BIRD WATCHING

Mollie Miller Atkinson

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"They are birds of the Forest,
but also of the garden."

Bird Watching

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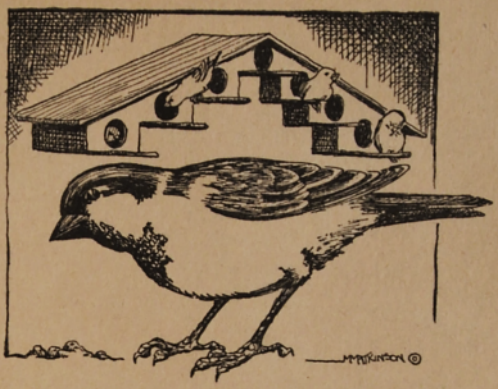


THERE is only one qualification necessary for bird watching, and that is the ability to keep still and quiet. This is hard enough sometimes, but once when the doctor said I must stay some months in bed it was forced on me, and then I began to find out about birds, and what a great interest and amusement they can be.

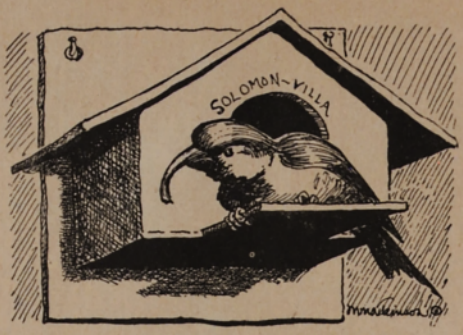
Of course it wouldn't have happened if I had been shut up inside the house, but my bed is in a verandah room open to the garden. The news soon spread among the local sparrows that meals were served there regularly, and after that I needed only to rattle a cup or a knife and fork to bring them flying in from the surrounding trees.

I was soon able to distinguish regular visitors by their habits, and when a friend made me some sparrow-houses, like tiny dove-cotes, and hung them on the outer part of the verandah, Florence, Sebastian, Charles and Mary adopted them as homes and became accepted members of the family.

It did not happen as easily as that, however; sparrows have a strong sense of proprietorship, and though the sparrow-houses had more than one compartment (one even had seven) any sparrow that settled in a particular house had the strongest objection to sharing it with another.

Sebastian was the first. He took an enormous interest when the seven-roomer was hung on the wall, hopping up one side of the sloping roof and down the other, and emitting enquiring chirrups as he peered over into the entrance holes below. This examination was as far as he went the first day; in the evening he flew off as usual to the trees. But next morning he was back, and this time he hopped down from the roof to a landing-stage, poked his head into a doorway, withdrew it, gazed agitatedly round as if expecting an attack from the rear, peered into the doorway again, then with a sudden flick, vanished within.

At once he was converted. All day he played there happily, exploring the seven compartments and rustling about among the straw with which



we had furnished them. Twilight found him in proud possession, just his beak poking out of an entrance hole as he surveyed the view before tucking his head under his wing.

For a night or two he was the undisputed owner. Other sparrows might explore during the day, but as the light failed they departed for the trees. One evening, however, the situation changed. No sooner had Sebastian retired than Florence flew in from the garden and wasting no time, disappeared into one of the vacant holes.

For a moment all was peace—but only for a moment. Then Sebastian shot out of his hole and dashed to the attack. The fun was fast and furious; they fought in and out of the compartments and up and down the landing stages, locked together in an indistinguishable, cheeping ball of feathers. Florence battled bravely, but at last she gave up and flew off to the garden.

Next evening she tried again—this time her defeat took longer. The third night she gained her objective, and by the end of a week she and Sebastian were ranged side by side, resisting with united fury all newcomers who attempted to sleep in the vacant compartments of their home.

Almost the same procedure took place with Charles and Mary. Charles was the scout, but when he had adopted a four-roomed house on the opposite wall, Mary joined him and was successful in breaking down his resistance. As soon as the couples were thus happily established no one would have guessed there had ever been any trouble.

And then Solomon arrived. He was a bird that had to be seen to be believed; and even when you'd seen him you doubted the evidence of your senses. He was, technically speaking, a sparrow, but some accident had altered his appearance so completely that he looked like a new species of bird altogether.

Sparrows are what is known as soft-beaked birds. That is to say their beaks are always growing, like finger nails. Like finger nails they must be filed or cut or somehow shorn off regularly, and if you watch a sparrow, you will see that it continually wipes its beak, with a comical stropping action, on any handy surface.

MOREPORK

"They can fluff out their thick feathers until they appear almost twice their normal size"

SILVEREYE

"Their useful work of eating insects and fruit buds"

This is not pure bumptiousnes as it sometimes appears, nor is it just to wipe away food, but assists in the work of keeping the beak its proper shape, together with the fact that as the lower mandible grows upward and the upper mandible grows down, the two parts, fitting perfectly together, grind off on one another.

This is just what Solomon's beak had failed to do. A blow had evidently pushed the upper mandible out of place, enough to make it miss the lower mandible as it grew. Perhaps it happened when he was still a chick—too young to help matters by "stropping"—whatever the cause the beak had got away from him entirely, and had grown out in a great curve, over an inch long. Not that he minded; indeed he seemed more pleased with himself than a sparrow has any reason to be, beak or no. The first time I saw him he was swinging up and down on a karaka branch, eyeing the verandah in a most interested manner. The others were feeding there as usual, and it wasn't long before Solomon joined them and demonstrated that in spite of his handicap, by sheer speed and greed, he was able to devour at least twice as much as any of the others.

He soon became extraordinarily tame, and when Florence, Sebastian, Charles and Mary flew on to my bed for crumbs, Solomon came much closer than the others, hopping on to the tray itself to gain a position of greatest advantage. He also spent time with me between meals, investigating bookcases and shelves, and hopping up and down my bed with an air of great interest and importance.

He could eat and pick things up by turning his head sideways, but we could see that his beak handicapped him a good deal. For one thing he couldn't preen properly. In preening a bird passes its feathers one by one through its beak, which is covered with oil that it has first pressed from the preen gland at the base of its tail. The bird gradually goes over all its plumage in this way, leaving a thin film of oil that keeps the feathers in good condition. These manoeuvres were beyond poor Solomon, so his feathers gradually became more and more ragged and disreputable. Another handicap—very serious for a sparrow—was that he couldn't fight.

All this time, of course, Charles, Mary, Florence and Sebastian were living happily in the sparrow houses, which owing to the proprietary feelings I have described, still had a good many empty compartments.

Solomon looked on these vacancies with a longing eye, and every evening tried to insinuate himself into one or other of them. Every evening he was repulsed. He had little hope, pitting his ungainly protuberance against the workmanlike beaks of the others. Their rapid pecks disposed of him in a moment, and even though he sometimes managed to hide himself in an empty hole for a time, some incautious movement usually roused his nearest neighbour and ended in his ejection. Once or

twice he achieved his purpose by slipping in at the last moment when the others had settled down, and on one such occasion had the misfortune to choose a hole already containing the sleeping Mary. During the evening she waked up; a furious battle broke out at once, and ended as usual in Solomon's defeat and his departure, somewhat dazed, into the night. I could only hope he would land in a suitable shrub before a morepork found him; sure enough he appeared as cocky as ever next morning.

To solve the problem we decided that Solomon must have a house of his own, and accordingly my friend made a neat single-roomed villa and hung it on the wall nearer my bed than strange sparrows seeking refuge would have dared to go.

It was an instant success. Solomon found the new house in the course of his usual investigations, and lost no time in adopting it for his own. It was just what he wanted. From this vantage point, almost beside me, he was able to keep an eye on what was going on and had many an extra meal while the others were asleep. When I switched on my light in the evening and the meal arrived on a tray, he would poke his amazing head out of his front door and sit blinking in the glare. Then he would hop down and stuff in as much as he could manage, fly back, and retire with a hasty flick for the night.

Thus Solomon passed the Winter very happily, his deformity bringing him fame and not many drawbacks. But in Spring it was a different story.

As the days grew longer and warmer, all the other sparrows entered a whirl of preparation for the nesting season, and were busy either flying about with building material, courting, or fighting.

Florence and Sebastian, Charles and Mary set to work to furnish their respective apartments with new straw and feathers, and it was clear in each case that the wives were the practical workmanlike builders and rather scorned their husbands' more amateurish efforts. Sebastian was always inclined to lose his head, but Florence flew back and forth for material with unceasing energy, and in time made an untidy but soft and downy nest inside her hole. One of Sebastian's last contributions was two daisies picked up from a recently cut lawn, and conveyed, sticking out on either side of his beak, to the nest. It was a sweet sight, and I hoped Florence received him kindly.

To all this poor Solomon was hopelessly an outsider. No hen would consider such a husband. He sat alone in his little bachelor villa, envious and miserable, and one day while the others were away completely demolished Charles' and Mary's half-finished nest, leaning into their hole and tearing out its contents in what appeared to be a fit of jealous rage. But as the owners simply built it up again with unabated enthusiasm, such

demonstrations can have given him little satisfaction.

At this time all the birds were acquiring their full Spring plumage. Hen sparrows, though their feathers take on an extra freshness, do not show a marked change in the Spring, but cocks are so brightened and enriched in colour that I am sure those people who refer to sparrows as "dun" and "drab" can never have observed them then. Their beaks, that during the Winter remained an indefinite horn colour, turn quite rapidly a jetty black, as does also the little "beard" of dark feathers in front of the neck and chest, which before had a grizzled look. (This is because in Winter each tiny feather has a grey tip, which now falls off.) The wing and head feathers turn from mild greys and browns to rich black, fawn, and russet, and you have only to try to draw the patterns of their plumage to realise how intricate they are.

If any such change took place with Solomon his feathers were too shabby for lack of preening, and his beak too peculiar, for it to show. The only thing I noticed was that his great beak had a jagged crack in it at the place where the point of the lower mandible, that was perhaps growing harder than usual because of the Spring, cut into it; and this crack was finally the cause of an accident that would undoubtedly have ended his life if it had taken place anywhere but on the verandah. As it was it opened out a new phase of his existence.

One day, as he sat on top of his little house and tried to scratch and preen himself a little, I was startled by a sudden scuffle, and saw Solomon fall, fluttering and squeaking, to the ground. On picking him up we found his leg caught firmly in the crack in his beak; he could never have released himself, and must have perished miserably if no help had been at hand.

