Birds

on New England wool properties

Land, Water & Wool
Northern Tablelands
Project Fact Sheet
1
A woolgrower guide

Why are birds important?

Birds fulfil various important roles on wool properties, including natural pest control and as indicators of productive pastures and adequate shelter for livestock. Many woolgrowers derive satisfaction and pleasure from having a variety of birdlife on their farms. In turn, New England wool properties provide habitat for a wide variety of species, including threatened and declining woodland birds.

Birds on New England farms

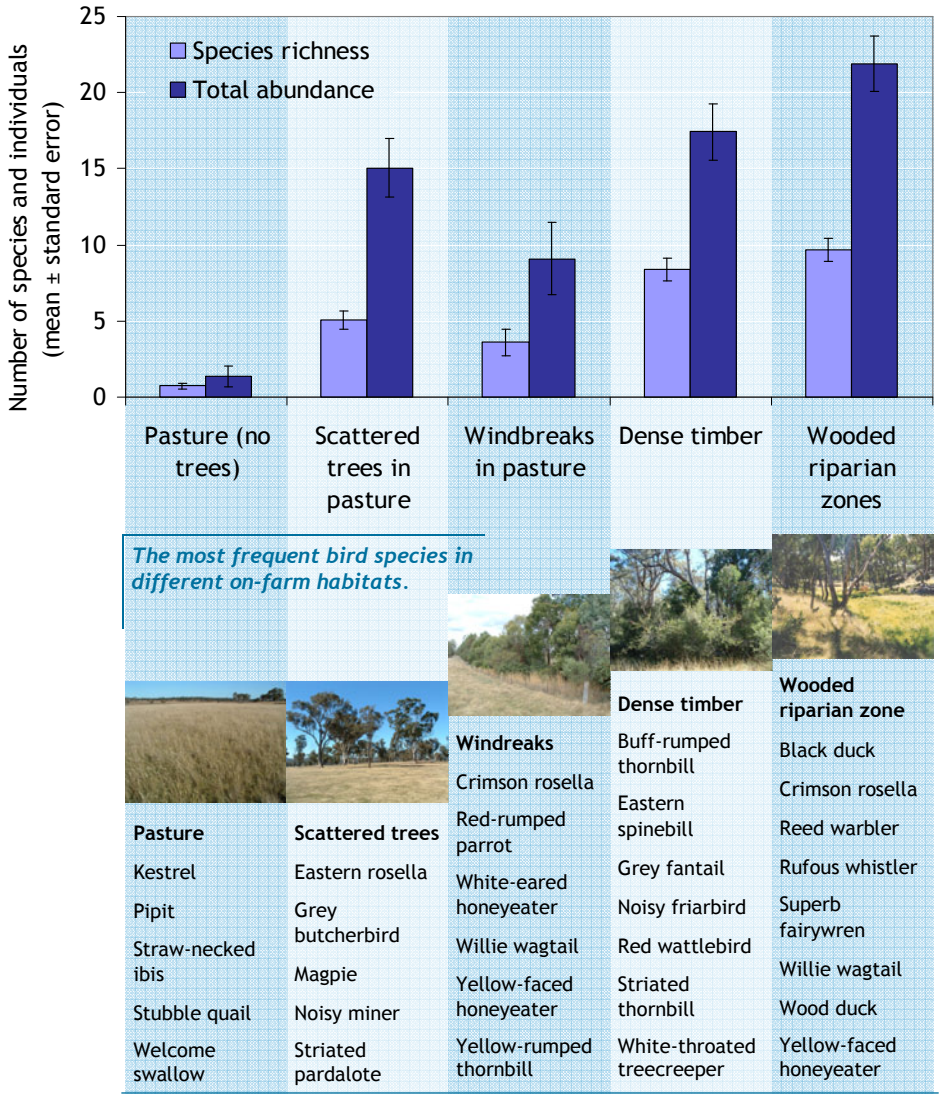
The Land, Water & Wool Northern Tablelands Project (NSW) recorded 109 species of bird on 24 wool properties between Walcha and Glen Innes in surveys between 2002 and 2005.

Striking patterns in bird species composition and abundance are encountered across different habitats on farms (Fig. 1).

- Wooded riparian zones along creeks and streams support the most diverse bird communities and the largest numbers of individuals.
- Pastures contain the fewest species and individuals of bird on average.
- Dense timber on farms also supports healthy numbers and varieties of birds.
- Scattered trees in pasture support numbers and varieties of birds that are intermediate between pastures and denser timber.
- Windbreaks and tree and shrub blocks have more and greater varieties of birds than the pastures into which they are planted.

