Birds and Aircraft: A Problem at Auckland's New International Airport, by E. K. Saul. Jnl. Roy. Aeronautical Soc. v. 71, No. 677: May 1967. Reviewed from Wildlife Pub. 91, Dept. Internal Affairs, Wellington, N.Z.

This paper highlights the problems caused by building an airport right in the middle of the rich feeding areas of anything up to 30,000 godwits, knots, oystercatchers, stilts, dotterels, swans, ducks and gulls. Into the bargain it was near a rubbish dump frequented by thousands of gulls. Control methods aimed at preventing aircraft striking flying birds are discussed: ways of scaring birds away, attempts made to stop people disturbing wader flocks, so that they will not fly over the runway, and the nearest dump has been closed. To prevent birds roosting on the runways at high tide, H. R. McKenzie and R. B. Sibson suggested alternative roosts being provided, and two artificial roosts were built nearby. One is an island of 6 acres, composed of sand, shell, black rock and crushed concrete and was proving highly effective.

Of scaring methods, daily sweeps of the airport by vehicles are made, some shooting having a marked preventive effect. Long grass is recommended to make roosts unattractive, and a model aeroplane designed to look like a hawk has been tested. In this paper (or for that matter any other on the subject I have read) no mention is made of the old-fashioned way of driving birds away with a man and a dog. Perhaps it would not work for long, but one would at least like to know that such an elementary (and cheap) idea has been thought of and tried.

— J.M.C.

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Ecological Adaptations for Breeding in Birds, by David Lack, Methuen & Co. Ltd. N.Z. Price $11.55.

There are few authors expert or lucky enough to write three important books in a row. Dr. Lack has achieved this hat-trick without depending on luck. The main hypothesis supporting this book is, in his own words:—

> "I consider that all the breeding habits and other features discussed . . . have been evolved through natural selection so that, in the natural habitats where they were evolved the birds concerned produce, on average, the greatest possible number of surviving young."

It is, in every sense of the old phrase, an encyclopaedic work, and for that reason alone is worth possessing. It is also an impressive synthesis, but the extent to which this synthesis carries conviction depends more upon the number of cases about which Dr. Lack argues so plausibly than the extent to which individual ones are convincing in themselves. Thus your acceptance of the main theme tends to increase as the book progresses, though even at the end you are left with the impression of a large number of exceptions to the general theory, a feeling that alternative explanations are frequently possible (as in clutch size in waterfowl and hole-nesting species) and, as a corollary, a suspicion that natural selection operates in a more complicated way than Dr. Lack gives the impression it does. But it is this very combination of conforming and non-conforming cases that makes the book so stimulating and a spur to research.

It is divided into two parts — the first deals with nesting dispersion and the pair-bond and the second with clutch size, size of eggs and growth rate. There is also a large clutch of appendices in which a tremendous amount of detail on a wide variety of subjects is summarised — an excellent idea which saves cluttering the main text and helps to keep it easily readable. Every chapter has its summary and eventually there are summaries of the summaries. Though this involves the reader in some repetition he, at least, cannot claim that the argument is ever obscure.

There are a few specific points which seem to merit criticism:—

1. Conclusions reached on the basis of comparison by means in the absence of any other statistical data, may frequently be unjustified (I was surprised, by the way, at how little elementary statistics appear in this book). It is the very use of means in this way that leads to the saying that there are lies, damned lies and statistics.
2. One gets the impression that *all* variation is regarded as adaptive. Need this be so ?
3. Virtually all the data Dr. Lack uses seem to be regarded by him as equally reliable. Synthesizers of other people's work are always faced with the problem of assessing its reliability. I wonder whether Dr. Lack should, at times, have been more obviously critical.
4. As an off-shoot of this last point, definitions often vary with the expert, Dr. Lack sometimes omits even giving his own, e.g. there is none for incubation time. How is the reader to know, therefore, whether certain data have been properly combined or compared ?
5. When does a natural habitat become unnatural ?

Such reservations as these are minor as far as the work as a whole is concerned, but if they are justified in any way they may have led to at least some errors in deduction.

The very pleasant illustrations are by Robert Gillmor; and, as usual, there is a virtually exhaustive bibliography (O. Hilden's paper on clutch size in waterfowl is a notable omission) and an excellent subject and animal index.

— G.R.W.

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LETTER

A gremlin haunted me when I wrote the paper on "The Occurrence of the Musk Duck *Biziura lobata* (Shaw) in New Zealand." I figured, but did not describe, the right humerus collected by Mr. Russell Price in the creek deposits at Poukawa Swamp, Hawkes Bay, in 1963.

The measurements are, in centimetres:

L	P	M	D
10.2	1.9	0.6	1.215

The bone is very little worn, and appears to be slightly sub-adult.

— R. J. SCARLETT