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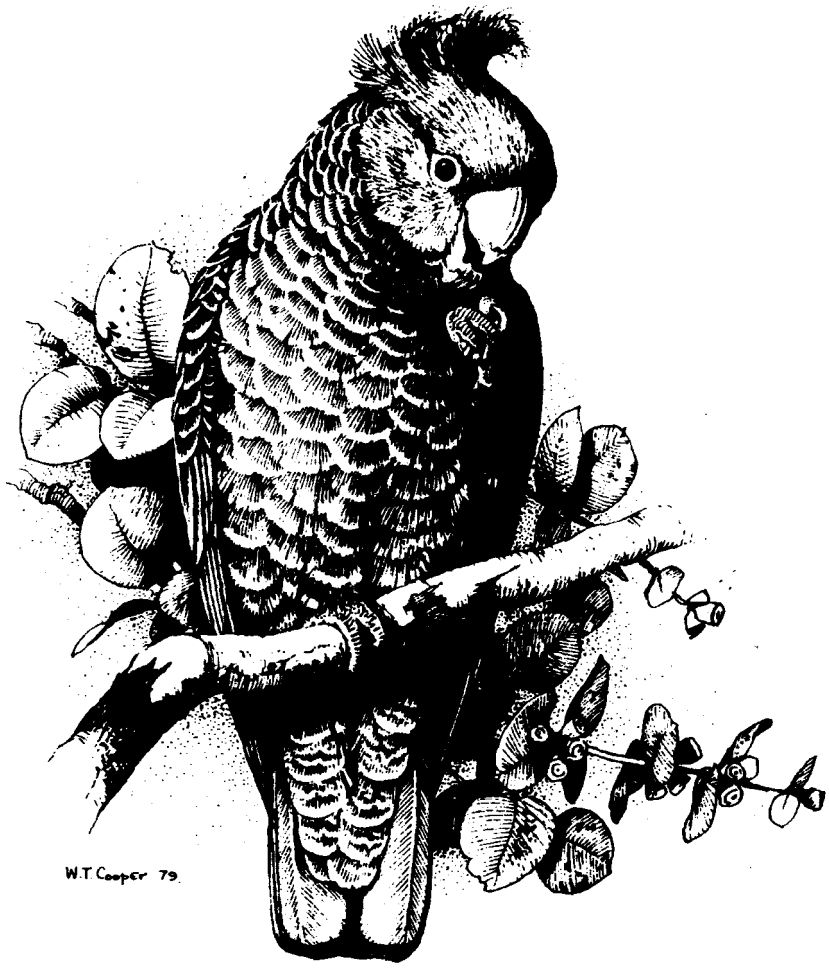

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WHY MIGHT SPECKLED WARBLERS BE DECLINING? OBSERVATIONS FROM THE ACT.

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Abstract

The speckled warbler Chthonicola sagittata is one of a number of species declining from the highly fragmented temperate woodlands of eastern Australia. The species has recently been upgraded nationally to "Near Threatened" and in NSW and Victoria to "Vulnerable", in recognition of its decline. Here we summarise findings from a three-year demographic study of an ACT population of Speckled Warblers and report on several aspects of their biology that may make the species vulnerable to population decline in fragmented landscapes. First, the species occurs at low population density and is a specialist in terms of nesting and foraging behaviour. Second, despite being multi-brooded with the potential to fledge up to three broods each season, females have low reproductive success. Low success results mainly from nest predation, a phenomenon that may be elevated in habitat remnants, particularly those that are small or characterised by a large proportion of edge habitat where generalist predators may invade from the surrounding habitat matrix. Finally, Speckled Warblers form intraspecific flocks in winter, behaviour that is likely to increase survival in harsh years. Disruption of the structure and composition of flocks may have potential to trigger the Allee effect, which is a slowing in population growth at low density or small population size.

Introduction

Habitat fragmentation alters the amount, configuration in the landscape, and quality of suitable habitat available for species, and can have profound effects on the dynamics of natural populations (Sih et al. 2000). For example, it can subject populations to a loss of critical resources for breeding and survival (e.g. food and shelter), change the intensity of ecological processes such as predation and competition, and reduce gene flow (Andren 1994, Fahrig and Merriam 1994). The impact of fragmentation on the Australian avifauna has been ubiquitous with local extinctions occurring across most guilds of birds and in most habitat types (Recher and Lim 1990, Garnett 1992, Lunney et al. 1997, Recher 1999). Considerable research has focused on identifying patterns of declines, and it is clear that species richness and abundance decline with a reduction in remnant size and habitat quality and an increase in habitat isolation (Loyn 1987, Saunders 1991, Barrett et al. 1994, Reid 1999, Mac Nally et al. 2000, Major et al. 2001, Lindenmayer et al. 2002).

The Speckled Warbler *Chthonicola sagittata* is one of a number of species declining from the highly fragmented

temperate woodlands of eastern Australia (Garnett and Crowley 2000). The species has recently been upgraded nationally to "Near Threatened" (Garnett and Crowley 2000), and in NSW and Victoria to "Vulnerable", in recognition of its decline (Robinson and Traill 1996, Reid 1999; Traill and Duncan 2000). Since European settlement up to 80% of the natural habitat of the temperate woodlands has been cleared to make way for agriculture and grazing, with most remaining habitat modified in some way (Ford et al. 2001). This has had considerable impact on the status of species within the region. Speckled Warblers have declined across a large part of their range, and in districts where no habitat fragments larger than 100 ha remain they appear to be locally extinct (Barrett et al. 1994, Robinson and Traill 1996, Traill and Duncan 2000). Specific causes of decline are unknown but thought to be related to processes resulting from fragmentation and degradation of the habitat, rather than a result of habitat loss alone, because populations continue to decline in districts where land clearing has stopped (Reid 1999).

Here we summarise results from a three-year study of the demography of an apparently healthy population of Speckled Warblers in the ACT, reporting on aspects of the species' biology that might be linked to the causes of decline in habitat remnants.

Study species and field techniques

The Speckled Warbler is a small (11-15 g) insectivorous passerine and a sedentary *resident of* the temperate woodlands of eastern Australia (Blakers et al. 1984). It is primarily ground-dwelling, nesting and foraging directly on the ground. Males are slightly larger than females and can be distinguished on the basis of a black rather than rufous lateral crown stripe.

The study was conducted on the lower slopes of Mt Ainslie in the Canberra Nature Park, Australian Capital Territory (149° 9' E, 35° 16' S), between 1997 and 2000 in open eucalypt woodland dominated by *Eucalyptus rossii, E. melliodora, E. mannifera* and *E. macrorhyncha.* The study population consisted of all individuals living within a 300 ha area within the larger ca. 1500 ha reserve, and was monitored throughout the year. Adults were captured in mist nets, and each was colour-banded to allow individual recognition; at least 90% of the resident adult population was banded in each year. We attempted to monitor all nesting attempts by resident females and juveniles were colour-banded in the nest. Repeatedly locating banded birds and catching and banding unmarked individuals as they settled on the study site allowed us to document the social structure of the population, reproductive success, mortality and dispersal.

Summary and discussion

Population density and territory size

The population density of Speckled Warblers on Mt Ainslie was low with a mean 1.8 birds per 10 ha (range 1.7-1.9 over three years) (Gardner et al. 2003). Breeding groups defended large, usually contiguous territories whose boundaries changed little from year *to year (Gardner*

2002). The mean size of breeding territories was 9 ha (range 6-12 ha), which is considerably larger than for closely related and ecologically similar species with which Speckled Warblers coexist (Gardner et al. 2003).

The causes of low density on Mt Ainslie are unknown but similar figures (0.18-0.54 birds/ha) are reported from several sites across the species' range (Higgins and Peter 2002), suggesting a broadscale, rather than site-specific cause. One possibility relates to the species' narrow foraging niche. Speckled Warblers forage almost exclusively on the ground year-round; they do not use multiple substrates or change their foraging niche seasonally as do other related Acanthizid species with which they share habitat (Ford et al. 1986, Bell and Ford 1990, Tzaros 1996). In addition, they do not dig for prey or sift leaf litter like White-browed Scrubwrens *Sericornis frontalis* but move across the ground gleaning prey off the surface (Tzaros 1996, Higgins and Peter 2002). Such a specialised foraging niche may act to limit overall numbers.