Holding the trembling Solomon after we'd got the leg free, we realised that to leave him would be to risk this accident again. We could not do that, so we decided at once that the wonderful beak must go. With the aid of a file it was done in a few minutes; an inch of superfluous beak lay in my hand, and Solomon, a comparatively normal sparrow, and none the worse for his adventures, shook out his feathers and flew off to the garden.

He was back that evening as usual, and though when he came to eat

his meal he made what golfers call "air shots," pecking the air above what he was aiming for and staggering to gain his balance, he soon adjusted himself, and from then on seemed entirely unconscious of his new shape.

This did not mean that he was slow to take advantage of new possibilities. His beak had still not quite the finish that Nature intended, but it was good enough to fight rival cocks with, and as he suffered no shame because of his shabby feathers, he set about finding a wife at once. Unfortunately the season was too far advanced; most hen sparrows were already provided for, and the enthusiasm with which he greeted their approach met with no response except from their irate husbands. These were often to be seen in angry flocks pursuing Solomon across the garden!

As Summer advanced I became too interested in the families of the others to notice Solomon's movements very carefully. Florence and Sebastian, Charles and Mary and other couples who had managed to appropriate compartments in the sparrow houses produced many families, and every stage was exciting. There was the time when the two parents took turns at sitting on the eggs, and then at feeding the chicks on the nest; the wonderful first flight, with the mother bird hovering back and forth between the garden and the verandah uttering anxious, encouraging cries, while the chick leaned further and further out until it found courage to set forth on its little untried wings and fly a bumbling zigzag course to where its parent called in the distance; and finally the period when the beautifully fluffy fledglings followed their parents round the garden and on to my verandah rail, squawking incessantly for food. I followed it all with such interest that although Solomon lived in his little house and took crumbs from my bed as usual, it was not until well into January that I discovered about his second life beyond the range of my verandah observations.

During the latter part of the nesting season the plumage of the sparrows becomes tarnished and worn. The unceasing work is very hard on feathers, and towards the end of the Summer (when they go through the moult and grow a warm new coat for Winter) they are looking comically shabby in comparison with their newly fledged sons and daughters.

Solomon, who, as I said before, began badly, was by this time a perfectly ludicrous sight. His body feathers were rough and dull like uncombed hair, and indeed many had fallen out altogether, so that he was almost bald on the lower part of his breast and had only a thin fringe round his neck. His wings and tail were not much better, and altogether a shabbier object could seldom be seen, though his spirits were still quite unaffected by his appearance.

But one day in January as I was feeding the other sparrows and watching the parents poking crumbs into the cheepers' beaks Solomon

KUKU

"New Zealand has a fine native pigeon"

RIRO RIRO

"In his little dusky face the red eye is set like a jewel"

suddenly arrived among them, and not alone. It was the noises proceeding from the chick following him that first caught my attention, for though the cries of young sparrows are always piercing enough, I had never experienced such sounds as these, nor seen such a caricature of chickendom as met my eyes. With unnaturally long wings drooping to the ground on either side, a livid strip of baldness running down the front of its body, and a crop of rough scrubby feathers, it presented a pathetic and altogether amazing spectacle. There was no question as to who was its parent; only Solomon could have fathered such a creature, and though he regarded his offspring with an embarrassed and slightly doubtful air, he made no attempt to evade his responsibility, and fed it dutifully. There seemed no need to pity this curious victim of heredity, for above all it had inherited its father's self confidence and utter disregard of personal shortcomings. Drawing attention to itself with ceaseless screams and cries, it allowed Solomon no peace, and even when he retired into his own villa took up a position on the roof and from that day on slept there regularly. The mother, wherever she lived, seemed to have decided to have nothing further to do with either child or husband. She came only once, and after a brief inspection of Solomon's home appeared there no more. Whether our monstrosity had brothers and sisters that she looked after I shall never know, but certain I am that Solomon took charge of no other child but this, and after he had taught it to fend for itself, thankfully returned to his bachelor life.

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Lots of other adventures have happened to my sparrow families since then, new characters have appeared among them, and old characters have dropped out of the picture. Whether cats or simply old age have been responsible for the disappearances is hard to say; cats, probably, take a heavy toll of the young sparrows, but if these survive their babyhood they seem to become wilier and more of a match for their enemies. What constitutes old age is also difficult to determine. Rattle, a little hen that has become so tame that not only the verandah room but also the whole house is her happy hunting-ground, took up residence in one of the sparrow houses nearly four years ago, being then, I judged, a young thing in her first year. Every Summer she has raised two or three broods there, and has just finished her fourth season. At quite a moderate estimate her output to date must amount to between 30 or 40 young chicks, and she still has every appearance of youthfulness and vigour.

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But though bird watching may begin with sparrows it naturally doesn't end with them. Sparrows opened my eyes to all birds, and supplied the clues to many things that all birds have in common. It is comical to

see a bellbird, for instance, between bursts of the most glorious music, fluff itself out and give a hasty preen to its feathers, for all the world like his common little town cousin.* He makes the same ridiculous action with his legs wide apart and neck arched in order to reach the breast feathers, the same undignified contortions to gather oil in his beak from the preen gland at his tail. But having recognised these common characteristics, the fascination lies in going further—to the discovery of those qualities that are *peculiar* to each different kind of bird—that make each species differ from the others in the same way that each human being differs from his fellows.

It is surprising how the quality of recognition can develop, so that after a time one becomes instantly aware of certain sounds and movements that before would have passed unnoticed. The peculiar flutter and flash of a riro, the unmistakable whoof! whoof! of a pigeon's wing-beat, the swift darts of a sky-flying tui, the mouselike movement of a rifleman up a treetrunk, the transition from marble-stillness to lightning movement of a kingfisher, the distant whistle of a shining cuckoo, register themselves automatically on one's consciousness, even when the attention is elsewhere. This is not only an excellent training in observation, but also an enriching of all experience of nature. A more intelligent understanding of trees and plants follows as a matter of course. The countryside is recognised in all its possibilities, and the bush, from being unknown and without special significance, becomes a treasure-house for exploration and discovery.

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Of course the best place for watching New Zealand forest birds is the New Zealand forest, and few of us have the opportunity very often. But there are birds of *some* kind everywhere. Of natives there are sea birds on the open coasts; bittern, duck, pukeko and all sorts of waders by the lakes and swamps; and such birds as the ground lark and the fern bird in the open country. And of imported birds there is no shortage. Even in the very midst of the cities sparrows, starlings and pigeons pursue their lives in utter disregard of the clamour of people and traffic around them. But on the outskirts of the towns, in the spreading suburbs where so many New Zealanders live, there should be plenty of opportunity for bird watching, and if the right trees and shrubs are planted in the gardens to provide food in times of dearth, tuis, bellbirds, pigeons and riros may come to visit, and silvereyes in their scores and dozens, as well as chaffinches, goldfinches, greenfinches, yellow-hammers, hedge-sparrows, starlings, blackbirds, thrushes, and our old friend the ubiquitous sparrow.

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*Cousin only in the most distant sense, of course; sparrows and bellbirds both belong to the order of *passeriforms* (perching birds) but there is no close relationship between them.

PIPIWHARAUROA—SHINING CUCKOO

"He sometimes perches longitudinally on a branch"

KEA

"If you are lucky you make the acquaintance of Kea in his native haunts"

Morepork...

IF YOUR home is anywhere near the bush, of course, the chances of your garden being visited by native birds are much increased. The birds in the bush that covers the hills behind our house are very knowing about the possibilities beyond their domain. Tuis know when the kowhai is flowering in that garden, and when the konini (fuchsia tree) is full of honey in the next. Bellbirds have discovered that flowering currant is an excellent addition to their native diet, just as in July and August the pigeons are not slow to take advantage of the white flowers of the tree lucerne that so conveniently fill up some barren winter weeks for them. And a morepork, I am sorry to say, has found a most interesting source of fresh poultry in the large family of sparrows both in the sparrow houses and in the trees outside the verandah room!

I've had some surprising encounters with Morepork lately. On one occasion I was reading in bed by the open window; it was early, and there was still some light outside. Suddenly the room seemed filled with a silken rustling and something like a huge moth hovered above me for a moment before descending with a rush on to my bed. For a second or two we gazed at one another in petrified astonishment, scarcely more than eighteen inches apart. I had a vivid impression of chocolate-brown wings stretched over the eiderdown and great eyes fixed on me with eerie intensity, and then the morepork gathered himself together, flew up from the bed, and after zig-zagging a moment near the ceiling, slipped silently out into the gathering darkness.

It was an exciting happening, but sinister. I knew that this visitor would be most pleased to meet the sparrows; for though moths and beetles form most of a morepork's diet, he is always ready for a small bird, and round about the verandah room, with the special sparrow family in their houses on the wall and their relations in dozens in the trees outside, would be a very happy hunting ground.

Like all owls, Morepork is a bird of the night, waking in the evening twilight and going to bed soon after daybreak. But there is a short period both night and morning when his activity overlaps that of the day birds,

and then the sparrows must beware. But the tables are turned if the little birds find him in the daytime; then he is helpless before his erstwhile prey and they, knowing this well, are eager for revenge. They will pursue him mercilessly, and he is so blinded by the light that he cannot escape. Yet, however the little birds may torment him they never do him any real harm, so my anxieties were all for my sparrows.

And not without reason! At dusk a day or two later Morepork was discovered sitting on the landing-stage of one of the sparrow houses, peering in the door. Luckily the door was far too small for him and the sparrow inside had the sense to stay still, for he was quite bold and when I came to see him, remained calmly perching while I made some drawings to go with this story. I could see his yellow claws gripping the landing stage with two toes forward and two back*—a strong grip from which his prey would have small chance of escape. He moved his head as if on a swivel, being able to turn it the full circle, so that at one time he watched me over his right shoulder, and at another over his left, without moving his body.

He went at last, without his supper, but he didn't forget us, for next morning the near-tragedy happened.

I wakened early and discovered that a sparrow had flown in the open window and slept in my room for the night. I hadn't noticed it when I went to bed, and there it was blinking on a shelf when I switched on the light in the morning.

I crept out of bed so as not to disturb it and went to the back of the room. There was a sudden scuffle, my sparrow flew wildly back and forth, and as I turned a dark shadow disappeared over the window sill and a bunch of sparrow feathers fluttered to the floor. And then I saw that Morepork had missed his mark, for there was the sparrow, trembling and minus a tail, clinging to the window curtains.

