush.

KEVIN TAYLOR, *Ainola, Goat Island Road, Leigh, R.D. 1*



STATUS CHANGES IN GARDEN BIRDS

Daily records of birds observed in my garden in Masterton in a 12-month period — May 1942 to April 1943 inclusive — compared with a similar record in the 12 months — May 1971 to April 1972 — indicate the changes that have taken place in the intervening 29 years. The trees and shrubs in the garden have remained basically the same, with the minimum alteration in the environment in the garden or in its immediate neighbourhood.

Four species have maintained their numbers: Blackbird (*Turdus merula*), House Sparrow (*Passer domesticus*), Starling (*Sturnus vulgaris*) and Silvereye (*Zosterops lateralis*) being recorded on every day of observation.

Two species showed a slight decrease, the first figures in each instance giving the days recorded in 1942-1943, the second those in 1971-1972: North Island Fantail (*Rhipidura fuliginosa placabilis*), 166-144; Tui (*Prosthemadera n. novaeseelandiae*) 98-78.

Greater decreases in varying degrees were shown by eight species: Chaffinch (*Fringilla coelebs*) 229-126; Goldfinch (*Carduelis carduelis*) 184-74; Greenfinch (*Carduelis chloris*) 62-10; Hedge Sparrow (*Prunella modularis*) 276-173; N.Z. Kingfisher (*Halcyon sancta vagans*) 19-1; Song Thrush (*Turdus philomelos*) 365-174; Shining Cuckoo (*Chalcites l. lucidus*) 13-3; Grey Warbler (*Gerygone i. igata*) 257-37. As the Kingfisher is of erratic occurrence in built-up areas and has remained widely distributed in the district generally and actually increased in numbers in the past 30 years, the above garden record is of no significance. The decrease in records of the Shining Cuckoo possibly bears some relation to the substantial drop in the numbers of the Grey Warbler. The other introduced species listed above have shared in the general decrease of birdlife apparent throughout the Wairarapa.

Eight species recorded in 1942-43 were not seen in 1971-72: Californian Quail (*Lophortyx californica brunnescens*) 8-0; Morepork (*Ninox n. novaeseelandiae*) 18-0; N.Z. Pipit (*Anthus n. novaeseelandiae*) 5-0; Pukeko (*Porphyrio porphyrio melanotus*) 3-0; Indian Myna (*Acridotheres tristis*) 4-0; Redpoll (*Acanthis flammea*) 96-0; Skylark (*Alauda arvensis*) 25-0; Yellowhammer (*Emberiza citrinella*) 10-0.

Except for occasional birds brought to the district, mostly from Hawkes Bay, the Myna no longer inhabits the Wairarapa. The Pipit,