

BIRDS FROM A TE KUITI GARDEN

By ROB and GILLIAN GUEST

“ . . . there is more to a garden than its produce: it provides opportunity to see, hear and smell the living world, to appreciate the changing seasons and for me added delight lies in finding out what insects, birds and other animals live there, and in tracing their complex interactions with one another and with garden plants.”

So Jennifer Owen (1983) introduced her meticulous and detailed studies of wildlife in her garden, which clearly demonstrated the satisfaction and value of investigating the rich (somewhat surprisingly so) animal communities found therein.

In May 1980 we moved to Te Kuiti, to a house with a garden that is relatively large (c.1600 m²) and varied, providing a good habitat for birds. We wanted to formalise our observations in an attempt to understand when and how the different species of bird were using this habitat.

STUDY AREA AND METHODS

Te Kuiti, a small town in the northern King Country, has about 5000 inhabitants and is on the hill slopes on both sides of the Mangaokewa River. The valley floor is at 52 m a.s.l., and the hills rise to 277 m a.s.l., still with some remnants of native bush. Our garden in the town is flat to very steep, has many shrubs, an orchard, a few larger trees, flower borders, a vegetable garden and a small creek, choked with watercress, which flows for much of the year.

We decided that keeping a record of all species seen and heard in or from the garden each calendar month would satisfy most of our requirements. The method has the virtue of being simple, and monthly records allow easy analysis of seasonal trends. We were aware of the effect that observation period has on the number of species observed, and a month seemed to allow relatively similar amounts of time to be spent on the property for observation. (After 5½ years we still consider this to be so – but during this time we have had few periods away from Te Kuiti and have spent a reasonable proportion of our time throughout the year in the garden.)

We were also aware that the inclusion of species not actually using the garden created some bias. The criteria for recording did not change from month to month, however, and so the records do give some indication of the birds' presence on a scale beyond that of the individual garden.

Observations were made from May 1980 to November 1985 inclusive, a total of 67 months.

RESULTS AND DISCUSSION

During the study period we observed 33 species from the property. Table 1 lists these species and the percentage of months in which each was recorded.

Nine species were noted every month; most of these were the common introduced species, but three native species, the Fantail, Grey Warbler and Silvereye were also regular inhabitants. We stress that these summaries in no way indicate the abundance of individuals within each species – the numbers of House Sparrows, for example, far exceed those of Grey Warblers. Only the 14 species recorded most often could be considered to be resident in the vicinity all year round, and even these showed some transient trends. The Tui, for example, was not recorded in March of 1983, 1984, and 1985; they are known to travel widely in the area, frequenting fruiting kahikatea trees in March.

The number of species observed each month varied throughout the year (Figure 1), and it varied from year to year from a low of 11 species in March 1983 to a high of 25 in December 1980.

Autumn was consistently the quiet period with fewest species observed. This may be partly because of the retiring and quiet behaviour of some species during moult and partly because the main fruiting and seeding period elsewhere reduced the birds' dependence on garden foods. Increasing numbers of species were observed as winter and spring progressed, most being recorded towards the end of the year. This may reflect various trends such as more diverse foraging behaviour during winter months, more species using the garden in summer, and many species being more conspicuous during the breeding season.

Figures 2 and 3 show the trends in occurrence of some species. The spring records of Shining Cuckoo reflect the national trend (Cunningham 1985). The birds arrived in early October and at night during October could be heard calling overhead – presumably birds migrating further south. No northward movement was discerned during the autumn, and no birds were seen after mid-February.

Greenfinches and Welcome Swallows visited the garden regularly in summer but tended to be sporadic at other times.

Records of California Quail are strongly influenced by their increased calling in spring and early summer, that is, by their conspicuousness rather than their presence. This factor almost certainly accounts for the records of the Pheasant, which reached a peak in early summer. We always detected Pheasants by ear, and the histogram reflects the main calling period.

The records of Black Shag are of interest. This species was not associated with the garden but was observed flying along the Mangaokewa Valley above the river. Black Shags were present all year on local ponds but were markedly fewer in winter. The pattern suggests observations of birds flying to or from nests, although the nest sites are not known (Myk Davis, pers. comm.).