However, each habitat is important in providing the right conditions for a particular set of species (Fig. 2). Open country specialists like pastures. Woodland species prefer dense timber. So a mix of habitats on a farm maximises bird diversity.

Figure 1. The average number of bird species and individuals in different habitats on New England wool properties. Censuses were conducted for 20 minutes in 1.2 ha plots.



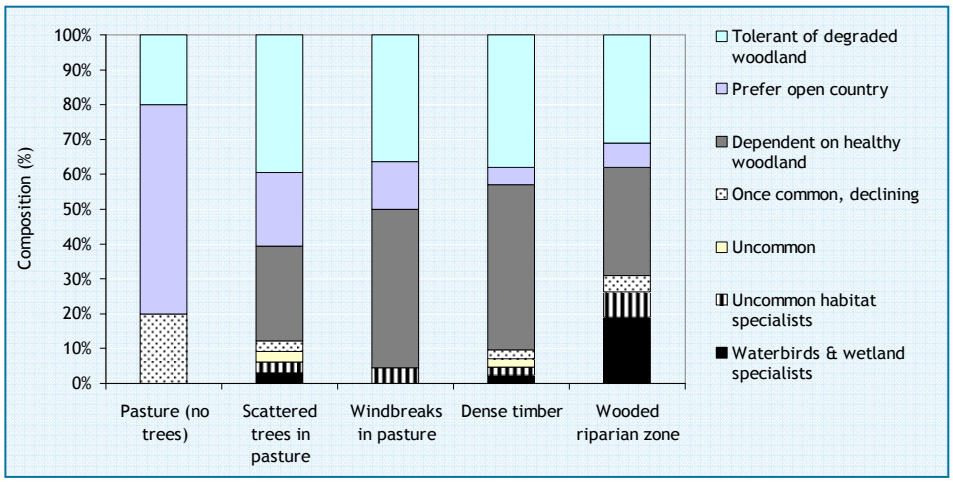


Figure 2. Bird species composition in different habitats on New England wool properties. Species are classified in seven groups based on Geoff Barrett's pioneering work in the Armidale region (Barrett et al. 1994).

Declining woodland birds found on New England farms!

Twenty species of woodland bird have been identified that are destined for extinction in the NSW wheat-sheep belt, where little habitat remains (Reid 1999). We found ten of these species on New England wool properties between 2002 and 2005. Wool growing in the cooler, more humid New England region is compatible with the retention of extensive native timber. New England farms can thus play a special role in conserving woodland birds.

Photography courtesy of Bob Shepherd.

Woolgrowers retaining adequate areas of dense timber and shelter for livestock to counter the extremes of climate, are also retaining habitat suitable for woodland birds.

Nine 'declining' woodland species found on New England wool properties are predominantly insectivorous—they help with pest control. Some are aerial insectivores, others leaf gleaners and others ground foragers, so together they suppress a wide variety of insects.

The diamond firetail is granivorous—it indicates pasture seeding and the ability of pastures to self-regenerate.

Our research found some of these declining woodland bird species in planted windbreaks and revegetated corridors. This means that woolgrowers are putting back habitat suitable for these species.

The possibility that woodland birds facing extinction in drier woodlands further west, will have a home on New England wool properties long into the future gives cause for optimism. Few national parks or nature reserves occur in the intensively developed parts of New England, so that bird conservation will be largely dependent on graziers.

The potential to increase woodland birds in the New England woolscape is a worthy goal for the regional wool industry.

Do you have these species on your farm?

Many woolgrowers get satisfaction and pleasure from having a diversity of colourful and fascinating birds around all the time.

Diamond firetail

Restless flycatcher

Rufous whistler

Sittella

Brown treecreeper

Dusky woodswallow

Jacky winter

Speckled warbler

White-browed woodswallow

Yellow robin

What do birds mean for woolgrowers?

Birds fulfil several important roles on New England wool properties.

Birds for pest control

Certain birds eat large quantities of insects each year, helping to keep pests such as blowflies and pasture scarabs, in check.

Magpies, ravens, crows and ibis are common on New England farms and are part of the front-line pest control service in pastures. Many lesser known woodland birds are also important, and capable of suppressing defoliating insects in trees, provided there is enough shelter.

