

Chaffinch, Redpoll and Hedge Sparrow eat varied food items in Fiordland, probably with considerable seasonal changes. They occur in forest edges and open forests where they have access to both forest and open country. Chaffinches feed on insects from forest floor and foliage, seeds from grassland and on the mast of *Nothofagus*, while Redpolls feed on caterpillars and other insects from foliage and open ground, seeds from marsh and dry grassland, and also on the mast of *Nothofagus* (Riney *et al.*, 1959). Hedge Sparrows feed on small insects and seeds from the ground both inside and outside the forest. In conclusion, those exotic species which have colonized Fiordland are opportunistic feeders and utilize a wide variety of resources, and their seasonal adjustment in feeding habits would probably follow a similar pattern to that in their original habitat.

Although evidence presented in the present paper is not conclusive, the indication is that there is no decisive factor which may hinder the distribution of introduced species into indigenous habitats once the breeding population has been established under similar climatic conditions and dispersal has begun. Geographical barriers are apparently negligible in these species, which have successfully colonized outlying islands. Among other naturalized species that have wide distribution in settled areas, the House Sparrow breeds in low hardwood forest of suburban districts (e.g., Botanic Gardens, Dunedin, Area 16) and has successfully colonized uninhabited islands (Wodzicki, 1956). Also, flocks of Starlings were observed in the Freshwater River Basin, and one nest was found in the Rakeahua River Hut in the uninhabited part of Stewart Island which is seldom visited by people. However, these species and the feral Rock Pigeon are not likely to spread very far into the indigenous forest. The Skylark, Greenfinch, Goldfinch, and Yellow Hammer may find high barren mountains a barrier. These birds may establish themselves in some parts of Fiordland if they find their way in. In fact, as mentioned earlier, a few Goldfinches and Yellow Hammers were recently recorded from parts of Fiordland.

The process of colonization of settled areas by indigenous species (second type) may be analyzed according to the requirements of these species. Apart from the species commonly found in open country such as the Harrier and Pipit, the indigenous species which are found in settled areas of the South Island are the N.Z. Pigeon, Morepork, passerine species of insect-eaters and honey/berry/insect-eaters. Early records show that these and other indigenous species became very scarce in the settled areas through destruction of the habitat. However, the Fantail, Grey Warbler, Silvereve, a contemporary arrival from Australia (Thomson, 1922), and Bellbird in the South Island remained in small numbers and have apparently increased since. As already seen in the section on population distribution, these species maintain high densities in low hardwood forest and podocarp dominant forest. In fact the densities of these species recorded in low hardwood forest and podocarp dominant forest were greater than in indigenous *Nothofagus* dominant forest. These facts show that many of them require edge conditions and that the modified habitats with patches of indigenous shrubs require no special adaptation on their part. Their distribution and abundance in settled areas are probably determined by the degree of their tolerance to human activities and of their breeding success against supposedly increased predation. In Dunedin District they nest in relatively undisturbed wooded areas (Town Belt, public gardens, and farmland), and appear in small private gardens after breeding. Their exploitation of new habitats is rather limited. Except for *Pinus radiata* used by a pair of Bellbirds, the nest-sites of these species were the same as those in indigenous habitats, exotic shrubs and trees being seldom used. Nesting materials also showed little modification from their original ones: wool and cotton wool used by Brown Creepers and Grey Warblers, and feathers of domestic fowl used by Bellbirds were the only additions found. Although Silvereves fed on nectar and