That is the story of Morepork to date. I almost wish I could regard him simply as a villain, but I can't do that, for apart from the fact that he is such a strange and wonderful being, I realise that like the rest of us, he is entitled to his breakfast.

Nevertheless, I wish he would confine himself to wetas in the future!

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Moreporks can fluff out their thick feathers until they appear almost twice their normal size. I have seen one do this when its attention was fixed on its prey—perhaps in order to appear more frightening. The coloured illustration shows the morepork in this way.

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* Owls' claws are not fixed in this position, as are parrots'; the owl's third toe is reversible; it can go forward or back.

Silvereyes

AFTER sparrows, silvereyes are my most common visitors — or rather the ones that come in the greatest numbers; they are certainly among the friendliest of the native birds. They come mostly in the Winter. I have made a birdtable in a small tree outside my window, and if this is well-stocked with raw mutton-fat, sweetened water, and all sorts of scraps of bread and potatoes, it is seldom without its little green guests.

The remark of the man who was not sure whether he had seen one Chinaman six times or six Chinamen once seems to apply excellently to silvereyes; when a flock of twenty or thirty of them descend on the food I put ready, at first it seems ludicrous that so many little beings should be so exactly alike. But after watching for a time I begin to see that the idea is almost (though not quite!) as absurd when applied to silvereyes as in its original connection; there is great individuality among them, both as regards character and appearance.

In autumn, after having been separated into pairs during the nesting season, silvereyes begin to re-assemble in flocks. At first the numbers are small, but as the winter deepens, more and more are seen together, and when in June I begin to stock my bird table regularly, as many as fifty at once are not uncommon.

Sometimes I put a dish of scraps on my window-sill, so as to be able to study them at close quarters. The sparrows come first, but if I sit quietly the silvereyes follow suit, and soon the dish is overflowing with lively little green forms, and looks like an illustration to a new version of "sing a song of sixpence."

It is easy then to see differences between them. Some are bigger than others, some have smaller or larger heads in proportion to their bodies. The russet under the wings sometimes blends softly into the pale breast, and sometimes is splashed on boldly, leaving a ragged edge of colour. In temperament some are more timid, some more accommodating. There is usually a bully in a group—a little dictator, who not only takes the lion's share, but considers it impertinent for his neighbours to want a share at all.

But whatever the differences, all are very greedy. Their dainty appearance is not accompanied by a dainty attitude towards food, and one after another of them will present a comical sight as with head raised, throat bulging, and pointed beak stretched wide, it gulps convulsively in its endeavours to swallow a mouthful several times too large.

Quarrels are frequent. Belligerent little figures face one another with raised crests and open beaks, and sometimes, each having delivered a few good pecks, they fly up into the air above the dish fighting as they go. But in spite of this they are companionable little creatures. Two will sit side by side on a branch cuddled together like love birds. Each in turn stretches forward its head and lets the other preen the inaccessible back of its neck, and at night many will sleep together on a branch, wing to wing, like roosting fowls.

In October and November flocks begin to break up and nesting begins. The nest is small and neat, shaped like a shallow bowl and built of fine grasses. Three or four pale blue eggs are laid and after a few weeks, if you continue to put food on the birdtable (which is not wise, for by then the silvereyes should be doing their useful work of eating insects and fruit blights) the parents will bring their fledglings there, and stuff them with scraps to the accompaniment of a shrill, insistent, hungry piping.

The conspicuous ring of fine white feathers round each eye is the distinguishing mark of the whole family to which our silvereye belongs; a family found in Africa, Southern Asia, Japan, Polynesia and Australia. In the nineteenth century the Australian species migrated to New Zealand, perhaps urged to do so by a shortage of food, or helped by a gale.

There are different theories to account for their coming. They are first reported in the North Island in 1856. The flocks of new little birds caused a good deal of interest, and when they appeared in Wellington and did good work in preying on the aphis called American blight, they were doubly welcome.

The coloured silvereye picture shows them as I see them often in the Spring, fluttering among the fruit blossom. It is interesting to reflect that these little birds, that are true "natives" of New Zealand, inasmuch as they came here without the agency of man, have yet never known the country as it was before the introduction of European plants—so that peach blossom is to them just as much part of New Zealand as manuka or kowhai.

Kapene Kuku-Pigeon

PIGEONS—or doves, to use the pretty, old-fashioned word—belong to an order found all over the world; some 450 species are known, often differing widely in size and appearance. The famous extinct dodo belonged to the pigeon tribe—a bird as big as a goose, and flightless—and at the other end of the scale of size is a diminutive long-tailed African dove.

New Zealand has one fine native pigeon. And Kuku is the Maori name for him, so "Kapene Kuku," the Maori version of "Captain Cook" seemed an excellent name for the pigeon that frequents the puriri tree a few yards from my window, whose shining green-purple head and shoulders I can see sticking up among the leaves, his beak and the ripe berry he is eating vying with one another in pinkness.

I cannot help picturing the feelings of those first naturalists who came to New Zealand with the original "Kapene Kuku" when they started out on their explorations of virgin forest. So much would be quite new to them, and then, after many strange bird forms—tuis, huias, kiwis—they would be suddenly confronted with an unmistakable pigeon—but what a pigeon! Imagine their exclamations as Kuku gazed down at them from his position in fuchsia or tawa, uttering his gentle "Ku!" of surprise and interrogation. "Marry! A dove!" one might whisper to the other, or: "'Tis a great pigeon, nearly the size of a rooster!" And though this would have been some exaggeration, Kuku is indeed a splendid specimen of his family, both with regard to size and colour, and he undoubtedly possesses in like measure those qualities of innocent harmlessness that have made the dove a symbol of gentleness and peace far back into history.

It is a pity that this characteristic is sometimes described as stupidity, for to those who know him Kuku is far from being a stupid bird. He was all but exterminated after the pakeha came to New Zealand by the destroying of his forest home, and by hunters before he was given legal protection, and perhaps the trustfulness with which he offered his broad breast as a target could be called foolish, but in other ways he is sensible and intelligent, and it would be sad to have to consider trust in man as the attribute only of a fool. If he is tamed, as has been done, though it is not common, he is an affectionate and charming friend. He is dainty in his habits—even young pigeons will not foul the nests—and very clean in

his person. When it is raining he will clean himself by turning his wings upside down to allow the water to run into the underside of the feathers. In Nelson one made itself quite at home in a farmhouse, and loved to bask on the hearth in the warmth of a great open fire. It came and went freely, like a family cat, and would take food from the hand, being particularly fond of green peas! Other pet kukus have learnt to eat cake, bread and all sorts of civilised dainties, and have seemed quite happy to vary their natural diet of bush berries.

But to change the pigeon's diet is most decidedly not a thing to be aimed at, for though it is fun to tame him, Kuku is first and foremost a bush bird, and one of his most important functions is to broadcast the seed of the fruit he eats. Indeed it is thought that certain seeds will not germinate without first having passed through a pigeon's body, and this makes it clear that Kuku plays an indispensable part in the preservation of the forest, and we can see how each plant and creature fits into the vast and complicated economy of nature. Unforeseen and disastrous results may come from an ignorant interference with the balance.

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After writing the above I looked out for Kuku to make a drawing of him; but for a week or two had no luck—perhaps there were ripe berries in the bush that were keeping him busy. But at last one afternoon I found him in the garden, snoozing on a high branch and obviously well-stuffed with lunch. He was so far up the tree that I had to do a lot of clambering about to get a good view, but he was too sleepy to be disturbed and merely leaned over the branch and gazed down at me enquiringly, with his head on one side. After this observation he must have decided I was queer but harmless, for he tucked his head into his shoulder and closed his eyes.

Cuckoo's Host-Riro Riro

LARGE things — mountains and great trees — excite our reverence and wonder; very small things nearly always appeal to our affections. Who does not love a tiny bird? And when a tiny bird is endowed with a surprisingly loud, melodious voice, he endears himself to us more than ever.

It is thus with the riro riro. "Grey warbler" is his most common name, and sometimes he is called "rainbird," because his long-sustained, warbling song is thought to precede rain. But I have never found this a reliable indication, and think it is a pity the idea has arisen, as some people for this reason hail the sweet song with dismay rather than pleasure (which is foolish at best, for if the indication is true we should at least be glad of a friendly warning).

Riro measures 4½ inches from tail to beak-tip, and is coloured in different shades of soft dove grey. He has dark wings and white spots on a dark tail. In his little dusky face the red eye is set like a jewel, and it is always a special pleasure to be able to approach close enough to see this small ruby clearly. (The singular, in speaking of the eye, is intentional, for except in a few cases where the eyes are forward facing as with owls, if a bird really looks at anyone it cocks its head on one side, using the near eye only. The other eye, presumably, sees at the same time whatever is on the other side of the head—a thing that would be very confusing if it happened to a human being! A bird's consciousness must thus be very different from ours).

Early in Spring the pairing riros begin to build their nests. Of pensile structure, that is, hanging from the branch that supports it, not built upwards as is the case with cup-like nests, it is roughly pear-shaped, suspended by the narrow end, and with its opening on the upper part of one side. The old Maoris are said to have been able to foretell the weather by means of the riro's nest—hung high it meant a calm season, in a low sheltered position it indicated rough weather; the opening would be turned away from the prevailing wind.

Riros are early nesters, and in this they are wise, for their breeding season is sometimes rudely interfered with. It is not every riro pair, of course, that finds a cuckoo in the nest (to use the expression non-metaphorically for once), but it is certainly true that both shining and long-tailed cuckoos choose these little birds more often than any others

to be the foster parents of their children. So by starting early in September the riros manage to rear one batch of chicks successfully, before the danger of a visitation from Mrs Cuckoo.

Not that they are necessarily so greatly to be pitied if this happens. Despite the horrid tragedy of their own children, that are either, as eggs, tipped out of the nest by the cuckoo mother, or starved and squashed later by her enormous child, it sometimes seems as if the riros are willing victims, and regard themselves as honoured rather than sacrificed.

One October we were amused to see evidence of this when the first shining cuckoo to arrive in the neighbourhood was given a civic welcome in our garden hedge. An excited riro fluttered round him as he sang his opening song; the riro's mate hovered in the offing, and both apparently regarded the affair with the greatest interest and pleasure. There was no doubt that they felt something especially significant about the new arrival.