Unfortunately, some of the birds associated with scattered trees in pasture are counter-productive to pest control, and may indirectly cause 'dieback' of those trees. For example, magpies, butcherbirds, currawongs and noisy miners behave aggressively towards smaller insectivorous birds. The beneficial smaller birds are excluded, and tree health suffers.

Adequate shelter in the form of dense timber and scrub or planted windbreaks and blocks are necessary to provide refuge for woodland birds and allow them to keep trees healthy, safe from the larger aggressive species.

Birds and productive pastures

A wide variety of abundant birdlife is a sign of a healthy farm, good pasture management, adequate livestock shade and shelter, and abundant clean water resources.

Short, heavily grazed pastures that are never allowed to recover from the last bite (stage I growth), are suboptimal for forage production and liveweight gain. They are also inhospitable for birds. Short overgrazed pastures provide no shelter from predators or places to conceal a nest. Such pastures have fewer plant species, and little seed production or insect life for birds to eat. The low diversity of birds in an overgrazed pasture indicates the system is producing well below its potential.

Highly productive pastures that are maintained in the stage II growth phase produce at maximum level. They support a larger range of birds such as bushlarks, quail, cisticolas, and fairywrens, which relish the shelter from predators, places to conceal a nest, the seeding of a diverse range of pasture species and the insect life. These birds in turn, attract avian predators such as kestrels, kites, falcons and hobbies. A healthy diverse bird community in open pastures indicates a system in which liveweight gain is likely to be high.

Birds indicate good stock shelter

In times of bad weather in New England, scattered trees are not enough to protect lambs and sheep off-shears from death. Few bird species are found among scattered trees, either. A farm bird community dominated by magpies, galahs, eastern rosellas and noisy miners is an indicator of scattered trees and insufficient shelter for stock. They are saying, **"warning—you could lose livestock in bad weather!"**

However, farms with areas of dense tree and shrub cover (windbreaks, block plantings and patches of dense timber and scrub) have ample shade and shelter for livestock and pastures. The Land, Water & Wool research showed that dense cover associated with shrubs and young trees provides sufficient shelter to encourage many smaller woodland insectivores back out across the farm (Fig. 2).

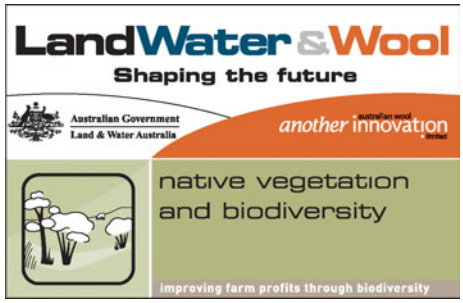
Woolgrower efforts to revegetate after the ravages of dieback, are successfully providing habitat for woodland birds, encouraging their pest control function across the farm. The presence of smaller woodland birds on your farm, says, **"my lambs or sheep off-shears would be safer here during a bad weather graziers alert!"**

How do I encourage more birds on my farm?

- **Plan and manage for a variety of habitats on your farm**—different species occur in different areas. Encourage a wide variety of bird life with pastures at different stages of recovery from grazing, crops, large patches of timber, scattered trees, well vegetated creeks and streams, some dams fenced off for clean water, and one or two large dams for larger waterbirds.

- **Retain or increase areas of dense timber**—small patches of timber are easily disturbed by grazing, weed invasion and feral animals, and become dominated by larger aggressive birds. For maximum bird diversity, aim for some or all of the following: timbered areas of 20 ha with a creek, several tree species, shrubs and young trees in the understorey, hollow trees, dead timber on the ground, a few mistletoes, and a variety of groundcovers.

- **Revegetate new areas to increase habitat**—remember to use trees and shrubs, and allow regeneration of native grasses and forbs. Dense, shrubby windbreaks and corridors support the smaller insectivores and can encourage their pest control services back out across cleared or dieback-affected open country.



Land, Water & Wool (LWW) is the most comprehensive natural resource management research and development program ever undertaken for the Australian wool industry. LWW is a partnership between Australian Wool Innovation Limited and Land & Water Australia, and has seven core sub-programs. The Native Vegetation and Biodiversity sub-program is working with woolgrowers and demonstrating that biodiversity has a range of values, can add wealth to the farm business and can be managed as part of a productive and profitable commercial wool enterprise.

The Land, Water & Wool Northern Tablelands Project is led by Associate Professor Nick Reid, University of New England, in collaboration with Southern New England Landcare Ltd, and the Centre for Agricultural and Regional Economics.

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