## Destructive Civilization in New Zealand

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## PART H

As already indicated, introduced birds are now particularly numerous in all parts of the country (New Zealand). some species, such as the Chaffinch, Song Thrush and Blackbird, even penetrating to the depths of the most extensive forests. They have so largely supplanted native birds in all settled districts that they constitute ninety per cent, of the bird-life of such areas. The efforts at acclimatizing various alien species have already been dealt with extensively elsewhere, and there is no need to go into details here. except to mention that so great was the mania for establishing foreign birds in New Zealand that altogether 143 species were liberated. In many cases, it must be admitted. the attempts made were very feeble ones, but out of this array of introductions thirty-two species have actually become established and many now exist in almost countless numbers. Unaided by man, several species have found their own way to the outlying islands, an interesting example of the migratory impulse which must have impelled these birds to leave the mainland. We can summarize the position of the introduced birds on the mainland (North and South Islands) as follows:-

Generally distributed in suitable localities: Black Swan (Chenopis atrata), Pheasant (Phasianus colchicus), Californian Quail (Callipepla californica), Rock Pigeon (Columba livia), Greenfinch (Chloris chloris), Chaffinch (Fringilla coclebs), Lesser Redpoll (Acanthis cabaret), Goldfinch (Carductis carductis), House Sparrow (Passer domesticus), (Emberiza citrinella), Song Thrush Yellow-hammer (Turdus philomelos), Blackbird (Turdus merula), Hedge Sparrow (Prunclla modularis), Skylark (Alanda arcensis), Common Starling (Sturnus vulgaris), White-backed Magpie

(Gymnorhina hypotenca).

Restricted distribution (only established in certain districts): Mallard (Anas platyrhynchus), Canada Goose (Branta canadensis), Virginian Quail (Ortyx rirginianes), Brown Quail (Synoicus australis), Swamp Quail (Synoicus ypsilophorus), Little Owl (Athene noctua), White Cockatoo (Kakatoë galerita), Eastern Rosella (Platycerens eximius), Laughing Kingfisher (Dacelo gigas), Siskin (Carduelis spinus), Linnet (Acauthis cannabina), Bullfinch (Pyrrhula pyrrhula), Cirl Bunting (Emberica cirlus), Indian Myna (Acridotheres tristis), Black-backed Magpie (Gymnorhina tibicen), Rook (Corvus fragilegus).

Established in outlying islands:—Kermadecs -Goldfinch. Song-Thrush, Blackbird, Starling. Chathams—Californian Quail, Greenfinch, Goldfinch, House Sparrow, Song-Thrush, Blackbird. Auckband Islands—Goldfinch, Blackbird. Campbell Islands—Lesser Redpoll, Goldfinch, House Sparrow, Starling. Antipodes Islands—Goldfinch.

One of the most pleasing features of bird-life at the moment is the tendency on the part of several native birds which have hitherto been restricted to a forest habitat to become established in settled districts, independent of the bush. All the bush species enumerated in the opening article as being generally distributed have already become so established in most districts. The Morepork exists even in the parks of our larger cities, where there is no native bush: the Shining Cuckoo frequents town gardens as readily as the countryside or bush areas; the Grey Warbler is welldistributed everywhere in all classes of country carrying any trees whatever; the Pied Fantail (and the Black Fantail in the South Island) is almost as equally distributed but in much smaller numbers. The Tomtits of both islands are inclined to forsake the shelter of native bush in certain districts; the Tui has established itself as a breeding species in some instances in town gardens; and the Silvereye is entirely independent of forest, if it feels so inclined.

In addition to these species, there is some evidence to show that the native Pigeon can live beyond the confines of the forest, where it receives adequate protection. A case is on record where a pair of Pigeons has inhabited for over forty years a plantation and a neighbouring patch of beech bush around a Canterbury sheep station, and has actually bred in the plantation, and another instance is related where a pair bred in a pine plantation in the same district. The little Rifleman was observed the other day by the writer on a hillside growth of gorse and broom, two introduced shrubs, bordering a main highway, while another observer records its existence in a Pinus plantation in the South Island. In Canterbury the species is also stated to inhabit gardens in the neighbourhood of Waimate, and in some cases is said to use holes in houses or sheds as nesting sites. The Whitehead of the North Island is found in detached areas of bush, but as yet has shown no great liking to leave its natural home, although the writer has recently seen it in an orchard on a Mangaweka farm, adjacent to riverside bush. In the South Island especially, the Bell-bird is a common visitor to town gardens, even in close proximity to large towns, and in the North Island it is occasionally seen in Eucalyptus plantations near forests. All these instances indicate that there is some reason to hope that in time it is possible that the birds will become established as permanent residents in town gardens and countryside plantations. Their evolution will be watched with interest, and also that of the introduced species, which, with a different environment from that in their natural home, may develop into new species. Containly on that account their introduction will prove an interesting experiment.