Regardless of the causes of low density, populations that are small are particularly vulnerable to stochastic demographic and environmental events and therefore at increased risk of extinction compared with large populations. In small habitat remnants populations will inevitably be at greater risk of extinction because of their low numbers, given their occurrence at low densities. In addition, where local extinctions have occurred recolonisation will be difficult if remnants are isolated from source populations.

Breeding biology

Most aspects of the breeding biology of the Speckled Warbler are similar to those of other closely related members of the family whose populations are not in decline. Females produce multiple broods over a long breeding season, with the potential to fledge three broods (each of three chicks) per season, given suitable conditions (Gardner 2002). Speckled Warblers apparently have the breeding potential to recover from short-term fluctuations in population levels, and it is probable that many aspects of breeding biology are not linked to underlying causes of population decline.

Nevertheless, one aspect of breeding biology that may have consequences for populations nesting in fragmented landscapes, and be a contributing factor in population decline, is the species' inflexible nesting behaviour. Unlike other Acanthizid species, all nests are built on the ground in a shallow depression which the birds appear to excavate so that the base of the entrance is almost flush with the surface of the ground (Tzaros 1996, Gardner 2002). As a result, nests are vulnerable to a wide range of predators and other forms of mishap. A consequence of this nesting behaviour is that breeding females suffer considerably higher mortality during the breeding season compared with males (Gardner et al. 2003). Only females incubate the clutch and brood the nestlings and they appear to be vulnerable to predation at this time (Gardner 2002). Predators can probably approach the nest without being observed because the dome structure and location of the nest obscures the view of

the sitting female. Males neither incubate nor brood the offspring and accordingly suffer lower mortality during breeding; in the non-breeding season mortality rates of males and females are similar (Gardner et al. 2003).

Habitat quality, in particular the structure and complexity of ground and understorey vegetation, is likely to be an important factor in the persistence of Speckled Warbler populations. Where understorey habitat is sparse, nests and attendant females may be more exposed to predation, especially by visually hunting predators that use parental activity as clues to locate nests (Martin et al. 2000). Most nest failure in the ACT population was due to avian predators that probably cue on parental activity, and differences in hatching success of nests were correlated with differences in habitat structure (Gardner in press).

In addition to habitat quality, individuals nesting in habitat remnants that are small or irregular in shape are likely to suffer higher rates of nest predation than those nesting in large tracts of habitat because of changes to predator communities or differences in patterns of predation due to edge effects (Paton 1994, Gardner 1998). Two factors are involved. First, local extinctions of large carnivores will occur if remnants become smaller than the areas they require for survival. Large carnivores play an important role in regulating populations and following their loss the numbers of small omnivores residing within remnants increase. Second, an increase in the ratio of edge to interior habitat that is typical of small or irregularly shaped remnants exposes the remnant to increased predation from adjacent habitats. This predation along the edges of remnants is probably due to a suite of medium-sized omnivores that thrive in disturbed habitats. This is of particular concern because females in the apparently healthy Mt Ainslie population had low reproductive success, each fledging about one chick per year, which is at the lower end of the range for the family (Green and Cockburn 1999). Predation by generalist bird species was the primary cause of low reproductive success at Mt Ainslie, and any increase in predation rates in sub-optimal habitat could destabilise populations.

Winter flocking

During winter, Speckled Warblers formed intraspecific flocks via amalgamation of residents from several adjacent breeding territories, as well as by the arrival of immigrants that had dispersed after the previous breeding season. The timing and mode of flock formation suggested that flocking probably increases survival in harsh conditions and appears to be particularly important to Speckled Warblers in drought conditions (Gardner 2004).

The aggregation of individuals into foraging flocks is thought to facilitate increased foraging efficiency and predator detection and therefore acts to increase survival in harsh conditions (Lima and Dill 1990). The benefits of grouping increase with group size, up to a point, and group size is varied in response to the severity of conditions (Elgar 1989). A reduction in population size that depletes the number of individuals available for grouping may therefore lead to a reduction in survival

if groups become so small that foraging and anti-predator strategies become inefficient. Social disruption of this sort can trigger the Allee effect which describes a slowing in population growth at low density or small population size which can greatly increase the risk of extinction (Reed 1999, Stephens and Sutherland 1999)

The areas used by Speckled Warbler flocks ranged from 6-30 ha with potential for single flocks to use areas as large as 36 ha. Habitat remnants smaller than about 40 ha may therefore be unsuitable habitat if there are too few birds available to form flocks of an adequate size when conditions are most extreme, leading to increased mortality.

Conclusions and future directions

We have identified several aspects of demography that have the potential to cause population decline in fragmented landscapes, particularly in small habitat remnants. An obvious focus for future work is to explore the effects of these phenomena on the viability of populations living in habitat remnants of different size and with different habitat characteristics, using the established procedures of Population Viability Analysis (Reed et al. 2002). PVA allows simulation of the stochastic and deterministic forces affecting populations and is primarily used to model the probability of extinction of small populations and the effects of different treatments and perturbations on population persistence.

The effects of fragmentation on Speckled Warblers appear to be multiple and potentially synergistic. For example, population size could be reduced in some remnants as a result of increased rates of nest predation, which will affect the numbers of birds available for flocking which in turn could trigger the Allee effect. Modelling has the potential to dissociate such effects and identify threshold values at which such changes in population dynamics occur, something very difficult to achieve on the basis of field studies alone. In recent years, advances in modelling techniques have allowed the consequences of Allee effects to be incorporated in models of population dynamics, so the tools are available to investigate these sorts of complex interactions (Courchamp et al. 1999, Stephens and Sutherland 1999).

Ultimately, the accuracy of predictions derived from such modelling depends on the quality of baseline demographic data on which the model is built. Given the breadth of demographic data collected during this study, the variability recorded among years and the focus on individuals, which allows assessment of the variability recorded, PVA modelling would be valuable and would have the potential to make sense of distribution patterns in remnants, providing a basis for management of such metapopulations.

References

Andren H (1994). Effects of habitat fragmentation on birds and mammals in landscapes with different proportions of suitable habitat: a review. *Oikos* 71: 355-366.

Barrett GW, Ford HA and Recher HF (1994). Conservation of woodland birds in a

fragmented rural landscape. *Pacific Conservation Biology I:* 245-256.

Bell HL and Ford HA (1990). The influence of food shortage on interspecific niche overlap and foraging behavior of three species of Australian warbler. *Studies In Avian Biology* 13: 381-388.

Blakers M, Davies SJJF and Reilly PN (1984). *The Atlas of Australian Birds.* Melbourne University Press, Melbourne.

Courchamp F, Clutton-Brock T and Grenfell B (1999). Inverse density dependence and the Allee effect. *Trends in Ecology & Evolution* 14: 405-410.

Elgar MA (1989). Predator vigilance and group size in mammals and birds: a critical review of the empirical evidence. *Biological Reviews* 64: 13-33.

Fahrig L and Merriam G (1994). Conservation of fragmented populations. *Conservation Biology* 8: 50-59.

Ford HA, Noske S and Bridges L (1986). Foraging of birds in eucalypt woodland in north-eastern New South Wales. *Emu* 86: 168-179.

Ford HA, Barrett GW, Saunders DA and Recher HF (2001). Why have birds in the woodlands of Southern Australia declined? *Biological Conservation* 97: 71-88.

Gardner JL (1998). Experimental evidence for edge-related predation in a fragmented agricultural landscape. *Australian Journal of Ecology* 23: 311-321.

Gardner JL (2002). Breeding biology of the speckled warbler, *Chthonicola sagittata. Australian Journal of Zoology* 50: 169-181.

Gardner JL (2004). Winter flocking behaviour of speckled warblers and the Allee effect. *Biological Conservation* 118: 195-204.