Cuckoo seems to have a rather agitating effect on other birds. I have seen a whole company of sparrows break into scandalised twittering and fluttering simply because he arrived unexpectedly in the vicinity. And if the mere presence of an adult cuckoo has this effect, the young cuckoo's, also, exercises a curious influence. He is chronically hungry, and his loud demands for food seem to hypnotise not only his foster-parents, but also any other passing birds, who, hearing his cries, go out of their way to appease him with the food they had collected for their own young.

The riros whose nest is chosen by a cuckoo must work unceasingly to feed their foster-child. Once hatched, the young cuckoo develops very quickly, and the riros have their work cut out to keep him going. They feed him as both nestling and fledgling. The fact that he is ready to leave the nest sooner than their own young would have been has resulted in the Maori legend accounting for the little bird's name. The time comes, said the Maori, when Riro, arriving at the nest after one of his innumerable trips for food, finds it empty. Temporarily confused by the unexpected lack, the little foster-parent cries in despair: "Riro! Riro! Riro!" which is Maori for "Gone! Gone! Gone!"

KINGFISHER

"Occasionally two are seen"

TUI

"Jumping about in mid-song from one side of a branch to another"

Pipiwharauroa-Shining Cuckoo

AS SOON as one has learnt to recognise it, the shining cuckoo's whistle is clear and unmistakable, in spite of its being so unlike the traditional "cuckoo!" of his European relation. It consists of a number of upward slurring notes, followed after a pause by one or more downward slurs. His Maori name, pipiwharauroa, suggests this sound a little in its first syllables, which make quite a good name by themselves; the whole word is rather formidable both to remember and pronounce!

If one is "cuckoo conscious," one instinctively waits for the familiar call as Spring deepens into Summer—in this case it is bird-listening rather than bird-watching, for Pipi is extraordinarily hard to see. For one thing he sometimes perches longitudinally on a branch, blending more into the form of the tree than if he were sitting crosswise, as birds usually do. And for another, he is an accomplished ventriloquist, and can conceal his whereabouts by making his voice seem to come from another direction, or from further away, than is actually the case.

It is in September or October that he is first heard—his call still rather weak and imperfect. Perhaps he is out of practice, or tired after a long journey from the Solomons, New Guinea, or some Pacific Island—it is not known for certain where he winters. But supposing his migration is indeed a fact (it has been thought possible that he remains in New Zealand for the winter) the flight from any of these places, across a thousand miles of open ocean, is a remarkable achievement.

The shining cuckoos arrive in the north of the North Island, and gradually spread all over the country. All through the Summer their musical whistle is heard in any wooded or partially wooded district from Auckland to Stewart Island—and all through the Summer, presumably, potential riros are being cast from their legitimate homes by ruthless Mrs Cuckoo, to make room for her own egg.

Not only the riro is chosen by Pipi as the foster parent of the young cuckoo—fantails, robins and tomtits have been the victims, and sometimes even an introduced bird. But the domed nest of Riro-riro seems by far the favourite, despite the fact that for this little bird, not much more than half the size of Pipi, the rearing of such a disproportionately large and hungry foster child is a big task.

The scientific observation and investigation of cuckoos in Europe has made great progress during this century. Much more is now known about the method of laying the egg in the victim's nest; the subsequent behaviour of the chick, that shoulders out any surviving foster-brothers, one by one, until it is alone in its stolen glory; and the routine of the mother-cuckoo, who places an egg in each of several nests at stated intervals.

Probably many of these facts apply just as well to Pipiwharauroa, and to our long-tailed cuckoo, whose habits are also parasitic; but none of them explain the more deeply interesting and mysterious problem of why this useful and musical bird is bereft of parental devotion, which is so moving to see in nearly all highly developed creatures. In the case of singing birds the breeding season is especially idealistic and beautiful. The mating songs and the artistry of many of the nests are wonderful accompaniments to the central theme of devoted parenthood. But to all this our lovely pipis remain outsiders. No fine-wrought nest is theirs—no session of anxious care and brooding. The many hundreds of caterpillars they so help us by destroying serve as food only for themselves.

Or is this fair? Here is one exception: Two years ago in a bush-edge garden a few miles from Wellington a lady found a young shining cuckoo with its riro foster parents. As she watched them with breathless interest an adult cuckoo flew up to the shrub where they had settled, and fed to the baby a caterpillar. Then it flew off, calling the baby after it. The riros went, too, and finally the whole quartette moved off together!

Kea . . .

IF YOU are lucky you make the acquaintance of Kea in his native haunts around the snowline of the Southern Alps—visitors to Franz Josef and Mt. Cook have splendid opportunities—but failing this you may have to resort, as I did, to the zoo, and there meet him in the most unnatural company of macaws, cockatoos and all sorts of exotic parrots.

(This is a poor substitute for the observation of free birds in their natural surroundings. Bird watching certainly spoils one for zoos, even though, paradoxically, it opens one's eyes to many interesting points about the poor prisoners that might otherwise have passed unnoticed).

When I arrived at his cage—a large one, like the inside of a moderate-sized house—Kea was sitting on a high perch at the back, as far from the public as he could well be. He looked bored and lethargic, and though he preened himself a little, lifting his wing and exposing its beautiful flame-coloured lining, he seemed in no mood for entertainment, and my visit did not promise to be very lively. I got out a sketch-book, however, and prepared to make the best of a bad job, but was no sooner concentrated upon a drawing than a heavy whirr shook the air as Kea, his curiosity aroused, suddenly took off from his distant perch, and power-dived straight towards me.

He landed, braking violently, on the three-foot-high floor of the cage just inside the bars against which I was leaning. I moved back in some haste. The enormous beak that came poking through the bars was a formidable weapon, and quite clearly its owner meant to join in any fun that was going!

It was an extraordinarily effective beak. In almost all animals and birds the upper jaw is fixed: parrots are the exception. A parrot can move both upper and lower mandibles, which accounts for the powerful hooking motion Kea used in his attempts to reach my purse, lying on the

ledge beyond the bars. I moved it back into safety, and compensated him with a few good bites at a pencil—until it was clear that he would make short work of that, so a bit of wood bark took its place, with which he played an extraordinary game of ball, tossing it a few feet in one direction and then lumbering sideways after it to toss it a few feet in the other.

One might suppose that these activities were tricks learnt in captivity, but in fact such curiosity and playfulness belong to the nature of the kea, and are a marked characteristic of him in his native home—to the amused disgust of mountaineers, whose nights in climbers' huts are often sleepless as a result of the frolics of keas on the roof!

Their destructiveness is a byword. Mattresses, blankets and things that are even tougher are unsafe—in some mountain huts the playful keas destroyed the china door-knobs! Bit by bit they chewed them down, till at last only the metal cores were left.

Unfortunately Kea has a more serious offence in the score against him, and one that has got him into grave disrepute. By no means all are guilty, but some keas, coming down from their homes to the sheep runs of Canterbury and Otago, have become sheep-eaters and even sheep-killers. The wounds their great beaks can inflict on helpless animals are so cruel and dreadful that many farmers shoot at sight. But a more effective remedy might be found if the causes of this horrid aberration were sought for, and preventative measures taken.

By nature Kea is a harmless and perhaps useful vegetarian and insect-eater; the taste for meat is probably acquired only when individual birds have found carcases and offal lying about in the sheep runs. Care in this respect would seem to be the best way of dealing with the trouble, rather than the indiscriminate shooting of innocent and guilty alike. Certain it is that an attitude of revengeful hatred towards a creature whose conception of one of the uses of a sheep is not, after all, so very different from our own, is stupid and cruel, and in the long run unhelpful.

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It is a pity that "kea" should be rhymed with "freer," as it is so often, because this does not nearly so well express the long-drawn, screaming cry of the bird, as the correct pronunciation does. "Prayer" is really the nearest rhyme—if that word is given two distinct syllables.

Kingfisher . . .

KOTARE, New Zealand's kingfisher, is well-known for his vivid beauty; bright blue-green and creamy-buff make a conspicuous colour-scheme. But it is not this alone that distinguishes him; his solitary habits, his silence, and the carven stillness with which he perches above some beach or stream, his large black eyes missing no tiniest movement that could indicate the presence of his prey—all are characteristics that put him in a class of his own among the birds of bush and field.

Most species of kingfishers make their living by fishing; hence their name. Kotare, however, eats also lizards, insects, and sometimes, alas, small birds. He has no song, is rather sedate and silent; apart from a curious, sharp, quacking cry he makes no comment on the world he observes with such unwavering attention. Except when a young family is still together he is mostly solitary. Occasionally two are seen, but they never flock, and rarely consort with birds of other kinds. Some say he is shunned by them perhaps because of his dangerous appetite, but a pair of riflemen in the bush behind our house made me doubt this.

In a dead branch of a tawa tree just inside this bush two Kotares made their nest. Kingfishers are tunnel makers; they excavate their home. With their long, strong beaks they dig into a rotten tree or a clay bank, making a tunnel over a foot long, that runs slightly upward to shed the rain and ends in a good-sized chamber where the eggs are laid.

It was during a picnic lunch one 31st of October that we discovered our pair, and contrary to all reports—for they have been said to attack a dog or even a man that comes too near their nest—they were not in the least put out by a noisy party of four a few yards from the scene of their activities. (This could be due to their having only begun to work, but even later when the babies were hatched they endured our observations with indifference).

The tawa branch they had chosen was broken off and rotted at the end. The kingfishers were busy at a hole just beneath this, and both of them flew to it repeatedly, to the accompaniment of much "quacking". On one occasion one pecked the other—not severely, but enough to send the injured party off in a huff. For a time the aggressor sat thoughtfully.

on a branch, then it gave what was apparently a conciliatory quack, at which the other instantly returned, and work began again. We assumed that they were just deciding on a site and beginning tunnelling operations.

It was three weeks before we were able to visit the bush again, and this time we didn't see the birds themselves—but under the tawa tree fresh strips of rotten wood, some nearly two inches long, testified to their continued activity.

After this, observations were interrupted till the beginning of January, and this time, as we hoped, the young kingfishers were obviously hatched. From within the hole in the tawa branch came extraordinary sounds like the distant barking of dogs, which increased to the point of pandemonium whenever Mr and Mrs Kingfisher paid one of their regular, circumspect visits to the nest. The parent bird would arrive, pause near the tawa, and go into a brown study, a sad little battered lizard, or limp inunga, dangling from its beak. Then it would dart to the hole and as it disappeared we could imagine its quick run up the tunnel to the dark cavern where four or five horribly squawking babies greeted its arrival with jealous rage and excitement.

