

The sections dealing with ducks will interest those who believe that the factors controlling game bird populations are amenable to scientific analysis as the basis for a positive conservation policy. We know so little of these factors, many and complex as they are admitted to be, that the author's suggestion that increase in numbers of paradise and grey ducks at Waikanae is related to the "closed season" of 1942 must be accepted with caution. Actually, the count of paradise following the shooting season of 1943 (28 on July 3) is much higher than the maximum in the year that followed the closed season of 1942 (6 on June 14). Analysis of Table 5 (grey duck) shows, too, that although the highest count certainly followed the closed season, yet the average counts before and after the closed season scarcely differ. (It may be noted in passing that failure to indicate whether a "dash" signifies "no ducks" or "no observation" hinders interpretation of the tables.) Even the greater difference between the mean count for the year between the 1941 and 1942 breeding seasons and that for the period between the 1942 breeding season and the following shooting season, when the maximum benefit of protection should have been evident, is not of statistical significance. It is not intended to deny that the closed season may have benefited the duck population, but only to point out the difficulty of accumulating convincing evidence of a change in the population of a wild bird.

The sub-title, "An Ecological Survey," deserves some consideration. Ecology is the study of the relation of organisms to their environment, and "the ecologist is concerned with the study of the casual relations respecting the presence of particular species in particular places." (E. J. Salisbury.) The amateur field naturalist may receive such definitions with something of the jubilation of the "bourgeoise gentilhomme" when he realised that he had been speaking "prose" all his life, and it is to some extent true that a schoolboy egg collector, searching for a bird's nest, may become an ecologist in determining its whereabouts, and most articles in "Bird Notes" are contributions to ecology in its broad sense. But, to quote W. H. Thorpe, "there is a good deal of incomplete and casual observation which . . . scarcely deserves to be dignified by the term 'ecology.'" The concept of "an association of plants or animals as forming in some sense an organic whole" (again the words are Thorpe's) is fundamental to ecology, and it is here that Dr. Wodzicki's approach to the analysis of the Waikanae estuary and its bird life, despite some diffuseness, prolixity and irrelevancies, justifies the subtitle of a paper which acknowledges, implicitly, that the understanding of New Zealand's wild life problems will involve an appreciation of the whole environment, dynamic and complex. Ecology, as a science, is still in its childhood: New Zealand abounds in pabulum for its nourishment, and Dr. Wodzicki has offered a substantial meal to the growing child.—C.A.F.

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WASHDYKE LAGOON, TIMARU.—On a casual inspection 17/1/46, there were 500-600 black-billed gulls, 400-600 black-backed gulls, c 12 white-fronted terns, c 10 Caspian terns, c 150 ducks (grey, mallard and hybrids), c 65 black swans, c 300 pied stilts, 1 pied oystercatcher, several hundred banded dotterels, etc. This lagoon is worthy of regular study by some person with opportunity for making repeated visits.—J. M. Cunningham, Masterton.

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BIRDS AT WHAREAMA, EAST COAST, WAIRARAPA.—Not a good estuary for waders. Total list seen, 14/7/46 c, 20 black-backed gulls, 1 red-billed gull, 1 white-throated shag, 8 black shags, c 3 grey ducks, harriers, magpies not numerous, yellow hammers numerous, flocks c 15 skylarks common.—R. H. D. Stidolph and J. M. Cunningham.