Gardner JL (in press). Predation risk is unlikely to account for the failure of subordinate speckled warblers to help at the nest. *Journal of Avian Biology.*

Gardner JL, Magrath RD and Kokko H (2003). Stepping stones of life: natal dispersal in the group-living but noncooperative speckled warbler. *Animal Behaviour* 66: 521-530.

Gardner JL, Magrath RD and Olsen PD (2004). Speckled warblers break cooperative rules: absence of helping in a group-living member of the Pardalotidae. *Animal Behaviour* 67: 719-728.

Garnett S (1992). *Threatened and Extinct Birds of Australia.* RAOU Report No 82, Melbourne.

Garnett ST and Crowley GM (2000). *The Action Plan for Australian Birds.* Birds Australia, Melbourne.

Green DJ and Cockburn A (1999). Life history and demography of an uncooperative Australian passerine, the brown thornbill. *Australian Journal of Zoology* 47: 633-649.

Higgins PJ and Peter JM (2002). *Handbook of Australian, New Zealand and Antarctic birds. Volume 6: Pardalotes to shrike-thrushes*. Oxford University Press, Melbourne.

Lindenmayer DB, Cunningham RB, Donnelly CF, Nix H and Lindenmayer BD (2002). Effects of forest fragmentation on bird assemblages in a novel landscape context. *Ecological Monographs* 72: 1-18.

Lima SL and Dill LM (1990). Behavioral decisions made under the risk of predation - a review and prospectus. *Canadian Journal of Zoology* 68: 619-640.

Loyn RH (1987). Effects of patch area and habitat on bird abundances, species numbers and tree health in fragmented Victorian forests. in: Saunders DA, Arnold GW, Burbidge AA, and Hopkins AJM (Eds), *Nature Conservation: The role of remnants of native vegetation.* Surrey Beatty and Sons, Chipping Norton, NSW: p 65-77.

Lunney D, Curtin AL, Fisher D, Ayers D, and Dickman CR (1997). Ecological attributes of the threatened fauna of New South Wales. *Pacific Conservation Biology* 3: 13-26.

Mac Nally R, Bennett AF and Horrocks G (2000). Forecasting the impacts of habitat fragmentation. Evaluation of species-specific predictions of the impact of habitat fragmentation on birds in the box-ironbark forests of central Victoria, Australia. *Biological Conservation* 95: 7-29.

Major RE, Christie FJ and Gowing G (2001). Influence of remnant and landscape attributes on Australian woodland bird communities. *Biological Conservation* 102: 47-66.

Martin TE, Martin PR, Olson CR, Heidinger BJ and Fontaine JJ (2000). Parental care and clutch sizes in North and South American birds. *Science* 287: 1482-1485.

Paton PWC (1994). The effect of edge on avian nest success: how strong is the evidence? *Conservation Biology* 8: 17-26.

Recher HF (1999). The state of Australia's avifauna: a personal opinion and prediction for the new millennium. *Australian Zoologist* 31: 11-27.

Recher HF and Lim L (1990). A review of current ideas on the extinction, conservation and management of Australia's terrestrial vertebrate fauna. *Proceedings of the Ecological Society of Australia* 16: 287-301.

Reed JM (1999). The role of behavior in recent avian extinctions and endangerments. *Conservation Biology* 13: 232-241.

Reed JM, Mills LS, Dunning JB, Menges ES, McKelvey KS, Frye R, Beissinger SR, Anstett MC and Miller P (2002). Emerging issues in population viability analysis. *Conservation Biology* 16: 7-19.

Reid J (1999). *Threatened and declining birds in the New South Wales Sheep-wheat belt: diagnosis, characteristics and management*. Final Report to NSW National Parks & Wildlife Service, Canberra.

Robinson D and Traill BJ (1996). *Conserving woodland birds in the wheat and sheep belts of southern Australia.* RAOU Conservation Statement No 10, Melbourne.

Saunders DA, Hobbs RJ and Margules CR (1991). Biological consequences of ecosystem fragmentation - a review. *Conservation Biology 5:* 18-32.

Sih A, Jonsson BG and Luikart G (2000). Habitat loss: ecological, evolutionary and genetic consequences. *Trends in Ecology and Evolution* 115: 132-134.

Stephens PA and Sutherland WJ (1999). Consequences of the Allee effect for behaviour, ecology and conservation. *Trends in Ecology & Evolution* 14: 401-405.

Traill B and Duncan S (2000). *Status of birds in the New South Wales temperate woodlands region.* Australian Woodlands Conservancy, Chiltern, Victoria.

BRINGING BREEDING BIRDS BACK: WOODLAND BIRDS BREEDING IN REVEGETATION PATCHES

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Abstract

It is known that woodland birds are able to occupy revegetation patches, but it is not known whether they have the ability to breed successfully in them. The principal aim of this study was to ascertain whether woodland birds, many of which are declining, were attempting to breed in small remnants and revegetated patches across the ACT and surrounding NSW This aim was addressed using source-sink theory, whereby revegetation patches were viewed as either potential sources (good quality habitat in which birds could breed successfully and from which excess individuals could disperse), or sinks (inferior quality habitat where birds were unable to breed successfully, and to which excess individuals from source populations might migrate). During the spring 2003 breeding season, 16 revegetated sites and four remnant sites were surveyed for bird species richness, bird abundance and for breeding attempts. Habitat variables were also recorded. The results were analysed using regression analysis and multivariate statistics. Eighteen woodland bird species, including four declining and one threatened species, were recorded attempting to breed in revegetation patches. Favourable site factors for breeding birds were older sites, sites dominated by eucalypts, and the incorporation of remnant trees into revegetation patches. Favourable landscape factors for breeding birds included connection of sites by scattered paddock trees and good health of trees surrounding the patches. Despite woodland birds being able to initiate breeding in revegetation, insufficient data were collected to conclude whether these patches were acting as sources or sinks in the landscape.

Introduction

Most of the original vegetation cover of Australia's south-eastern temperate eucalypt woodlands has been cleared since European settlement, and what now remains is highly fragmented and often degraded (Barrett 2000, Reid 1999, Robinson and Traill 1996). The large scale at which this clearing has occurred has led to the extinction and decline of many species of native woodland flora and fauna.

While some bird species require large areas of continuous woodland to maintain a viable population, others do not and may be able to utilise small patches of natural or re-established vegetation within an agricultural mosaic (Wilson 2003, Fischer and Lindenmayer 2002, Grey *et al.* 1997, Barrett *et al.* 1994). There is little published information on how birds use revegetation in Australia (Ryan 1999, Hobbs 1993). Some studies (Ryan 1999) have shown that the species that do

inhabit revegetation tend to be generalist or aggressive species. One Australian study in particular, the Birdwatch project (Taws 2001), documented woodland birds, including declining species, occurring in revegetation in the ACT and the South-West Slopes region of NSW. Birdwatch was a joint project between the Canberra Ornithologists Group (COG), Greening Australia ACT & SE NSW (GA) and CSIRO. It was initiated to assess the value of revegetation as habitat for birds. This study built on Birdwatch and sought to determine whether woodland birds were using revegetation sites for breeding.

Methods

The fieldwork area extended from Boorowa and Gunning in NSW to the ACT (Figure 1). Twenty sites were selected from a pool of 132 Birdwatch sites. Criteria for selection included proximity to Canberra, total area of the site, vegetation age, site width, and the proximity of one site to another. Age was used for stratification, with the other variables controlled. Area constraints were set between 0.5 ha and 10 ha. As age was the stratifying variable, five age class levels were recognised (Table 1).

Field methods

Two main types of surveys were undertaken at each site, both of which were fixed-time area searches. A 20-minute 2-ha survey was used to assess the current bird community occupying or utilising the vegetation patches. Surveys were conducted on the mornings of October, November and December 2003 between 06:00 and 12:00 h AEDT.