Records of species observed more often in winter months clearly indicate changes in distribution. The Falcon, Bellbird, Yellowhammer and Hedgesparrow were rarely or not seen in summer months, and the records of them probably indicate actual absence rather than reduced conspicuousness, although the Yellowhammer and Hedgesparrow were seen elsewhere in the town during the summer months (Myk Davis, pers. comm.). Whenever Falcons were in the area, they were seen regularly – one even plucked prey on top of a telegraph pole in the garden.

TABLE 1 — Relative occurrence of birds in a Te Kuiti garden, May 1980 to November 1985.

SPECIES	Months When Observed (%)
Starling, House Sparrow, Grey Warbler, Goldfinch, Fantail, Blackbird, Indian Myna, Silvereye, Song Thrush	100
Chaffinch, Tui	95
White-backed Magpie	94
Kingfisher	92
Morepork	89
Welcome Swallow	79
Mallard/Grey Duck, Greenfinch	62
Australasian Harrier	56
Hedgesparrow	43
White-faced Heron	40
Yellowhammer	32
Shining Cuckoo	31
Pheasant, Pied Stilt, California Quail	20
Black Shag	16
Falcon, Paradise Shelduck, Southern Black-backed Gull	10
Redpoll	8
Bellbird	7
Skylark	4
Shoveler	2

AVE. NO. OF SPECIES PER MONTH

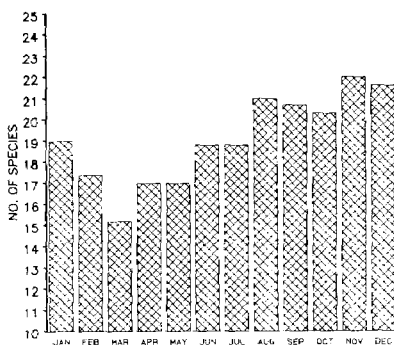
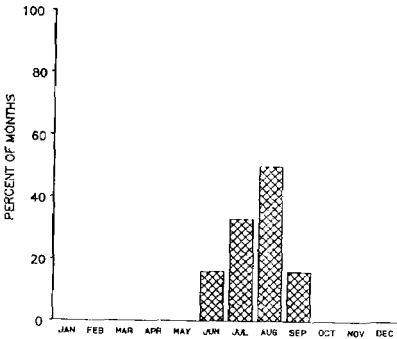
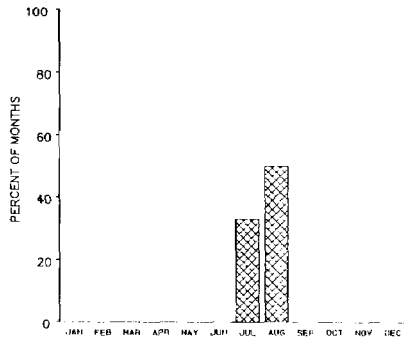


FIGURE 1 — Average number of species observed each month from a Te Kuiti garden, May 1980 — November 1985