But the real interest of that day was the discovery of a second nest-hole—a much smaller one this time—in another tree beside the tawa. Regularly in and out of this new hole flew a pair of riflemen—the smallest birds in the bush—obviously attending the needs of a batch of riflemen chicks.

The round entrance hole of the riflemen's nest was actually about four feet from that of the kingfishers. It was a very small hole. Perhaps its smallness, which would certainly exclude a grown kingfisher, accounts for the confidence of the little pair in choosing a site in such a dangerous neighbourhood. They may have known their babies would be safe enough when once fledged, and that in the meantime no enemy could squeeze itself through their tiny doorway. But whether the riflemen put their trust in this, or in the goodwill of their large-billed neighbours, the fact remains that each set of parents attended industriously to its own business, and totally ignored the other.

Five days later the two families were still unfledged; the four parents still in constant attendance. But when we went into the bush at the end of January, both nest-holes were deserted.

And about this time several young kingfishers, looking much more innocent than one would have expected after having heard their bad tempered baby voices, were often to be seen admiring the world from the telephone wires near our house.

Tui . . .

I HAVE only once had a tui in my hands, and that was when an injured one was found in the garden and brought into the house in the hope of discovering a means of cure. It is an exaggeration to say "in my hands" even then,—actually I was cautious enough with my hands, for though the poor bird was helpless from an injury which later proved fatal, it hated being handled and was by no means unable to defend itself. The power in those long black legs was astonishing, as one member of the family who got entangled with a claw discovered to his cost.

If you watch a tui doing one of its acrobatic performances through the trees it is clear that he hasn't these powerful legs and curving, gripping claws for nothing. Watch as it swings itself round a branch with lightning movement, one moment swinging above it, the next hanging underneath and stretching its neck for honey in a flower a foot away. It is simply impossible to imagine a blackbird behaving so—it is not made that way; its toes and claws are more or less straight and adapted for walking on the ground, where the nimble tui would be quite out of place.

There is no reason, of course, why one should compare tuis with blackbirds, except that the comparison serves so well to bring out the individualities of the two birds. They are as unlike in character as two human beings, though the tui has been described by early colonists writing to England as "something like your blackbird."

A blackbird is so circumspect, so well-behaved and proper. He sings like a choir boy, trilling forth his lovely song with beak turned up and wings neatly folded. 'Tuis are all passion and excitement, they will sing in any position, dropping out a few bell notes as they search for honey, and jumping about in mid-song from one side of a branch to the other. One moment they are sleek and shining in the sun, the next fluffed out till

they look like large feather dusters. Their actions are often comical; they are sometimes at their funniest in gestures and posturings when their "song" can hardly be heard at all—only a few chuckles and hisses and gurgles that are the accompaniment of some amazing music apparently of a pitch inaccessible to the human ear.

Blackbirds always seem to me to sing in English; or at least in some European language that is part of our culture and development. But the tui's song is wild and prehistoric—it is easy to imagine its ringing forth to the mountains and the primeval forest before this land was known or tamed by either pakeha or Maori.*

Tuis are passionate in their quarrels, too. I have seen blackbirds making an indignant chatteration, and nearly all creatures will fight sometimes, but I don't think one would ever see two blackbirds as a friend of mine saw two tuis—so blind with the rage and excitement of a duel that they crashed through the bushes in which they were fighting and landed locked together in a single ball of fury at his feet. And when he stooped to separate them, one was dead.

To return to the tui we found in the garden. I wish I could report that he had recovered under our care, and become tame and friendly as the result of the adventure. But we had no such luck. We examined him as best we could without hurting or frightening him, but could not discover any treatable injury, so beyond making him as comfortable as possible in an impromptu cage, there was little we could do. He died next day, having refused to eat and only sipped a little water.

He was beautiful and interesting-looking in spite of being so pitifully helpless. His long black legs are like polished leather. His feathers are very glossy and rich, blue-black in appearance when looked at closely; it is when he moves and flashes in the sunlight that brilliant, irridescent colours suddenly transform him from a "black" bird to a rival of the peacock. The little white tufts at his throat, which are, of course, his distinguishing feature, can be seen at a distance, but near to one sees also the fine white filaments that form a sort of lacy collar round his neck.

If he had recovered we might have had a wonderful pet. But only if he had chosen to be a free pet, like the sparrows. I couldn't keep him caged, although tuis have a long history of captivity, for they were favourites of the Maoris, and apparently became reconciled to a domestic life. In his book "New Zealand Song Birds," Johannes Andersen tells of how the Maoris taught their tuis speeches of welcome. They are clever mimics and to imitate the human voice recognisably is apparently quite within their powers. Buller also speaks of the tui as "a favourite cage

*It may be added that, unlike the blackbird, both male and female tuis sing. The hen tui has even been heard to sing while brooding her eggs.

BELLBIRD

"Help in the fertilisation of the bearing plants and trees"

RIFLEMAN

"Their mouselike appearance when searching the bark of the trees for the tiny insects that form their food"

bird," but his description of it as being "cheerful and playful in captivity, incessantly flitting about its cage and imitating every sound within hearing" loses its attraction when one learns that after its first year the captive tui mostly "becomes subject to convulsive fits to which it ultimately succumbs"; and that Buller himself had "as many as ten of them caged at one time" which "died off one by one, and invariably in the manner indicated." I think most bird lovers nowadays would hardly wish to let their pet pay such a price for their pleasure, even if, apart from this risk, they could bear to confine such a wild spirit, or thought its "cheerful playfulness in captivity" justified their depriving it of a bold free life in nature.

Bellbird

THE BELLBIRD is perhaps the loveliest singer in the bush. Both bellbird and tui have beautiful, and somewhat similar, songs; it is easy for people who don't know them well to mistake one for the other, especially in certain parts of their singing. But to anyone who has learnt it the sweetness of the bellbird's note is unmistakable. It has a kind of rare, detached purity, soulful and unearthly.

In February, after the nesting was over, I have seen a couple of bellbirds in the garden that were almost certainly parent and child. One was teaching a song to the other, and the youngster was a good trier, and sang his phrase over and over, gradually improving it. It was a lively lesson, carried on during incessant chasing around and through and in and out a group of trees and shrubs. Both birds were friendly, and responded when I followed up and imitated them, coming nearer to get a good view of me and replying to my whistle. Their movements through the branches were like lightning. They are despairingly hard to draw for that reason; they strike a dozen different attitudes in the space of a minute—all graceful and incredibly acrobatic; each so typical that one longs to record it, but none lasting long enough to leave more than the most fleeting impression.

Unlike tuis, bellbirds vary a little in appearance according to their sex. The female is browner and a little smaller than the male. The general impression made by both birds, however, is an olivy green, dusky at the head, and pale, even yellowish, on the underparts. As so often in birds the wings and tail are darker in colour—a brownish black. Being honey eaters their heads are often stained with the pollen of the flower that they are visiting for nectar. When the konini (tree fuchsia) is in blossom the bellbirds are decorated with the bright lavender-blue of its pollen—and when the flax is bearing its sticky, brown-orange flowers they have reddish heads. Before this was understood some early naturalists actually thought they were seeing a new species, or at least variety, when they observed such differing colour-schemes.

Bellbirds are pugnacious little chaps—I have often seen one chasing a sparrow across the garden. The sparrow has to look sharp, too, for the bellbird has a pretty turn of speed. They are not much bigger than the sparrows—seven and three-quarter inches to the sparrow's six. This is, of course, much smaller than the tui, that tops the foot by three-quarters of an inch. In spite of the difference in size and colouring bellbirds and tuis are often confused. Perhaps this is understandable when

one considers that they are found in the same localities, eat the same food —and indeed are often to be seen disporting themselves in the same tree. Their song, as I mentioned before, is similar, and Johannes Andersen records having heard a duet sung by a tui and a bellbird together. He describes how they sat not far apart on the same branch, and the tui led off with four or five bell notes. Then the bellbird sang his phrase and the tui accompanied it with a guttural undersong.

I have myself seen a sort of duet—or perhaps better a competition—between a bellbird and a blackbird. They sat together in a branch of wattle, each singing alternately, apparently to each other, with a kind of rivalry, or astonishment, and showing off. I suppose neither could believe that the other had such a beautiful song, and each strove to outdo it with his own. The bellbird flew first, but the blackbird followed in the same direction. The wattle-branch had been the blackbird's singing perch all the season, so on this occasion the bellbird was the trespasser.

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The bellbird's nest is built of twigs, rootlets and grass, and has a lining of moss, fine grass or feathers. The pretty arrangement of the feather linings has sometimes given the impression that the bird has an eye for colour. Occasionally the nest is found in a hole in a tree trunk, but mostly in the branches of a tree or shrub, and this often in quite exposed places, near a road or path. Both father and mother bellbird help in sitting on the eggs and later in feeding the young. These are first fed on insects, but later learn to sip honey from the flowers—I suppose by imitating their parents. In doing this they spread the pollen and thus help in the fertilisation of the plants and trees. Both by this and by the destruction of the insects that also form part of their diet they are beneficial to the forest, and thus, indirectly, to man, as indeed most birds are.

Rifleman . . .

THE RIFLEMAN is three inches long from tail to beak-tip—a bumble bee of a bird, smaller than any other in the bush. I say "from tail," but that's the joke—if a rifleman's tail were in ordinary proportion he would not be much smaller than a riro. But his tail is a mere apology, a tiny frill of feathers on the end of his round little body, and this makes a quaint and unmistakable impression as he moves through the undergrowth with darting, fluttering flight.

Most typical of riflemen is their mouse-like appearance when searching the bark of trees for the tiny insects that form their food. With wings almost closed they proceed up the trunks in quick little runs, digging their long fine bills into the crevices of the bark and uttering their tiny chirruping note as they go.

The nest is usually built in a hole or crevice in a tree trunk. It is made of fine rootlets and moss or little feathers, and though it is usually described as being placed near the ground, the only one I have found was in a hole well up among the upper branches of a miro tree (which I have already described as being near the kingfisher's nest). I watched through a telescope as the rifleman parents flew in and out to their nestlings, and it was very sweet to see the little birds dart into the round stage formed by the glass, their wings spread like butterflies as they alighted and paused for a moment at the entrance of the hole before disappearing within.