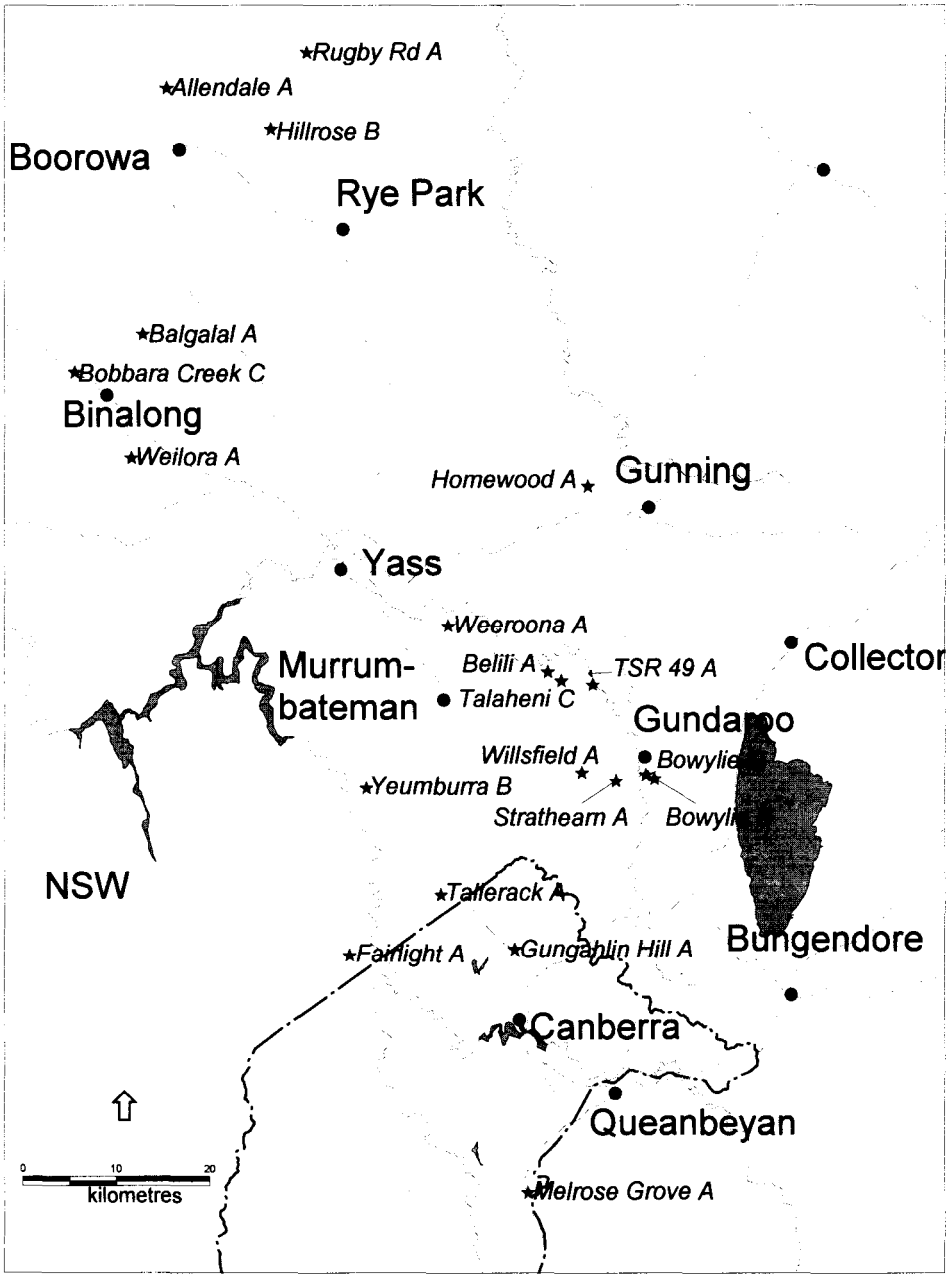
Breeding searches of 30 minutes were conducted over a 0.5 ha area at each site. Signs of a species attempting to breed included: courtship, mating, nest building, nest presence on or off site, eggs or young in the nest, fledged dependent young, activity around hollows, collection of nesting material, or carrying food. Systematic area searches for signs of breeding were conducted on three dates from October to December. Habitat information was recorded at each site, and habitat complexity scores (Catling and Burt 1995, Newsome and Catling 1979) were calculated for each site at the conclusion of the fieldwork using identical methodology to Birdwatch.

Table 1.

Site stratification according to age of revegetation.

Age Class	Age of Revegetation at 2001	Sites
1	1-4 years	Homewood Rugby Road Bowylie D Willsfield
2	5-7 years	Fairlight Weilora Streathearn Bobbara Creek
3	8-9 years	Balgalal Allendale Tallerack Weeroona
4	10 years	Yeumburra TSR 49 Hillrose Melrose Grove
5	Remnant (>20 years)	Gungahlin Hill Bowylie B Belili Talaheni

Figure 1. Location of breeding birds study sites.



Data

GenStat Release 7.1 (2004), a generalised linear modelling program, was used for carrying out regression modelling. For multivariate statistics, the PATN analysis package of Belbin (1995) was used to run ordinations, classifications, Mantel tests and Analyses of Similarity (ANOSIM: Clarke 1993). The level of significance used to determine whether any of the results were significant was $p<0.05$.

Results

A total of 111 bird species was recorded during the fieldwork, with 62 woodland species and 49 non-woodland species, adopting the classification of Reid (2000). Six of these were exotic species.

Forty-one species were detected attempting to breed in the general area of each patch. Breeding records from both Birdwatch and this study show that 44 species have attempted to breed in revegetation (Table 2). The species listed in italics were those that only used remnant trees within the revegetation for breeding. The majority of species on this list were small insectivorous species which were able to take advantage of the nesting opportunities provided by the young vegetation. Ten species were recorded as producing offspring in the revegetation.

It is encouraging that vulnerable and declining woodland species such as Diamond Firetail, White-winged Triller and Dusky Woodswallow not only utilised revegetation patches, but attempted to breed in them.

Table 2. Bird species attempting to breed in revegetation patches

Species	breeding records	offspring produced
Yellow-rumped Thornbill	17	
Superb Fairy-wren	12	yes
Grey Fantail	11	yes
Australian Magpie	6	yes
Yellow Thornbill	6	
Buff-rumped Thornbill	5	
Common Starling	4	
Eastern Rosella	4	
Crimson Rosella	3	
Brown Thornbil1	3	
Diamond Firetail	3	yes
Dusky Woodswallow	3	yes
Noisy Friarbird	3	
White-plumed Honeyeater	3	
Australian Raven	2	
Brown-headed Honeyeater	2	
Double-barred Finch	2	
Pallid Cuckoo	2	
Red-capped Robin	2	
Rufous Whistler	2	yes
Striated Pardalote	2	
White-eared Honeyeater	2	
White-winged Triller	2	
Willie Wagtail	2	yes
Black-faced Cuckoo-shrike	1	
Common Myna	1	
Crested Pigeon	1	
Diamond Dove	1	
European Goldfinch	1	
Golden-headed Cisticola	1	
Grey Butcherbird	1	
Grey Shrike-thrush	1	
Laughing Kookaburra	*1*	
Magpie-lark	1	
Mistletoebird	1	
Pied Currawong	1	
Red Wattlebird	1	
Rufous Songlark	1	
Southern Whiteface	1	yes
Striated Thornbill	1	
Weebill	1	
Western Gerygone	1	
White-browed Scrubwren	1	yes
White-winged Chough	1	yes

Discussion

This study has clearly demonstrated that a wide range of birds breed in revegetation including a surprising number of locally declining and threatened woodland species. Most records of breeding attempts were from within the revegetation, however the patch itself also influenced the nesting opportunities for birds adjacent to the patch. Birds attempting to breed outside the revegetation patch were observed using the patch for resources such as nesting material and food. This illustrates that even for birds not directly using the revegetation for breeding in, they are deriving benefits from the patch in order to breed successfully. That so many species were observed attempting to breed either in or using the revegetation indicates that revegetation is significant for local bird conservation.