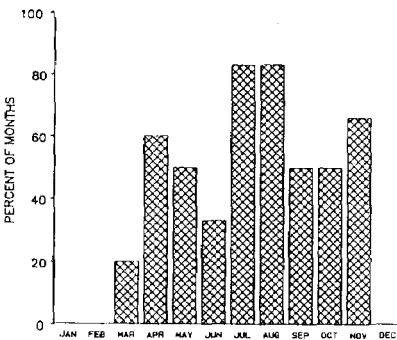
N.Z.FALCON



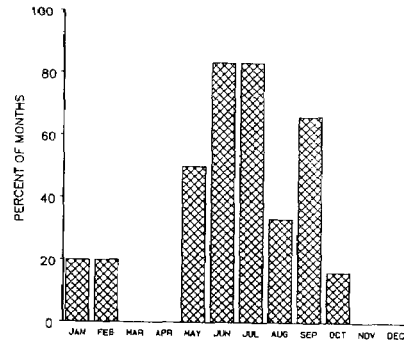
BELLBIRD



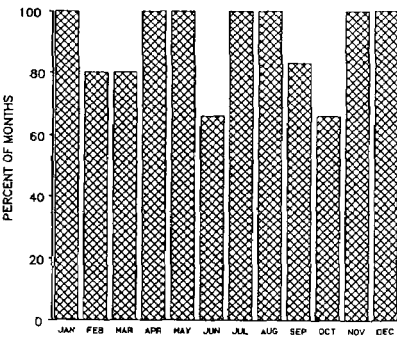
HEDGE SPARROW



YELLOWHAMMER



MOREPORK



HARRIER

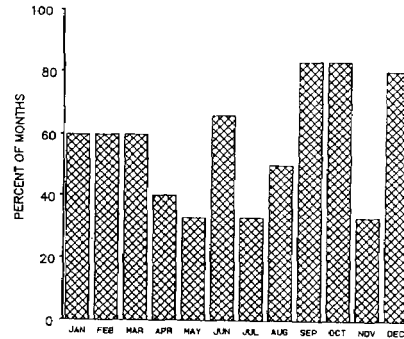
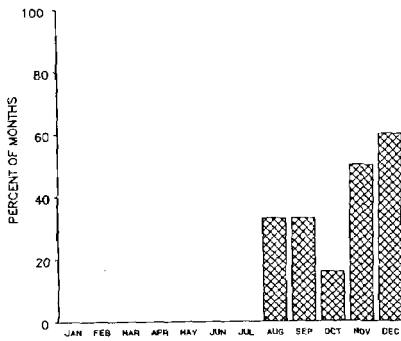
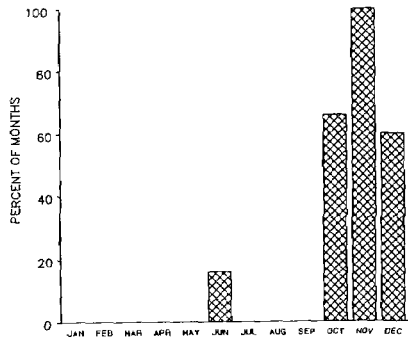


FIGURE 2 — Occurrence, by month, of six species recorded from a Te Kuiti garden, May 1980 — November 1985

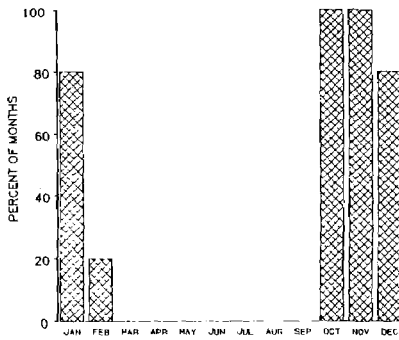
BLACK SHAG



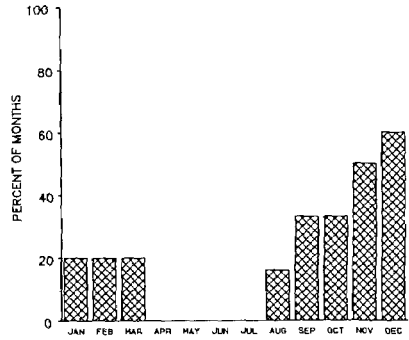
PHEASANT



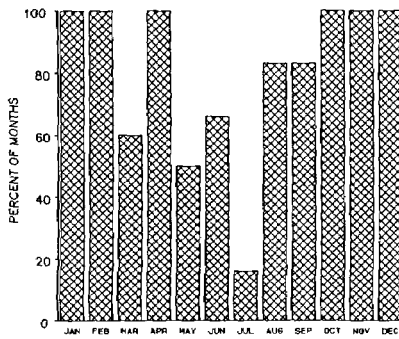
SHINING CUCKOO



CALIFORNIAN QUAIL



WELCOME SWALLOW



GREENFINCH

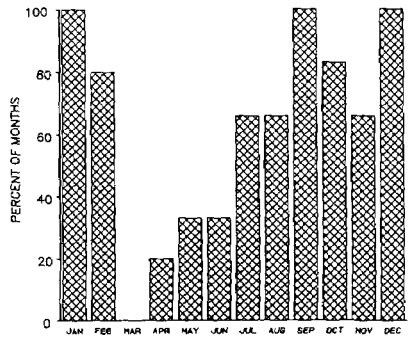


FIGURE 3 — Occurrence, by month, of six species recorded from a Te Kuiti garden, May 1980 — November 1985

Harrier and Morepork observations are included to illustrate that seasonal trends are not obvious with all species. The sightings of Harriers, which were not associated with the garden or the immediate surroundings, were probably chance events, as the histogram seems to show.

