FAUNA

BIRDS ON ROADSIDES

by Brenda Newbey

THERE is no doubt that vegetated road verges really are a valuable resource for birds.

For over 30 years, Main Roads Western Australia (MRWA) has run a programme of land acquisition of strips of farmland adjacent to main roads. Many of the resultant verges have been revegetated, especially over the last 20 years as revegetation techniques have improved. In early days, neat rows of seedling trees, often of a single eastern states species, were used for replanting these strips of paddock. Now it is more usual for a mix of 20-30 local trees and shrubs to be included in the planting. MRWA was interested in finding out whether the revegetated verges were as attractive to birds as remnant verges so they took the opportunity of linking into the Birds on Farms (BOF) project, a Birds Australia initiative which aimed to find out more about birds in farming areas with an especial interest in bird use of revegetation.

The verge study comprised 161 half-hectare sites over 21 shires. The sites were visited up to eight times over at least two years. A total of 112 bird species were recorded.

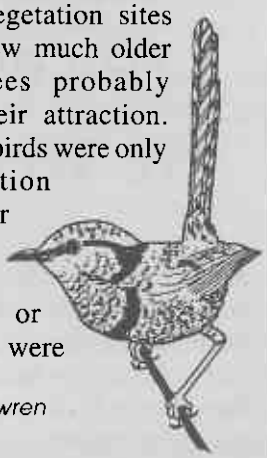
The verge sites were of various widths none less than 10 meters, along one side of a road. Length differed accordingly. About one quarter were remnant (with up to 15% revegetation), one quarter had a more even mix of remnant and revegetation and the remaining 50% were revegetation (with up to 15% remnant).

A few more bird species were found in remnant sites than in the other tree-history categories. They were species that have declined in numbers or range as a result of clearing for agriculture. However many species that have declined were just as likely or more likely to be found in revegetated sites. These included Splendid Fairy-wren, White-browed Scrub-wren and Rufous Whistler. Species more likely in remnants included Inland Thornbill, Weebill and Grey Butcherbird. Species only in remnant verges included Crested Bellbird and Rufous Treecreeper.

Understorey is important to most of the species that have declined. A well developed understorey was shown to be important for several of those species including Splendid Fairy-wren, White-browed Scrub-wren and Inland Thornbill, but irrelevant to all the species that have benefited from farming such as the Magpie, Raven and Ringneck.

The species favoured by farming and most of the bush birds were found in all age categories of verges. The fact that many of the younger revegetation sites included a few much older remnant trees probably enhanced their attraction. Some scarce birds were only in vegetation averaging over ten years old.

For sites where seven or eight surveys were done, total species count ranged from five to 31. Total count of individuals ranged from 10 to 310. The higher-performing sites tended to be in higher-rainfall areas than the lower-performing sites. By far the highest-performing site of all was a 20 m wide direct seeded revegetation site along the busy Old Coast Road. The vegetation was continuous at either end of the site with a very vigorous understorey including much honeyeater-attracting *Calothamnus quadrifidus*. There was a remnant old Tuart. But the biggest drawcard of all was the adjacent well-watered turf farm. Another high-performing site, in the shire of Swan, was a 15 m wide verge entirely composed of planted Marri with no understorey, adjacent to a stock water trough and ending near a farmhouse with a garden. Bird numbers here were highest in summer and autumn when the Marri was in flower or fruit and when water was most in demand. One winter visit to this site yielded no birds.



Splendid Fairy-wren

ROAD VERGE SITE LOCATIONS

Two of the best sites were only 16 m wide, direct seeded in 1981, 16 years before the survey started. In Albany Shire, they were among the first of the direct-seeded road verges. Revegetated verges often have a higher density of flowering plants than remnant bushland. At flowering they are visited by large numbers of honeyeaters. This was certainly the case for these two sites. In autumn, *Hakea laurina* in full flower appears to be a powerful attractant with maximum numbers of New Holland Honeyeaters and Silvereyes found. Western Spinebills were only recorded at these sites in autumn. Red Wattlebirds were more common in spring when *Calothamnus quadrifidus* was in full flower and *Banksia grandis* was also flowering quite well. The south-west endemic finch, the Red-eared Firetail, was found at both sites, sheltering in the dense vegetation and feeding at the edge of the adjacent paddock. It is not known what will happen as these sites continue to age. All the other direct-seeded sites are younger than this and may not yet have reached

Birds continued from page 14

their maximum carrying capacity.

Some of the low-performing sites were long undisturbed remnant at the edge of a block of bushland so that there was no perceptible corridor effect. Others were opposite a better verge on the other side of the road. Vigorous introduced grasses appeared to have a negative effect on bird diversity and numbers. Crested Bellbirds, scarce in verges, were recorded from an isolated low-performing remnant verge.

Verges supply food and shelter for birds often in a very different mix from that of the surrounding countryside.

Bird use of verges has something in common with our notion of time-share accommodation. Overall there was little difference between numbers of individual birds across the seasons. But when separate species are examined by season, an interesting picture emerges.

More Red-capped Robins were found in verges in autumn than at other times of the years. Grey Fantails were more common in autumn and winter, Brown Honeyeaters were much more common in spring. Splendid Fairy-wrens were most frequently recorded in summer though spring records were also high. Rufous Whistlers showed little variation throughout the year though numbers were up highest in spring when they call most vigorously. What is going on?

FAUNA

The Red-capped Robins use verges for dispersal in autumn and move away from verges for breeding. Grey Fantails move north and east as it gets colder in the south, returning in late winter. Brown Honeyeaters appear to gravitate to verges where there is a good food supply and often use them for nesting in spring. Splendid Fairy-wrens breed in spring in suitable verges with a dense understorey and their numbers peak in summer before autumn dispersal. Rufous Whistlers often occupy a verge as part of their long-term territory.

Bird numbers were high in the cooler months in the inland northern sites, with a sharp drop in summer. Summer totals for sites near Cranbrook and Augusta were high. It is critical for many species to be able to move through the landscape.

This project showed that birds will take up the advantages that a verge has to offer, responding to factors that impact directly on them such as structure, degree of isolation of the site, or plants in flower at the time. Factors such as road width and traffic flow were of little significance. Highest numbers of individual birds were recorded in narrow verges, lowest in the widest verges where the corridor effect is least pronounced. However some of the scarcer species were more likely to be found where the verges were wider.

In a landscape so often depleted of trees and shrubs, vegetated road verges have been a lifeline for bird species in agricultural areas of WA and revegetation programmes have been invaluable.

Note: While the BOF project in WA was mostly funded by the Gordon Reid Foundation for Conservation, the Main Roads part of the project was funded by MRWA. But a survey such as this is very labour intensive and both segments of the project depended heavily on volunteer support. For the full report, contact Birds Australia or MRWA.

Brenda Newbey coordinated BOF in WA. She can be contacted on: 9337 5673