Factors which improved the chances of birds breeding within the revegetation included the sites being older, being dominated by eucalypts as opposed to wattles, and the inclusion of remnant trees in the patch. A preference for older sites may reflect the woodland bird dependence on structures and resources that may improve and diversify as the patch matures. Breeding needs may be better met by eucalypts than wattles, with more nesting opportunities in the bark, limbs and leaves of the tree, and the provision of varied resources such as nectar, mistletoe, lerps, bark-hiding invertebrates, and the capability for hollow formation.

Landscape factors which allowed for better breeding included connection of patches by scattered paddock trees, and healthy trees surrounding the patch.

Source-sink theory

The breeding data was examined in light of the source-sink theory (Pulliam 1988). While results show that woodland birds do attempt to breed in revegetation, the issue of whether or not these birds are using the revegetation patches as sink or source habitat cannot be answered from the results of this study. More data and high-quality data are needed. Detailed single-species studies may be required to better determine this.

Conclusion

This study has shown that for breeding birds using revegetation patches, the vegetation around the patch can enhance the patch itself. The patch, in turn, can enhance the surrounding vegetation's ability to provide breeding habitat for birds by offering resources and a refuge habitat. The results from Birdwatch and this study are extremely positive, as they clearly demonstrate that woodland birds are indeed capable of breeding in small patches of revegetation. That declining and threatened woodland birds were also observed breeding within these patches is particularly encouraging. Revegetation patches represent, for some species at least, suitable breeding habitat, and can potentially contribute to at least halting the decline in woodland birds in agricultural landscapes in south-eastern Australia.

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References

Barrett GW, Ford HA, and Recher HF (1994). Conservation of woodland birds in a fragmented rural landscape. *Pacific Conservation Biology 1:* 245-256.

Barrett GW (2000). Birds on Farms: Ecological Management for Agricultural Sustainability. *Wingspan* 10(4): Supplement.

Belbin L (1995). *PATN Pattern Analysis Package.* Technical Reference. CS1RO Wildlife and Ecology, Canberra.

Catling PC and Burt RJ (1995). Studies of the ground-dwelling mammals of eucalypt forests in south-eastern New South Wales: the effect of habitat variables on distribution and abundance. *Wildlife Research* 22: 271-288.

Clarke KR (1993). Non-parametric multivariate analyses of changes in community structure. *Australian Journal of Ecology* 18: 117-143.

Fischer J and Lindenmayer DB (2002). Small patches can be valuable for biodiversity conservation: two case studies on birds in southeastern Australia. *Biological Conservation* 106: 129-136.

GenStat (2004). *GenStat Release 7.1.* VSN International, Hemel Hempstead, UK.

Grey MJ, Clarke MF, and Loyn RH (1997). Initial changes in the avian communities of remnant eucalypt woodlands following a reduction in the abundance of noisy miners, *Manorina melanocephala*. *Wildlife Research* 24: 631-648.

Hobbs **RI** (1993). Can revegetation assist in the conservation of biodiversity in agricultural areas? *Pacific Conservation Biology 1:* 29-38.

Newsome AE and Catling PC (1979). Habitat preferences of mammals inhabiting the heathlands of warm, temperate coastal, montane and alpine regions of southeastern Australia. In *Ecosystems of the World - Heathlands and Shrublands of the World.* Specht RL Elsevier Scientific Publishing Company. 9A, Amsterdam.

Pulliam HR (1988). Sources, sinks, and population regulation. *The American Naturalist* 132: 652-661.

Reid JRW (1999). *Threatened and Declining Birds in the New South Wales Sheep-Wheat Belt: 1. Diagnosis, Characteristics and Management.* CS1RO Wildlife and Ecology, Canberra.

Reid JRW (2000). *Threatened and declining birds in the New South Wales Sheep-Wheat Belt:H. Landscape relationships - modelling bird atlas data against vegetation cover.* CS1RO Wildlife and Ecology, Canberra.

Robinson D and Traill BJ (1996). *Conserving Woodland Birds in the Sheep and Wheat Belts of Southern Australia,* RAOU Conservation Statement No. 10.

Ryan PA (1999). The use of revegetated areas by vertebrate fauna in Australia: a review. In *Temperate Eucalypt Woodlands in Australia: Biology, Conservation, Management and Restoration.* Hobbs **RJ** and Yates CJ Surrey Beatty and Sons, Chipping Norton.

Taws N (2001). *Bringing birds back: a glovebox guide for bird identification and habitat restoration in ACT and SE NSW.* Greening Australia, Canberra.

Wilson CEV (2003). *Remnant woodland condition and its influence on woodland bird species richness and community composition.* Honours thesis for SRES, Australian National University, Canberra.

A SUPERB SUMMER: AN INFLUX OF SUPERB PARROTS INTO BELCONNEN IN 2005-06

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Abstract
Unprecedented numbers of Superb Parrots, including many dependent young were present in the southern Belconnen suburbs over the summer of 2005-06. The many sightings are chronicled here, together with a discussion of the possible reasons and significance of this influx.

Overview

The summer of 2005-06 saw "the largest Superb Parrot aggregation ever recorded" (Ian Fraser) in Canberra, as well as a concentration of the birds in the southern suburbs of Belconnen for the first time. In previous years, 30-40 Superb Parrots *Polytelis swainsonii* have been reported from the northwest suburbs of Belconnen, with most on Mt Rogers in Fraser, although some have travelled as far east as Kaleen. First reports are generally in early to mid-December. 2005 was no exception, with the first report from Mt Rogers on December 7 (Blemings). On Christmas Day, the birds were observed feeding on *Acacia pravissima* pods; others were seen in *A baileyana*, and eucalypts (Blemings).

Sightings in the summer of 2005-06

One of the first indications that this was to be an exceptional season was when small groups including dependent young were recorded on the Woodland Survey at Goorooyaroo Nature Reserve in December (Taws). In previous years, only one or two birds have been recorded at this time.

A pair of Superb Parrots was reported flying near the Hawker shops on December 6 (Mahoney) and four flying over Holt a fortnight later (Davey). The most southerly sighting was of four birds flying over the Kama Woodland Survey site between William Hovell Drive and the Molonglo River, on December 19 (Davey). Three birds were seen in a Spotted Gum *Eucalyptus maculata* on December 30 and 31 in the southern part of Hawker (Mahoney). In the last week of December 2005, two adults and three dependent young were reported in a garden in Giralang, and New Year's Day 2006 saw 18 reported in Page (Allan). On the morning of January 3, there were three reports: eight birds in Page at 06:30 h (Allan), ten in Oatley Court, in Belconnen Town Centre at 08:15 h (Mahoney) and a pair in Scullin at 10:50 h (Overs). That afternoon, an adult pair and two begging young were sighted in Wybalena Grove, Cook (Taws). Eight birds alighted in a gum in Page at 11:30 h on January 4; the group included at least two young, one of which was fed by an adult male. At 20:00 h that day, 11 birds flew over Page, heading northwest (Allan). Single birds

were recorded in the Belconnen Town Centre area on January 4 and 5, and three were seen flying over the Coulter Drive/Belconnen Way intersection on the evening of January 5 (Mahoney).

The first report of Superb Parrots in the grounds of Macquarie Primary School was on January 5, when about 50 were seen feeding on the ground in a patch of degraded stubble and dust. Closer investigation showed this to be a heavy infestation of Cluster Clover that had died down, leaving a lot of seeds in the heads (Edwards). Three days later, a group of five birds, including one male feeding a begging juvenile, was reported from a tree adjoining Macquarie Oval (Edwards).

It appeared that the birds were flying between Macquarie and the Belconnen Town Centre with reports from the Belconnen Markets on the following days: seven on January 6 (Overs), at least 32 the following day (Milburn), 15-20 on January 8 heading towards Macquarie (Fennell) and, on the following afternoon, a group of five or six was seen in eucalypts at the Belconnen Markets carpark, with the male working its way along the leaves, probably feeding on psyllids (Brannan). On the same day, I was alerted to eight chattering birds in a very large old eucalypt in Clint Place, Macquarie. Several small groups were sighted going in all directions over the Macquarie shops on the morning of January 10 (Overs).