Moreporks on the other hand did inhabit the garden and the surrounding area. The periods of apparent absence were neither regular nor readily explicable.

Although the patterns observed from this garden are of interest, they are not necessarily typical of other gardens in the town. Gardens closer to the river are likely to give more regular sightings of such water birds as ducks, shag, herons, stilts and Pukeko. Gardens with more birch trees tend to be more attractive for Redpolls, and those with native bush closer by have more Bellbirds and also New Zealand Pigeon.

The number of species to be observed reflects the wide range of habitats to be found within the town, from open pasture to well-grown stands of trees, the Mangaokewa River and the remnant stands of native bush adding to the variety.

This study was undertaken after data collection for the *Atlas of Bird Distribution in New Zealand* had ended. The atlas recorded 38 species based on 7 cards but did not record the Shoveler and Black-backed Gull observed by us. The species recorded from the square but not seen by us from the garden were generally less common or associated with other habitat types. They were Dabchick, Brown Quail, Banded Rail, Pukeko, New Zealand Pigeon and New Zealand Pipit. The comparison indicates both the comprehensive coverage of the atlas project and the high proportion of species in the area that may be observed from one small area of limited habitat.

We readily acknowledge that a simple study such as this can have only limited conclusions. Most of the advantages lie in the execution. The requirements of the study heighten one's awareness of birds' activity at home and increase the interest of observations. The patterns observed raise further questions and stimulate other studies. In addition, the perception of trends in occurrence, conspicuousness and frequency of the birds adds to the enjoyment of birdwatching in the most convenient place possible – at home.

ACKNOWLEDGEMENTS

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LITERATURE CITED

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PLASTIC PELLETS IN NEW ZEALAND STORM-KILLED PRIONS (*Pachyptila* spp.) 1958-1977

By P. C. HARPER and J. A. FOWLER

Since the problem of plastic pollution of the oceans was recognised in the early 1970s, there has been a steady increase in reports of seabirds ingesting plastic particles. This has culminated in an excellent synthesis of the subject by Day *et al.* (1985), who showed that most of the pellets from 50 species of seabirds were polyethylene fragments 3-5 mm in diameter, probably from larger pieces used in protective packaging, fishing buoys and other sources associated with fishing and marine shipping. Many other types of multicoloured plastics from toys, bottle caps, and clear plastic sheets have also been found in birds' gizzards. According to Day *et al.*, procellariiform species had the highest overall occurrence of plastic ingestion – 28 (90%) of the 31 specimens examined.

Plastic pellets occur in New Zealand waters, where Gregory (1977) found their abundance to be highly variable on New Zealand beaches: from 5-10/m in the more remote areas such as Ninety Mile Beach, Castlepoint, and the northern side of Farewell Spit, to dense in places close to industrial centres such as Petone, where pellets exceed 40 000/m. Gregory anticipated that New Zealanders would “sunbathe on ‘plastic sand’ beaches – a development already being approached at Oriental Bay in Wellington Harbour”.

The aims of this paper are:

1. To report the incidence of plastic pollution in beach-wrecked prions, thus providing information on the unreferenced comments of Bourne & Imber (1982) that plastic pellets have been found in the stomachs of many beach-caste Salvins, Antarctic and Thin-billed Prions (*Pachyptila salvini*, *P. desolata* and *P. belcheri*) and Blue Petrels (*Halobaena caerulea*) in New Zealand.
2. To see whether the abundance of plastic pellets in prions has changed over the years.
3. To examine relationships between the number of pellets and the weight or age of prions.

METHODS

During the 21 year period from 1958 to 1977, PCH examined *Pachyptila* representing five species. The birds had been driven ashore dead or dying during the windy months of late summer and after the gales that sweep New Zealand in winter.

From 1979 of these 9247 birds, PCH removed the gizzards and proventriculi and examined them for plastic pellets. These birds were all freshly cast ashore on exposed coast from Otaki to Pukerua Bay, north of Wellington, and on the south Wellington beaches, including Petone and