The male and female rifleman are quite differently coloured: he is soft green with dark brown wings and tail and yellow-white breast; she has the same pale breast, but back and wings of brown flecked with yellow, and distinct stripes of brown and yellow over the head.

In this district—a few miles from Wellington—riflemen seem to be among the birds that are becoming more plentiful. This may be merely a local phenomenon, as birds do seem to come and go in different districts without necessarily being affected in their aggregate numbers, but certainly in the piece of bush I have referred to in these notes riflemen are apparently increasing, and whereas a few years ago it was a lucky day on which one or a pair were sighted during a walk, that is now a fairly common experience, and a friends who camped here last summer tells me of a flock of ten or twelve that visited a tree near his tent.

A pair of riflemen is known to have made their nest in a pickle bottle left lying in a stable, and it has been suggested that they may be encouraged into bush-edged gardens by fixing nesting-boxes with very small entrance holes to likely trees.

Riflemen are to be found in all South Island forest, and in that of the southern part of the North Island.

Miro-Tomtit

ANOTHER small bird that seems to be returning to this district after some years' absence is the miro. Twenty years ago when gardens were beginning to replace gorse on the hills below the bush the miro, or tomtit, to give him the pakeha name that suits him so well, was a constant visitor. Nearly always it was the male that came into the gardens; the grey-clad female is more shy and retiring. But the jolly little cock, with his handsome, glossy, black-and-white plumage and bright brown eye, was delighted to accompany the digging operations that uncovered such a rich store of his favourite grubs and insects, and many a heavy task was lightened for the gardener by his cheerful companionship.

For years after that, however, the tomtit became a rarity in the immediate neighbourhood—both outside and inside the bush. And this is strange, for in other bush-edge suburbs, at no distance as the crow flies—or even as the tomtit flits—he was still as much in evidence as ever.

But now it looks as if he is coming back. In the last months he has been seen often in the bush, and though there are no reports yet of his appearance in the gardens, I feel sure that he will appear there soon, for he is friendly to humans and not afraid of houses, and I live in hopes that one day he will visit my window-sill, as he did that of one of my friend in another district, and cock his perky eye at me as if to say, "Any grubs? Any moths? Any beetles?"

. . . . . .

The white breasted tit is a North Islander, but the South Island has a species with a yellow breast that is more or less the same in habits and character.

Fantail . . .

WHAT is the best known bird in New Zealand? The kiwi? Well, theoretically, perhaps. But comparatively few people have seen a kiwi in the flesh, so that although his name and his funny figure are so familiar, he would not qualify. Some people would say "Tui," and this may be true, yet in spite of the fact that their image is to be seen on every penny, it is astonishing how many people confuse tuis with bellbirds, for all their difference in size and colouring.

No, I believe the bird most generally known by sight and recognised by name is the little fantail. And perhaps she is the most universally loved. Her image is to be seen on one of our halfpenny stamps, but we don't need a stamp to know her pretty figure, for fantails are found everywhere in New Zealand, and, thank goodness, are still plentiful.

(It comes naturally to say "she" to these little birds—perhaps because their quick, nimble daintiness is somehow feminine, or because their name so easily becomes "Fanny" when one comes to be on familiar terms with them.)

They are birds of the forest, but also of the garden, and being friendly and fearless, do not hesitate to come into our houses. Their swift fluttering flight is very quiet, and often in my verandah room one will dart in through the window unnoticed. A delicate rustling, like the finest silk petticoat, is the first thing to attract my attention, as Fanny, with exquisite twists and turns, hawks about the ceiling for the little flies and insects that form her diet. Sometimes, growing bolder, she will make free with all the house, and she is a welcome visitor, apart from her pretty companionableness, because her skill as a fly-catcher is so useful.

She nearly always remains in the upper parts of the room, alighting on picture-frames and curtain-rails between her flights around the ceiling, and turning first this way, then that, as she fans out her beautiful tail and announces herself with a cheerful "Tweet!" that is surely intended as a greeting.

It is wonderful to see how skilfully she flies, adapting herself to the

limitations of a man-made house as cleverly as she makes her way through the aisles of the forest. She zigzags up the passage—you can hear her beak snapping as she deals with any stray flies—examines the kitchen, volplanes on a downward curve through a doorway to the greater freedom of the living room, and finally darts up a narrow stairway to go exploring in the attic. From below we can hear her tweeting up and down this happy hunting ground, until her little cries become more agitated and we realise she has found the dormer windows closed and forgotten the way back down the staircase. Then someone goes up to release her, and is rewarded with a triumphant "tweet!" as she instantly accepts the invitation of the opened window and sails through it to freedom.

Also in the bush fantails are very friendly and usually can be whistled up with a leaf, or by means of a "kissing" sound with the lips. The commotion caused by anyone walking through the undergrowth disturbs little insects and flies and clever Fanny is quick to take advantage of this and greatly adds to the enjoyment of a walk by flitting alongside the track, first ahead and then behind the walker.

She will often perch on a stick held in the hand, and then as she jerks from left to right and flirts out her tail with perky friendliness, one has the opportunity of examining her really closely. A characteristic of the fantail is that the "gape bristles"—the little hairs growing from the base of a bird's beak—are longer than the beak itself, which gives her little face a comical whiskery appearance.

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In the Maori legend of the battle between the land birds and the sea birds, the fantail appears in another aspect—a warlike little bird who is deputed to go forward from the ranks of the land birds and challenge the advancing sea birds to battle.

The legend tells how the fantail, in a towering passion and armed with a spear, danced and glared and grimaced before the oncoming enemy, presenting the weapon on all sides and crying "Tei! Tei! Tei!" in challenge.

It is a splendid picture of the successful opposition of spirit to brute force, for the sea birds, who had come on a mission of plunder and aggression were in the end entirely vanquished, and returned to their own domain for ever!

And the Maoris say they got their war dance—or at least a typical part of it—from the fantail. So next time you see Fanny doing her quick jump to left and to right, as she makes her way along a branch or a curtain-rail, you will know you are witnessing the origin of the haka.

Blackbirds . . .

FOR SEVERAL weeks during the Spring we had only to look out of the window at any time of the day to see George and Henry competing in the garden. Up and down the drive they went, and back and forth across the lawn, pursuing one another with quick little runs and feints of attack. They seldom actually came to blows—their method of battle was more a continual display of what they could do, if they tried. Military manoeuvres of the most impressive kind, but rarely an action, and no apparent gain of one over the other.

It was not long before we realised that Marjorie, the hen blackbird, was nearly always a spectator. An extremely lethargic spectator, it must be admitted, who apparently favoured neither; but though she appeared quite uninterested in the proceedings, her plump brownish form was usually to be seen humped up in the shelter of a nearby bush or tuft of cocksfoot, her feathers ruffled, her beak sunk in her breast—the very picture of indifferent boredom, while her indefatigable suitors (as we now took them to be) presented their yellow bills at one another, chased one way, chased the other, flew up into the trees with indignant cries, flew back, and continued their endless performance for her benefit.

I don't know what happened in the end; I can't tell if Marjorie bestowed her hand—or should we say her wing?—on George or Henry. But I know that by November the competition had more or less ceased, and nest building was in full swing, and I'm sure it is safe to say that whoever was unsuccessful in his courtship of Marjorie had soon taken to himself another—and to me identical—brown lady.

Sometimes the cock blackbird helps in the nest-building, and sometimes he confines himself to singing. But it is now that he begins to sing seriously, and whether it is a full time or a part time occupation, he is sure to choose a good place near the site of the nest, and there, for some part of the day at least, to entertain his wife both during the building operations and afterwards when she is sitting on the eggs.

At the time of nest building a third blackbird put in his appearance in the garden. This was Bobbie Burns, an old friend—at least we think so, because the singing place he chose was the one that had been chosen for several seasons, and always by a singer so outstandingly better than any other that he earned the illustrious name I have mentioned.

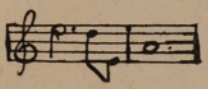
MIRO—TOMTIT

"Nearly always the male tomtit came into the gardens; the grey-clad female is more shy and retiring"

FANTAIL

"They are birds of the forest—but also of the garden"

And Bobbie didn't disappoint us. Perched high on a dead branch of a five-finger tree that gave him a commanding view of the garden, he delivered his large and varied repertoire, singing for a long time without repeating himself. As we have noticed in other years, he had one phrase which was, as it were, his theme song, a beautiful four-note melody, which usually pealed forth at the end of a "recital," repeated once, twice, or even on one magnificent occasion three times, as a triumphant climax to his outpouring of praise.

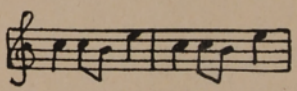


For weeks this lovely music blended with my dreams in the early morning, was the accompaniment to all the day's activities, and finally soothed us as vespers in the evening twilight. And then suddenly Bobbie Burns stopped singing. We knew what THAT meant. His chicks had hatched and domestic duties now claimed his full attention.

His place was taken by George, who was evidently some weeks behind in his schedule, and started his performance only a day or two before Bobbie left off. Perhaps it was a good thing that they were not long in competition, for George, though persevering, was no match for the master, and he seemed to know it, for at first he preferred to sing from the depths of a mahoe bush on the drive, so modestly hidden that I had a long search before I located him.

There he sat, head up, with only throat and bill moving, in proper blackbird fashion (tuis, on the other hand, constantly jump about as they sing), and produced over and over again his one little cheerful song.

As for Henry, we never had a note out of him. His singing place was obviously not in our garden, and so far as we were concerned, he was a bird of deeds, not words. For he didn't desert us—far from it. When the time came to feed his babies Henry was on the job for, I should think, about fifteen hours a day.



We first became conscious of his zeal when some digging was being done in the garden and Henry, his beak stuffed with a wriggling bunch of worms, hopped recklessly close to the spade in his determination to add to his "bag." So tame he became that the movements of the digger, and mine as I crawled after him with a sketch book, were ignored almost entirely. When at last he could carry no more he was off like a flash, round the house, along the drive, and up into a patch of gorse on the hill behind the garden. From there he reappeared with surprising quickness to make another collection.