A close inspection of the school grounds and oval on January 12 revealed 84 Superb Parrots, most of which were feeding on the ground. I walked across the oval in a northerly direction and found another 16 birds within about 200 m of the northern edge of the oval; these flew towards the oval. I continued to the Belconnen Markets, where I found ten more birds in the eucalypts. They too flew off towards Macquarie. I located another six in the tops of eucalypts in Nettlefold Street, several hundred metres west of the Markets. I am reasonably satisfied that I saw 116 different birds on my walk.

The following evening at 20:00 h, Barbara Allan and I visited Macquarie Oval again and found large numbers of Superb Parrots roosting for the night. The next morning, Alastair Smith and I observed about 40 birds on the ground and at least another 40 in the trees. The birds were very flighty, perhaps due to the presence of a Common Koel *Eudynamys scolopacea* and a couple of Sulphur-crested Cockatoos *Cacatua galerita* which persisted in swooping the Superb Parrots which had settled on the ground. Later that day, small numbers of birds were observed feeding on the grass seeds or gleaning lerps off eucalypt leaves (Bagley).

The birds were not confined to Macquarie and the Belconnen Town Centre though. Small groups of birds were being seen several times a day in Scullin around this time (Overs). There were sightings of a group of ten, which were joined by single birds arriving from the north, in the eucalypts in the Cook Horse Paddocks on January 14. Some headed south along a line of eucalypts towards William Hovell Drive. On January 15, one adult male and

about 14 adult females were observed feeding on mown wild oats near the Cook Horse Pound, while eight to ten juveniles waited to be fed in the nearby eucalypts. More females and young were seen fossicking in young eucalypts and an acacia in the area. Forty birds were seen flying over Wybalena Grove, Cook, on January 17 (Brookfield).

The birds were still finding food in the eucalypts in the Department of Immigration and Multicultural Affairs (DIMA) carpark in the Belconnen Town Centre with a report on January 17 of "at least 100 there all day every day this week" (Fennell). The following day, six birds were observed near Macquarie Oval, with five of them feeding on silver birch seeds in an adjacent backyard. The lone male fed a begging juvenile (Mackay). About 50 birds were reported in the DIMA carpark on January 20. The feeding behaviour of the males was described as follows: "before commencing feeding, and a couple of times during feeding, the parent bird moved its head in a jerking, roughly circular motion for about 10 seconds, before regurgitating" to the juvenile (Layton).

At least 100 birds were still in the DIMA carparks on January 22, with 30 in one tree, feeding exclusively on psyllids. Red Box *Eucalyptus polyanthemos* in particular, had heavy infestations, with many small lerp scales. This made it difficult for the juveniles which were "doing learning-feeding" and they needed to be "frequently topped-up by the adults" (Dabb). Early on the same day, about seven birds were seen in Flynn, and soon after at least four were seen on the northern slopes of Mt Rogers (Blemings).

Be alert, not alarmed

Watching and attempting to photograph Superb Parrots is not without risk. On January 19, Geoffrey Dabb set out to photograph the Superb Parrots in Belconnen Town Centre. He found a few birds in the DIMA carpark and small groups of five to eight flying into trees in the vicinity of the markets; about 40 birds in total. By mid-morning the majority of the birds had settled in the eucalypts in the fenced carpark behind the Winchester Police Centre. Unbeknownst to Geoffrey, concerned citizens had reported a man with binoculars and camera lurking in the area, so when he entered the Police Centre to request permission to access the carpark, "a couple of uniformed persons burst into the foyer" in pursuit of him. Needless to say, access to the carpark was declined, so he beat a hasty retreat to Macquarie Oval where about 20 birds were feeding on the ground and using the large exotic trees for cover when disturbed.

Late departure

In past years, Superb Parrots have left Canberra by late January, but in 2006 small numbers remained in February. One flew over Catchpole Street, Macquarie on the afternoon of February 10. At 19:45 h that evening, I found two males and a female which appeared to be settling for the night in a tree in the grounds of Macquarie Primary School. A search of

the remainder of the school grounds and the oval failed to find any other Superb Parrots.

Why such an influx?

It was difficult to get a clear indication of the proportion of males to females and juveniles. Alastair Smith and **I** estimated a ratio of about 2:5:3 from a group of 40 on January 13, although another 40 or more birds in the surrounding trees were too difficult to observe closely. Given that juveniles had been observed in Cook waiting in the trees to be fed while the adults fed on the ground, it is possible that most of the Macquarie birds in the trees were juveniles. Two days later in Macquarie, Michael Lenz estimated that there were two to four juveniles approaching every adult male or female in a group of about 35 birds. Paul Fennell reported that the birds in the DIMA carpark that week were "in groups of two adults and three offspring." Chris Davey has suggested that there are two possible explanations for the large numbers of juveniles: "a highly productive breeding season last year" ...due to an abundance of food in the breeding areas during the breeding season, and "a better than usual over-wintering success". He postulated that the 'normal' number of adults may have been in Canberra in December and January, but the total number of birds is greater because of the large numbers of juveniles.

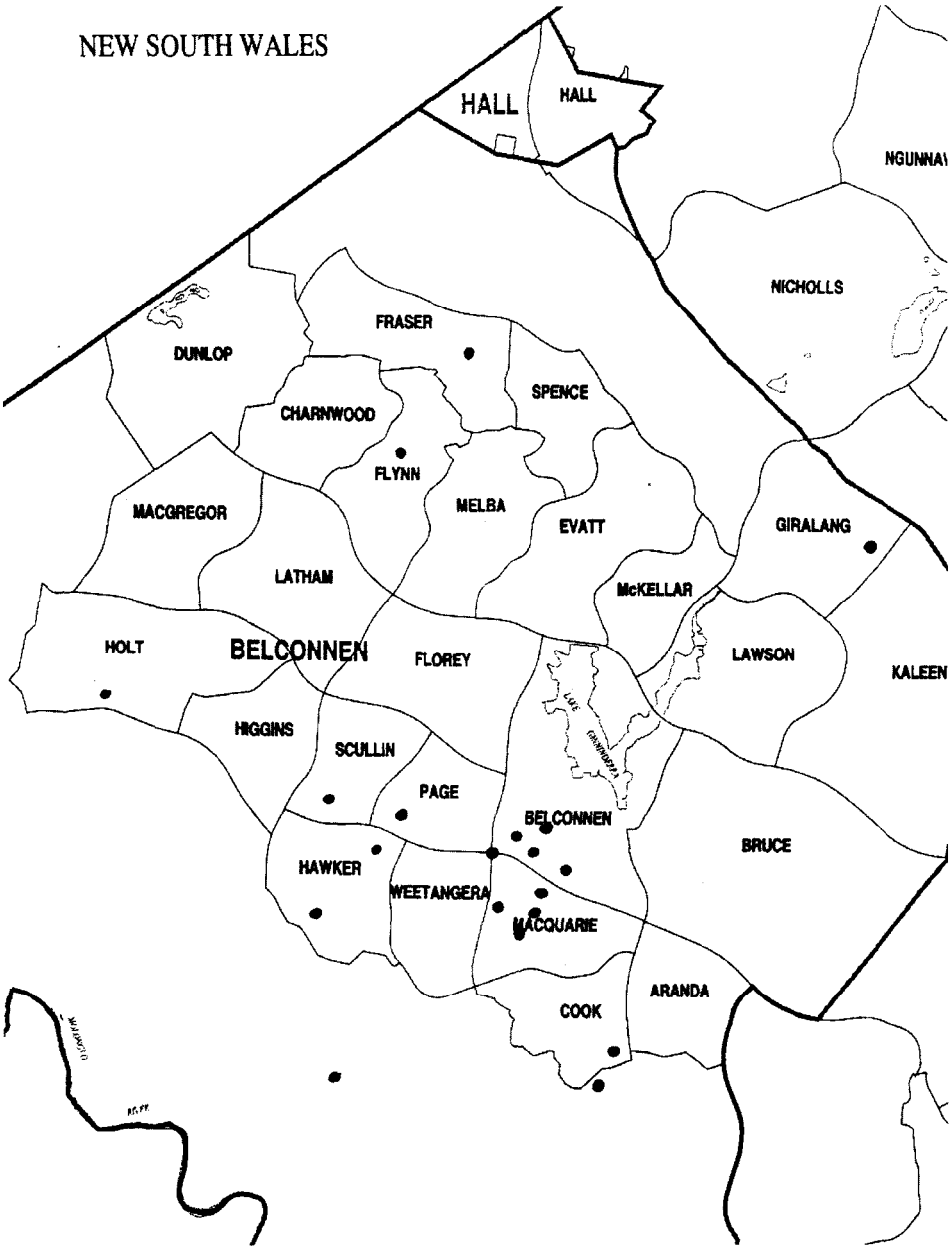
Anthony Overs took a different view: breeding success in 2005 was similar to the previous few years and two to four juveniles were typical. He and Chris Davey concurred that limited post breeding food supplies to the west forced the birds to travel further in search of sufficient food. Anthony noted that the recent dry conditions had caused less "seed setting in some grasses normally used as food resource" for the Superb Parrots which breed in the Wallaroo Road/Captain Hill/Gundaroo area to the north of Belconnen, forcing the birds further afield.

