

Chatham) were shown to be significantly discrete entities with all three phases of the Variable Oystercatchers lying very close together. With computer services more readily available to carry out the tedious computations of multivariate analyses, it is to be hoped that the biological sense of this work will encourage other ornithologists to use what is after all only the logical and elegant offspring of the scatter diagram.

Among the ecological material there is an instructive list of prey species taken by mainland oystercatchers; apparently they do take more species of mollusca (including pauas but not oysters) than they do of worms and crustacea. Baker also demonstrated that the long slender bill of the South Island Pied Oystercatcher gives it a strategic advantage over the Variable in habitats with soft substrates. A flock of both species was watched feeding on tuatuas (*Amphidesma subtriangulatum*) at Jackson's Bay, the two species feeding at approximately the same rate and for the same period of each tidal cycle. South Island Pied Oystercatchers were able to obtain an average daily quota of tuatuas equivalent to about 52% of their body weight but the average daily intake of the Variable birds was only about 36% of their body weight. At Kaikoura on a rocky substrate the short robust bills of the Variable birds enabled them to obtain limpets equivalent to 44% of their body weight, showing that they were more efficient at feeding on rocky substrates than on soft ones. In terms of niche utilization their choice of the rocky substrate has distinct survival value, particularly in districts with large flocks of South Island Pied Oystercatchers. Baker gives only a brief resume of this experiment and a more detailed account of the problems involved in this type of assessment would be valuable. He gives a general formula for the computation of the existence metabolism for a South Island Pied Oystercatcher of average weight which suggests that the bird would require 64.69 Kcal/bird-day to maintain body weight in captivity. From Baker's figures it would appear that the Jackson Bay birds were obtaining about 1090 Kcal/bird-day, a discrepancy of considerable interest.

It is to be hoped that many New Zealand ornithologists will seek out copies of this useful and stimulating paper.

J. H.

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McPHERSON, L. B. *Sounds of New Zealand Birds*, Vol. 5. A 45 r.p.m. extended play record, PR 739. Christchurch: McPherson Natural History Unit, P.O. Box 21-083, Edgeware, 1974. \$1.50 plus postage.

Les McPherson's Natural History Unit has produced the fifth volume in this series. Birds recorded are:

SIDE ONE

North Island Weka
Red-fronted Parakeet
North Island Kaka
Northern Blue Penguin
Morepork

SIDE TWO

Kea
Pukeko
Fairy Prion
Indian Myna
Australasian Gannets

These were not recorded by Mr McPherson but by Carl and Lise Wiesmann on their trip here in 1956-7 using EMI L2a and L2bs recorders on Scotch 11A and 12 tapes with a 36" parabolic reflector.

I have found nothing to fault the technical quality of these recordings, and believe most listeners will agree that they represent very well the general types of communications of these species.

These are loud, low-voiced birds which are among the easiest to record. That is to say, they do not have strong high notes with great volume such as is found with the New Zealand Robin, the Hedge Sparrow, and those of similar eloquence but which are the bane of every recordist, even those blessed with the possession of such high-fidelity, precision machines as the Swiss Nagra with its speed of 15" per second. As mentioned in previous reviews, it is most difficult to prevent over-recording, with consequent distortion, in making tapes of such birds. This problem did not exist with the birds on this disc. Nevertheless, it is most evident that care and experience combined to produce some very excellent tapes. Our appreciation and commendation go to the Weismann husband-wife team and to Mr McPherson for making this disc available to the public.

Wm. V. W.

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The Natural History of New Zealand. An ecological survey. Edited by Gordon R. Williams. Pp. XVIII + 1-434, text illus., pls 1-40. Wellington, &c.: A. H. & A. W. Reed. 1973. \$15.50.

Only a brave man (of incredible omniscience) or a rather foolish one (possessed of crass ignorance) would try to review such a comprehensive book as this purports to be with equal profundity for all parts of it. The accepted technique for the reviewer is to sample a part and, finding what is new and true, authentic, questionable, or however it seems in the particular field of knowledge which the reviewer professes, judges then the whole by the part. I have been pleased, therefore, to find many things not said before, some things said by others but not in this way with yet other things known to most of us but gathered together or reinterpreted here in a manner which makes *The Natural History of New Zealand* a unique reference work.

I cross swords, therefore, with the reviewer of *The Press*, the Christchurch morning paper, who wrote of this book on 11 May 1974:

"The editor claims that the book is an ecological survey, hoping that today's "man in the street" might find it a basic reference on which he may base his judgement of his impact on, and his development of, the New Zealand environment. But time also passes for the scientists and most of the facts and ideas seem to predate 1971.

"Some of today's real problems, for instance water management in swamps and estuaries, are hardly mentioned, and for the most part the general movement of concern about our environment has already assimilated most of the ideas behind the book.