It was a small step from the garden to the verandah—in a day or two Henry had discovered all the possibilities of afternoon tea on the dinner

waggon. There was something so flattering in his trust that we couldn't deny him. His large form looked incongruous among the sparrows, who always know about afternoon tea, and the latter were somewhat disconcerted by the majestic calm of Henry, who, having decided that all was well in this place, wasted no time in the nervous excitement that is part of the sparrows' make-up, but flew straight through them to a strategic position on the waggon. Here he paused for a moment to take stock of the situation, and then with the same lightning-quick motion of his head with which he dives for a worm, seized a whole bun, broke it up, stuffed his beak, and was off into the garden.

His next step was to discover that I had early morning tea in my verandah room, and of this he approved immensely, though both he and the sparrows had rather earlier ideas than I, usually arriving at about five o'clock to see if things were on the move.

I took to keeping a few raisins for Henry, and became quite adept at reaching for them when I felt him on my bed, and feeding them to him almost without opening my eyes. It was quite easy to distinguish him from the sparrows without seeing him. His "footstep" couldn't be mistaken. It was not only that he was heavier; he has such an extraordinarily *springy* motion that this scarcely counted. Watch how lightly any blackbird lands after flight, moving the tail up and down for balance. It was just this springiness by which I could recognise him; that, and a much greater deliberation of movement than the sparrows, as he advanced up the bed for his raisins.

It was most exciting to discover that his plumage, that I had always thought was a uniform sooty black, reveals itself at close quarters to be marked with a delicate brocaded pattern, like finest watered silk.

We had no sooner concluded that Henry was an established member of the household than his visits suddenly ceased. It was only a form of cupboard love after all, and as soon as that nest full of hungry babies was out into the world he ceased to trouble us. We missed him—especially as at a distance he was soon indistinguishable from George and even Bobbie Burns, for they all were known to us mainly by their habits, and when with the coming of Autumn the habits changed we had nothing to go by.

But next Spring we shall be on the lookout for a repetition of these performances, and in the meantime it is clear that this season's efforts were not in vain, for the garden is full of young blackbirds in every stage of development.

Table Bodied Bird . . .

IT WAS a ridiculous name to give a pet, but "Table Bodied Bird"—as a sort of play on the term "Able Bodied Seaman"—was the description that stuck to this particular White Leghorn from the beginning, and though we modified it by several diminutives as time went on, Table Bodied Bird remained her official title for all the honourable thirteen-odd years of her life.

In spite of the sinister suggestion of the name, her only connection with the table was when she appeared there on special occasions in a piedish, lying on her back with her legs placidly curled on her chest, and decorated with parsley. She was entirely unperturbed by this treatment —in fact she had become so hopelessly tame that any treatment involving being made a fuss of by her family pleased her—and as she lay there regarding us with one reddish-brown eye she appeared neither to reproach us for our unseemly laughter, nor yet to consider the affair the least bit funny.

It was not until the last of her original family had departed this life and left her in undisputed possession of the fowl-yard that she identified herself with us so completely, though from the beginning she was perhaps the friendliest of the yardful. They were all by way of being characters. There was Mrs McTavish, a dominating personality who constituted herself as mistress of ceremonies. She was a Black Orpington with a dignified and impressive bearing that deserted her only at mealtimes. Then she led the race for the food-supply with a disregard of appearances that was quite painful to witness. Next was Ruby, a bird that seemed born to be down-trodden. She was another Black Orpington and played the part of a sort of companion-help to Mrs McTavish, who bullied her mercilessly. A third character was Scatty. I don't know why a fowl-yard scarcely seems complete without one very silly hen, but I think I have noticed this. Such was Scatty. She certainly played her part well. She had no brains at all, and just ran idiotically about, got herself into absurd positions when let into the garden,

and became needlessly hysterical whenever anything happened. Lastly (apart of course from Table Bodied Bird) there was Albert. He exemplified another well-known farmyard phenomenon—he was the hen that changed into a cock. Never a very successful cock I must admit—even Albert himself was not convinced, but a hen he certainly ceased to be, he grew spurs, heavy neck feathers, and the beginnings of a beautiful sickle tail; of course, he gave up all thought of eggs and walked about the yard with a king-of-the-castle air that was only slightly spoiled by the doubtful look in his eye.

It is never a success to combine poultry farming with pets—this family all outlived their egg-laying and died natural deaths. Rumour has it that Albert gave his only crow on the morning of his demise; it was obviously too much for him. Scatty died much as she did everything else —for no particular reason. Ruby finally fertilised the rhubarb, Mrs McTavish the marrows. And Table Bodied Bird was left alone in her glory.

We often wondered if she were lonely, and later on when a friend next door started poultry-keeping with a yard full of pullets, I had the opportunity of trying her out. There was never the slightest difficulty in catching her, and she loved nothing more than being carried, so I took her to call, and finding the next door hens having a run in the garden, set her down among them.

She was rather a low-slung bird by nature, and in her later years, being somewhat stiff and bent, she seemed smaller still. She was only half as tall as the handsome young pullets—they towered above her as she staggered a little and paused to get her bearings, so I stood watchfully by, thinking that the strong fowls might obey the instinct that makes them attack any weak or sick member of their species.

I need not have worried. When Table Bodied Bird had pulled herself together and focussed her one good eye (the other was permanently eclipsed by her drooping comb) on her surroundings, her demeanour became suddenly that of a fowl whose feelings are outraged beyond endurance. Before the surprised pullets had in the least understood the position, she advanced on them with an awful deliberation. The pullet nearest her backed off nervously—a weaker spirit turned and ran. Table Bodied continued her advance.

Among those upstanding young Leghorns her bent, decrepit, but indomitable figure reminded me of a dowager duchess of the old school quelling an uprising among the working classes. Hopelessly

outnumbered, hopelessly outdated, and with nothing to justify her attitude save her own unalterable and quite unreasonable convictions, such a one might nevertheless have shown the same pluck and determination as this surprising bird. Finally with a squawk of indignation she took a flying leap at the nearest white bosom. Its owner staggered under the shock. Table Bodied delivered another attack. But I thought it was time to intervene; sooner or later those young birds would come to their senses, so I gathered her up into my arms again.

The owner of the hens looked at her in mock disgust.

"The old snob!" she said.

After this we no longer had pangs about her loneliness. She regarded us as rather larger fowls and we were all the companionship she wanted. She would have spent most of her time indoors if given a chance, like a family cat. She used to advance up the steps and across the verandah with steady purpose, picking up each curled foot daintily, every step a creative act. She loved joining in a verandah tea, and though like the sparrows she was not above sharing the food, it was companionship not cupboard love, that drew her, and many a cup of tea had a narrow escape as Table Bodied Bird suddenly leapt into the drinker's lap, with exactly the same desire to be nursed as a cat.

On one occasion she was brought to visit me when I was ill, and set down on the end of my bed. She took stock of her new surroundings deliberately, with that total lack of surprise which so characterised her. At length her eye fell on the flowered bed-cover. Head on one side she observed it carefully, and then with an air of great matter-of-factness, raised her leg and executed two or three raking scratches at the pattern. Steadying herself, she put down her head and observed it again. It was impossible to resist living up to her expectations; we slipped a few grains of wheat on to the coverlet. She pecked them up with satisfaction: "I always knew that eatables turn up when you scratch among the flowers," she seemed to be saying.

In her old age she was too stiff to reach some parts of her body for preening her feathers, with the result that with the new season's plumage she often presented a curious sight. As a new feather pushes its way through the skin it is encased in a

tube of papery or celluloidy substance, which normally breaks open, releasing the feather as it grows. The bird assists this with its beak. But in Table Bodied's case the process sometimes went rather astray. The feather's growth was not vigorous enough to break its own case, and she was a bit too stiff to right matters with her beak. Until we came to her assistance she had a very porcupine-ish appearance, but it was easy to break open the quills, and she enjoyed being "preened" as much as she enjoyed any other contact with us.

When at last she went to her rest, very peacefully and gently, we missed her sorely. I have never known a creature so touchingly trusting, and so companionable. One of my nicest memories is of a day not many months before she died. It was a sunny afternoon and we were on the verandah listening to Beethoven through the wireless. Table Bodied, happy to join a family gathering, "poached" herself comfortably on the grass at the foot of the steps. Her head was on one side as if she were listening, and every time I looked over the verandah rail and spoke to her she looked up at me with her nice red eye and gave a gentle "Wark!" of greeting.

Dear Table Bodied Bird, where are you now? Has your little consciousness gone back into the general consciousness of all fowls everywhere? And if so, what tiny modification have we made in this cosmic "fowlness" by the queer relationship we had with you?

Bird Watching

BIRD WATCHING makes one notice the change of the seasons in a new way. In the early part of the year (which in this hemisphere is the *end* of the birds' year—as we begin with Autumn) all the adult birds commonly seen are going through the moult. Their nesting season is over and they are mostly rather shabby and dejected-looking and often a bit off their food. The young birds, of course, are better off—they have their brand new feathers—but it is a sign of the season to see birds that are obviously of a certain species, but somehow just wrong in colour. These are the young birds, that have not yet attained their full plumage, though otherwise quite independent citizens.

The young tui, for instance, has no white tuft at his throat. Young female blackbirds are a reddish russet that later darkens to the dusky brown of the adult hen, and the developing cock blackbirds pass through a similar evolution from grey to black. At one stage the cocks are black all over, including their bills, but if you watch while they are feeding you will soon see that the missing orange colour is there in the form of the bill's lining, and when they open their mouths their future glory is revealed!

Sparrows, when they are first fledged, all have the colouring of the adult hen. Only gradually the cock develops his distinctive gorget (the little "beard" of black beneath his bill) and the black and russet of his head and wings. He passes through a comical period on the way to this when the first black feathers begin to show, and then he wears a slightly pathetic expression as if he suspected himself that he is neither one thing nor the other!

As the Autumn advances the sparrows begin to look for "Winter quarters." It is my experience that the cocks do the exploring and the hens follow up later. Probably all birds search out a good position for roosting in during the cold months, and they may be generally more gregarious then.

Silvereyes always move in flocks during the Winter, groups of fantails are common, and on one occasion in April I saw up to twenty riros together in the bush. This is rare, and whether it indicates that they might tend to forage together in Winter as silvereyes do, I don't know.