The Superb Parrots which visited Canberra last summer were observed feeding on psyllids on eucalypt leaves, acacia seed pods, cluster clover seeds and silver birch seeds. Chris Davey has suggested that, having discovered a "bounty of food" on the periodically managed ovals of southern Belconnen (as well as in the trees in Belconnen Town Centre), Superb Parrots may now "routinely return to their 'newly discovered' post breeding feeding areas and this will occur irrespective of the breeding season". Perhaps the summer of 2006-07 will be another superb summer.

Acknowledgments

My thanks to the following for their reports of Superb Parrot sightings and their insights into possible reasons for last summer's influx: Paul Mahoney, Rosemary Blemings, Geoffrey Dabb, Barbara Allan, Anthony Overs, Nicki Taws, Peter Milburn, Muriel Edwards, Shaun Bagley, Muriel Brookfield, Ian Fraser, Michael Lenz, Chris Hudson, Chris Davey, Rod Mackay, Paul Fennell and John Layton.

Figure 1. Location of Superb Parrot sightings December 2005 to February 2006



A WHITE-BROWED BABBLER IN THE ACT

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Abstract

This paper describes the discovery in February 2006 of a White-browed Babbler in a regenerating woodland site in suburban Canberra, the first known record of the species in the ACT in half a century.

On the evening of 21 February 2006 I had a visit from a birdwatching neighbour, David Baxter. One of David's regular birdwatching haunts is Aranda-Black Mountain, and he came to me with the news that he had seen a White-browed Babbler *Pomatostomus superciliosus* in Aranda. The description he gave was so accurate, even to the point that he'd found it at a roost nest, that I could not think of anything else it could be. I pressed him for precise details of the location and went out first thing next morning.

I only had one hour to search for the bird. After 50 minutes without success I was just heading for home when I stopped to watch a large feeding flock of ground-foraging birds including Superb Fairy-wrens *Malurus cyaneus*, Speckled Warblers *Chthonicola sagittata* and Yellow-rumped Thornbills *Acanthiza chrysorrhoa*. Then on a patch of bare earth a different shape and movement caught my eye and there was the White-browed Babbler. I followed as it fluttered and hopped for 100 metres, giving occasional chatterings and alarm calls. It stopped at one point to scratch in the dirt then it picked up a piece of dead grass and flew in to a Hawthorn *Crataegus monogyna* bush where it had constructed a roost nest. It poked the piece of grass into the nest and then spent ten minutes hopping in and out of the nest, poking and prodding.

I left after this, and returned two days later in the afternoon but was unable to find the bird. I returned on 11 March, thinking that it had probably moved on, but located it by its call coming from deep in a tea-tree thicket. The bird was seen again in the same area by myself and several other observers in April, June and August 2006. It was usually located by its distinctive calls, including drawn-out whistles and chattering, and was often found in association with a mixed feeding flock, particularly of ground-foraging species such as Superb Fairy-wrens and Speckled Warblers. It was usually fairly shy when approached, flying for cover or watching from a distance on an exposed perch close to thick bush. Only the one roost nest was found, and in winter this became quite exposed as the deciduous Hawthorn bush shed its leaves. How long the babbler was present here before February is unknown.

The vegetation of the area is a regenerating woodland of Blakely's Redgum *Eucalyptus blakelyi*, Apple Box *E. bridgesiana* and Yellow Box *E. melliodora*. There are few mature trees

but many patches of dense young redgum, thickets of tea-tree *Leptospermum* sp. and *Bursaria spinosa*, and introduced shrubs such as Hawthorn and *Cotoneaster* sp., all providing good cover for the White-browed Babbler. The ground cover is a mixture of perennial native grasses such as Red Grass *Bothriochloa macra* and Wallaby Grasses *Austrodanthonia* spp., and introduced annual grasses and fortis.

The subspecies of White-browed Babbler in this region, *gilgandra*, occurs in northern Victoria, south-east Queensland and most of NSW. This record is from the south-eastern edge of the species' documented range, but is of particular significance as there are no known records of the White-browed Babbler in the ACT since the 1950s, and it is now considered extinct here (Wilson 1999).

Pre-1950s the species was considered to be "occasional" in the ACT (Matthews 1943, Lamm and White 1950). John Calaby in the early 1950s wrote of the White-browed Babbler, "Rare. Seen a few times on the road behind Mt Stromlo and the back road to Yass.... No nesting records." (Calaby 2000). And Harry Frith, probably referring to this same group wrote, "until at least 1950 a group existed near Mount Stromlo ... perhaps the remnant of an earlier invasion" (Frith 1969).

Only the one individual has been found which is very unusual for a species that normally lives in groups of 3-15. The next nearest record of the White-browed Babbler, both in time and distance, was that of a single bird in January 2001, seen near the Yass River, 13 km north-west of Gundaroo, and 40 km to the north of the Aranda area (Taws 2001). This bird was found in a ten year old tree planting, and itself was more than 20 km south of the next nearest known group of White-browed Babblers, near Dalton.

White-browed Babblers are widely considered to be sedentary, although some possible nomadic movements after nesting are described from around Inverell, in northern NSW (Baldwin 1975). However, detailed studies including banding studies show that individuals do not usually move long distances. Banding records from the ABBBS show that of 2275 recoveries between July 1984-August 2001, 99.9% of birds moved less than 10 km from the banding site; only three individuals were recovered between 10-50 km (Higgins and Peter 2002). Birds banded as fledglings in two Western Australian studies were recaptured usually only a few hundred metres from the banding site, while the longest movement recorded was 4.76 km (Higgins and Peter 2002).

Females are more likely to disperse further than males to join new groups outside their natal territory (Cale 1999); however as male and female plumages are similar, the sex of the Aranda individual is not known. White-browed Babblers are dependent on remnant vegetation with good shrub structure for foraging and breeding (Cale 1999), although they have been found foraging in revegetation which had good shrub structure (Taws 2001). They rarely use open farmland (pasture or crops) except for occasional foraging within 20 m of remnant vegetation (Lynch et al. 1995).

The appearance in bushland close to the edge of suburbia of a single bird of a species with strong social tendencies, limited dispersal tendencies, and a need for well-structured native vegetation cover is extremely unusual. It strongly parallels the appearance of a single Grey-crowned Babbler *Pomatostomus temporalis* on the golf course at Duntroon, 9 km to the south-east of Aranda (Overs 2004). The Grey-crowned Babbler also used to occur in the ACT but has not been sighted since about 1970 (M. Clayton pers. comm.) and the nearest known current group occurs between Yass and Boorowa, about 80 km to the north-west of Duntroon (pers. obs.). The Grey-crowned Babbler has been seen at Duntroon for nearly two years now. It is possible that the White-browed Babbler might stay in the Aranda area for a long time as well, as the habitat appears suitable for it to survive. Sadly though, it is unlikely to see another one of its kind if it remains where it is.

