

Birds of the Sand Country

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The normal vegetation of a sand-dune area provides cover of an open kind which is generally a more favourable environment for large numbers of birds than a more densely wooded area. This applies in some degree to such light-soiled country even after it has been modified by additional protective vegetation. Some of the obvious advantageous factors are the good drainage and low humidity, the size and accessi-

bility of numerous insects, the range of edible fruits and seeds, and the high proportion of nitrogen and protein in the leaves of leguminous plants in such areas. These hypothetical advantages can be re-examined after some consideration of the birds present.

They can profitably be listed and grouped in categories for the purpose of this somewhat superficial survey.

<i>Name</i>	<i>Status in the Area</i>	<i>Major Food Dependence</i>	<i>Abundance</i>
Harrier	Resident	Predation	maximum
Falcon	Visiting		rare
Brown Quail*	Resident	Seeds, insects	local
Pheasant*	"	" "	patchy
Californian Quail*	"	" "	"
Turkey*	"	" "	local
Rock Pigeon*	"	" "	scarce
N.Z. Pigeon	Res. and visiting	Fruit, leaves	rare
Shining Cuckoo	Migrant (breeding)	Insects	common
Long-tailed Cuckoo	Passage migrant	"	rare
Morepork	Resident	Insects, predation	sparse
Kingfisher	"	Insects	common
Skylark*	"	"	?
Fantail	"	"	common
Fernbird	"	"	local, rare
Grey Warbler	"	"	common
Song Thrush*	"	"	"
Blackbird*	"	"	"
Hedge Sparrow*	"	"	"
N.Z. Pipit	"	"	"
Tui	Res. and visiting	Nectar	scattered
White-eye	" " "	Insects, berries	common
Greenfinch*	" " "	Seeds	"
Goldfinch*	" " "	"	"
Redpoll*	" " "	"	"
Chaffinch*	" " "	Seeds, insects	"
Yellowhammer*	Resident	" "	"
Chil Bunting*	"	" "	scattered
House Sparrow*	"	" "	common
Starling*	"	Fruit, insects	"
Myna*	"	Insects	local
Magpie*	"	"	common

* = introduced

RESIDENTS AND REGULAR VISITORS

This category includes the resident or regular visiting terrestrial birds both native and introduced.

The most noticeable characteristic in this assemblage is the high proportion of naturalised passerine birds, especially finches, and field

observations confirm their numerical abundance. They are not only present in greater density than on most other kinds of favourable country, but they are present in considerable density at times when the same species are absent or scarce elsewhere, *e.g.*, in winter. This round-the-year abundance makes them a significant factor in

the biotic mosaic and a carefully planned research project to study their role is something which we may hope will be undertaken in the near future. For absolute density of numbers irrespective of species composition, semi-cultivated sand-dune country probably gives a higher figure than any other kind of terrain in New Zealand.

It is difficult to say what may have been the ecological significance of some changes that appear to have occurred historically in the composition of the bird fauna. However, indigenous seed and fruit eaters, notably native quail and parrakeets, have disappeared, whereas a number of purely insectivorous indigenous birds still occur in the areas. Of the naturalised gallinaceous birds, the larger and more conspicuous pheasants and Californian quail seem to fluctuate in abundance more than the smaller and less conspicuous Australian brown quail.

WATERFOWL

Waterfowl associated with the lakes and fresh-water lagoons enclosed in sand dunes are not likely to differ in species composition or in behaviour from birds on other freshwater areas, if only for the reason that as a group they are less conservatively bound to territory than terrestrial birds, and are by habit more mobile and wide ranging. However, it may be noted that the lack of road access to many such sand country lakes does give more freedom from disturbance, and the number of ducks present is often high in proportion to the apparent food supply. The presence of little grebes on several lakes in such country may also be attributed to lack of disturbance.

WADERS AND GULLS

Seaward dunes without too much vegetation attract a third category of birds, namely waders and gulls, deriving most of their food from the tideline or even from the sea, but requiring adjacent open country for nesting. At varying distances inland, therefore, are found the solitary nests of banded dotterel, and of oystercatchers, the more sociable groupings of pied stilt, and the still denser colonial nesting groups of gulls and terns. Most of them use unstable surface areas and have little effect on anything else, but black-backed gulls in large colonies have a stimulating effect on some kinds of dune vegetation and there is a marked degree of

permanence in the sites to which they return annually.

VAGRANTS

As this paper has been planned to relate in particular to the Rangitikei-Manawatu sand areas, it is appropriate to include another category of birds, grouped here as passage migrants and vagrants. Most of those occurring in New Zealand are waders, requiring just the conditions offered by dune country, where the well-known effect on rivers of shifting sand is to provide an ever-changing area of estuary and lagoons near the coast. The passage migrants use such areas and pass on, but if the urge to do so is weak, as it appears to be in immature birds, many are able to remain throughout a year or more. Godwits, for example, may be seen at any time, summer or winter, although they nest only in the Northern Hemisphere.

There are additional circumstances that make the South Taranaki Bight a reception area and assimilation point for vagrants. The air drift that is primarily responsible for the sea currents that shape the coast, and later for the movements of the sand, also carries a vagrant quota of air-borne plants and animals. The involuntary journey is fatal for most of them; the exceptions are the few that land in a favourable area. It is clear that this has been happening to a measurable extent with a number of Australian birds of the kinds that habitually soar to high altitudes in Australia and drift for hundreds of miles in search of new feeding areas as the old ones dry up. This is a marked habit of herons, spoonbills, ibis, pelicans; and some birds of prey. All these kinds are represented in the list of recurring vagrants in New Zealand, and within a twenty-year period over which observations have been more precise, two or three of them have established a resident breeding population in New Zealand with a regular pattern of seasonal movement. The Royal Spoonbill may be cited as a case in point. About 1933 a fresh invasion was recorded at several points in the North Island, and within a few years the presence of four birds on the estuary of the Manawatu was recorded each winter. In 1949 one spoonbill nest was found with the white-heron colony at Okarito in South Westland. There are now four or five nests each year and the winter flock near Foxton has built up to 12 or 14 birds. Evidently there is a pattern built up in which the original reception area, although unsuitable for nesting, has now a function as congenial winter quarters.