One of the first signs of Spring is the tuning up of the bird-songs. This is most marked in European birds—New Zealand natives tend to sing more the same all the year round. They are, as it were, evergreen, like the bush. Not that they don't respond to the new season, but as a rule New Zealand birds make no such marked change as, say the blackbird, thrush or chaffinch. In August, usually, the chaffinch begins to practise his short song—a descending scale ending with a flourish: "Chi-chi-chi-chi-chi-chi-chi-wita-weechu!" It is a week or so before he can do it perfectly, but after that you see him on any telephone wire, bobbing and bowing to left and right as he tosses it out to heaven.

Then comes the nest-building—or collecting of nest material; in the sparrow's case this is the first symptom—they are never much good as singers. On sunny days in September they begin gathering material of every suitable or unsuitable kind. Straws and feathers are carted about the garden with a great show of important business, only to be dropped and forgotten, the moment anything else attracts attention. But gradually they begin to work more seriously, and my special sparrow family are unremitting in their efforts to fill the compartments of their homes with a thick lining. There is no necessity for them to build the large untidy nests that the less lucky ones construct in the eves, in the gutter spouting, or, forced unwillingly, it seems, back to nature, in the trees outside. Their homes are ready—they have only to supply the furniture. But the instinct for a large collection doesn't leave them. They stuff and stuff, and Rattle, whose little house is just outside my window, has filled the space so tightly that there is no room for her tail, which has bent quite out of shape since she's been sitting on her eggs.

When the sparrow babies are hatched the parents must work very hard to supply them with food. Usually three broods are brought up in a season, and often the families overlap—one lot of fledglings are being fed in the garden while more eggs are brooded in the nest, or sometimes the next eggs are laid so early as to be partially brooded by the nestling chicks. Once the chicks fly they never return to the nest, but are fed outside by the parents until they have learnt to fend for themselves. How parents and babies find one another each morning is a mystery. Some sixth sense must be operating on both sides, as was illustrated to me by a little incident a week or two ago.

I found a young sparrow in the garden near my window. It had left the nest too soon, and though feathered, it couldn't fly properly, and would have been at the mercy of any cat. What to do was a problem, for though I was pretty sure it was one of my sparrow-house babies, to have put it back in the wrong nest might have caused trouble, so I brought it to the verandah in a box and tried to feed it myself. This was quite

unsuccessful. The chick was not specially afraid of me, but obviously I did not suggest food to it at all. It simply kept its beak shut. I tried everything, prodding soaked bread on to its bill with my fingers and with tweezers, making encouraging bird noises with my lips, and imitating a parent sparrow in every way I could. But the obstinate little creature saw through it. It just sat and looked at me pathetically—its beak tightly closed, its feathers now rather sticky and damp with milk. So I gave up and began to feed the others that soon came crowding round for the bread. At first the little orphan took no notice, and the other sparrows flew past his box ignoring him completely. Then I saw a hen pause on the ledge by him, and the baby, without warning, broke his lengthy silence, squeaked violently and gaped for food. The mother hopped to him at once; mutual recognition was unmistakable. And then the hen, very agitated, gave me the hint I wanted—she flew to the one-roomed sparrow-house on the left of my window.

Now that I knew where he lived it was the work of a moment to put the baby back. The parents were soon feeding him again, and next time he flew I hope he got on better.

Bird watching, like charity, begins at home. It is splendid to be able to make further observations in field or in bush, but almost anyone who is interested in getting to know birds better has some opportunity in their immediate neighbourhood, as I have tried to show earlier. For those who have gardens the problem is comparatively simple. It is a question of attracting birds to your garden with the right kind of food. Obviously the food supply is of the utmost importance to a bird in selecting the place where it is to live. Birds like pigeons that are dependent on a vegetarian diet, may be ever so plentifully supplied with food for the main part of the year, but if in one month there is a dearth the neighbourhood spells starvation to them.

It is the same with all birds, of course, but the New Zealand natives have been for centuries adapted to the bush for their needs, and the removal of so much—unwisely much, alas—of their natural habitat has altered conditions for them radically. Many species have perished or become rare, but of those that have survived some, I think, are increasing in number again, and if we give them the right help, tuis, bellbirds, pigeons, riros and a dozen others may become part of the daily lives of New Zealanders, children and grown ups, just as Robin Redbreast, Jenny Wren, the swallow and the cuckoo are part of the lives—from childhood up—of people born in England.

In speaking of attracting birds to our gardens it is perhaps necessary to begin by trying to alter the ideas of those who maintain that birds are a destructive nuisance in a garden and ought not to be encouraged. It is

perfectly true that they can be destructive; but the fact is that not only do they do more good, in the long run, than harm, but actually are most urgently necessary to the welfare of the garden, which without them would be a prey to blights and insects.

This, indeed, is more or less what happened in New Zealand in the middle years of last century, and was what led to the introduction of many kinds of European birds. With the falling back of the bush under the white settlers' fire and axe went also the retreat of the birds, the bush's dependants and protectors. The new-won lands were almost birdless, and the insects and blights, thriving in this new life of abundant food and no enemies, became a desperate problem. The European birds were brought to cope with this, and it may be that too many were introduced, or birds of the wrong kind. They have brought their own problems, and the process of adaptation is still going on. It has been observed how an imported species will oust a native from some neighbourhood, and that is sad. But I think we would do better to try to help the adjustment by providing the right conditions for the native birds than by waging a perhaps mistaken war on any of the others.

This principle holds good when applied to birds of prey or "harmful" species among the native birds. Many sad mistakes can be made by attacking a species because some particular aspect of its behaviour is destructive. Moreporks, as I've said before, will attack small birds, but they also attack rats and mice—themselves enemies of small birds and their eggs—and mainly they are insect eaters, which means they are helpful to the farmer and gardener. Black-backed seagulls, that sometimes, flying inland, attack young lambs and helpless sheep most cruelly and destructively, are nevertheless useful to us as a whole. They eat quantities of offal and waste from freezing-works that might otherwise ruin our coasts and beaches. Shags have a bad reputation with fishermen for their depredations among trout—but they also feed on trout-eating eels, as well as on crustacea that are harmful to fish. Silvereyes deal with the blight on our fruit trees—they deserve a few apples as a return; many an old-fashioned gardener conscientiously left some on his trees in Autumn as a payment of the debt he owed the birds.

But apart from these utilitarian considerations—that are brought forward to meet arguments against birds rather than as the main reason for our encouragement of them—a bird watcher needs nothing further to justify his enthusiasm than the beauty and interest of the birds themselves.

Are there any creatures so qualified to inspire our wonder? That build their homes with exquisite artistry, working as weavers, masons and tunnellers with equal skill? That lift up their voices in joy and praise,

pouring out their melody with the effortless ease of a master? And lastly that with their unique power of flight are the very embodiment and symbol of all the longings and aspirations of mankind? Who has not watched the flight of the seagull, the skylark, or the pigeon with envy and a kind of premonition that it represents a state of being or of consciousness to which somehow we must aspire? We picture the angels with birds' wings, and guardianship and protection are expressed in the form of them, as well as the wondrous power of flight.

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But this is a long way from the problem of the things we can do to draw birds to our gardens. In conclusion I will give a few suggestions.

On the negative side one rather important condition is the absence of a cat. It is sad, but cats rarely combine well with the encouragement of wild birds to one's garden. There is nothing that puts a bird off so much as to encounter the gaze of this enthusiastic bird watcher. I can nearly always tell if a cat has got into the garden by the indignation meeting held by our sparrows. Their alarm or warning call is unmistakable. And of course if puss got into my verandah room it would be goodbye to the friendly little visitors. Some people say they keep their cats so well fed that they don't attack birds, but I doubt if my birds would believe this, and it is the birds' opinion that counts.

The next thing is to plant trees and shrubs that provide the right food. Especially plants that give food in the Winter are helpful. Pigeons come to our tree lucerne in June, July and August. They eat the flowers and also the young leaves (cleverly avoiding the growing points of the shoots). Tree lucerne has the great advantage of quick growth; it becomes a sizable tree in a few years. A self-sown seedling that we first noticed about eighteen months ago when it was not much more than a foot high is now a slim eight-foot tree, and receives constant visits from kuku. Karamu and taupata have berries that are good food for the bellbird, tui and pigeon. (These have male and female flowers on separate trees, which explains why sometimes a promising tree mysteriously bears no fruit. The mahoe is the same; only the female tree has its branches encrusted with purple berries). All these are fairly quick growing. The kowhai is rather slower, but it is well worth it. Bellbirds and tuis love its golden honey, and pigeons feed on the tender young leaves. The puriri is a wonderful tree; its flowers and fruit, showing all the year round, are beautiful enough to make it famous. Kuku the pigeon loves the ripe cyclamen-coloured berries, and the pink flowers must have nectar to draw the tui and bellbird, as both come constantly to the puriri near our verandah. The tree fuchsia —konini—also is good for honey, and the New Zealand flax; and among imported plants flowering currant, red-hot-poker, and the Australian gums

are eagerly sought out by the bellbird and tui. The list could be continued endlessly, but this is enough to suggest what to have in mind when planting a "bird garden."

The other good plan is a bird table for feeding the birds artificially. This can be a platform in a tree, under a window, or simply on a post driven into the ground. The point is to have a regular place, and a regular time for putting out food, as this is the best way to draw the birds. They will soon get used to the "dinner bell" in the form of any call or whistle—or literally the ringing of a bell. If the bird table is arranged by burying a post a good plan is to choose the branch of a tree with twigs and side branches left on. This gives places for the birds to perch, and the side branches can be hung with suet and jars of sweetened water. (Don't choose narrow necked jars, they are terrible traps for silvereyes, that reach in to sip the last drops and get stuck.)

The platform is made by fixing some kind of rough wooden tray between the branches. Drive a few nails into it for anchoring crusts of bread and stale ends of cake.

The ground round the bird table should be kept bare, or if it is in grass, clipped short. The main reason for the table is to keep the birds going in Winter—especially in bad weather—and if any food that is knocked off the platform falls into long wet grass, the birds following it become soaked and chilled.

Of course only some birds can be tempted directly with food. Your bird tables and carefully chosen plants will draw those birds that eat grain and honey and berries, but not the kingfisher, morepork, cuckoo, fantail, riro, rifleman or tomtit. And yet if the conditions are there that draw the other birds the insect eaters will probably come too.

Perhaps the bird company brings them; perhaps the right trees bring the right insects; or perhaps—it would be nice to think it—the presence of people who love birds creates some kind of atmosphere that they respond to, and the activities of a bird watcher are really writing an invisible notice above his garden:

"Birds are welcome here!"