References

Baldwin M (1975). Birds of Inverell District, NSW. *Emu 75:* 113-120.

Calaby JH (2000). List of Birds of the ACT (compiled in the early 1950s with brief annotations). *Canberra Bird Notes 25: 1-*22.

Cale PG (1999). The spatial dynamics of the White-browed Babbler in a fragmented agricultural landscape. PhD Thesis University of New England, NSW.

Frith HJ, ed. (1969). *Birds in the Australian High Country.* AH and AW Reed, Sydney.

Higgins PJ and Peter JM, eds. (2002). *Handbook of Australian, New Zealand and Antarctic Birds. Vol 6: Pardalotes to shrike-thrushes.* Oxford University Press, Melbourne: 885.

Lamm DW and White D (1950). The changing status of avifauna in the Australian Capital Territory. *Emu 49:* 199-204.

Lynch JF, Carmen WJ, Saunders DA and Cale P (1995). Use of vegetated road verges and habitat patches by four bird species in the central wheatbelt of Western Australia. In Saunders DA, Craig JL and Mattiske EM (eds) *Nature Conservation : the role of networks.* Surrey Beatty and Sons, Chipping Norton, NSW: 34-42.

Matthews GM (1943). *List of Birds of the Australian Capital Territory. Leaflet No.* 53. Commonwealth Forestry Bureau, Canberra.

Overs A (2004). A Grey-crowned Babbler in Canberra. *Canberra Bird Notes 29:* 149-150.

Taws N (2001). Recent sightings of the White-browed Babbler in the ACT region. *Canberra Bird Notes* 26: 43-45.

Wilson SJ (1999). *Birds of the ACT — Two centuries of change.* Canberra Ornithologists Group.

ACQUISITION OF A LIFETIME: THE DUCIE COLLECTION - NEWLY PURCHASED PAINTINGS FROM THE FIRST FLEET

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Abstract

This paper describes the discovery in Gloucestershire, England, of First Fleet natural history paintings by George Raper, their subsequent authentication and purchase by the National Library of Australia.

In late 2005 the National Library of Australia purchased the Ducie Collection which contains 56 rare and exquisite First Fleet watercolours. Drawn with loving care, in many cases the paintings are the first visual record of certain Australian plant and animal species by the hand of a European artist. Attributed to George Raper, a midshipman on the *Sirius*, they show the birds and flowers of the Port Jackson area as he would have seen them between 1788 and 1790.

The paintings in the Ducie collection reflect the awe and wonder of the sailors of the First Fleet as they encountered Australian birds and plants for the first time. The species depicted include the Crimson Rosella *Platycercus elegans,* the Swift Parrot *Lathamus discolor,* a Laughing Kookaburra *Dacelo novaeguineae* and a Superb Fairy-wren *Malurus cyaneus.* The artist is clearly fascinated by the brightness of the birds' plumage and the cheekiness of the parrots. To capture the sheen on the feathers of the Brush Bronzewing *Phaps elegans,* Raper, alone of all the First Fleet artists, uses a glittering bronze paint. The flower paintings include a waratah, fringed lily, swamp lily, boronia, crowea and dendrobium. The waratah has the confronting shape of a plant from another world.

The paintings were discovered in 2004, at Tortworth Manor, Gloucestershire, in the Cotswolds, during a routine valuation of the estate of Basil Moreton, sixth Earl of Ducie, by the firm Dreweatt Neate. The works had been passed down through generations of the Moreton family. Unsigned and undated, their significance had remained unrecognised. The consequent lack of handling and display has left their colours in an astonishingly vibrant state.

The National Library began negotiations to buy the paintings in January 2005, after an approach from representatives of David Moreton, seventh Earl of Ducie, and the Moreton family. The family had elected to seek an Australian institutional buyer rather than to sell the paintings by auction, a course of action which would have almost certainly seen the paintings dispersed among institutions and private collectors.

The Earls of Ducie have had a long connection with Australia. The fourth Earl, Berkeley Basil Moreton, was a well-known Queensland pastoralist and member of the Legislative Assembly before inheriting the title in 1922. A branch of the family remained in Australia, and the sixth Earl, Basil Howard Moreton, moved to England

from his Hervey Bay cane farm to take up the title after his uncle's death in 1952. Two of his four children were born in Queensland and grew up in the imposing 17th century rectory on the Tortworth Estate to the sound of Australian accents and the scent of baking lamingtons, unaware of the undiscovered link to Australia that was waiting in their barn.

George Raper was born in 1769 and entered the Royal Navy at the age of 13. He sailed with Commodore Arthur Phillip and Captain Hunter in the *Sirius*, flagship of the First Fleet, in 1787 and was promoted to midshipman during the voyage. When Raper arrived in Port Jackson in January 1788 he was just 18. He spent three periods at Port Jackson: from January to October 1788, from May 1789 to March 1790, and briefly from late February to March 1791. It is likely that the paintings in the Ducie collection date from the period June to November 1789, when the *Sirius* was isolated at Careening Cove (now Mosman Bay) for repairs. The floral species in this collection are all spring-flowering. The migratory birds such as the Channel-billed Cuckoo *Scythrops novaehollandiae* provide another clue that supports dating the works to a June to November period.

To establish the authenticity of the paintings and their attribution to Raper, National Library conservators and curatorial staff examined them at first hand in April. An analysis of the watermarks in the paper confirmed a probable date in the First Fleet period. The paintings were also compared with watercolours by Raper held by the National Library of New Zealand and the Natural History Museum in London, some of which bear Raper's signature. In one of the signed watercolours at the National Library of New Zealand, the tell-tale metallic paint appears. There are also a number of similarities in style among the Raper paintings held at the National Library of New Zealand, the Natural History Museum, and the Ducie collection. These likenesses include the addition of flowers or parts of plants to the bird watercolours, often in a composition that places a flower vertically beside the bird, in a disembodied perspective. The unbroken provenance of the paintings through the generations of the Moreton family, and the fact that they were discovered with other documents dating from the 1770s, further confirm their authenticity.

Digital copies of all the paintings in the Ducie Collection can be seen online; go to the Library's Pictures Catalogue at www.nla.gov.au/catalogue/pictures and enter the search terms 'ducie collection'.

COG thanks the National Library of Australia, and in particular Linda and her staff, for the opportunity to inspect the Ducie collection in July of this year.

WHITE-FRONTED CHATS: A BREEDING ATTEMPT IN THE ACT

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Abstract

White-fronted Chats have become scarce in the ACT over recent decades and it is now eighteen years since they were last recorded breeding here. A pair of chats, first noted on 23 July 2006, remained at a site at the junction of Uriarra and Coppins Crossing Roads until late August despite the area appearing to be unlikely habitat for this species. The discovery of a nest with two nestlings on 27 August explained the chats' continued presence at the site if not its choice. Sadly, the breeding attempt was unsuccessful due to unwitting human interference.

Observations

On Sunday 23 July 2006, a pair of White-fronted Chats *Epthianura albifrons* was observed by a group of COG members (Lindner 2006) on an excursion to the Molonglo Valley west of Canberra. The sighting of this species anywhere in the ACT is noteworthy these days, and this sighting was particularly remarkable as the habitat, dry open paddocks, is not typical for this species in the region (see below).

Notification of the sighting on the *CanberraBirds* email news list triggered a spate of visitations by local birdwatchers over the next days and weeks. I first saw the pair with my son James on the morning of Wednesday 26 July, and made a small effort to monitor the birds' presence after the initial rash of interest had died down, recording the birds again on 13 and 27 August. On all visits I was able to detect the birds within about five minutes. This seemed to be typical for other observers as well, although the birds were unable to be located on some occasions.

Habitat and behaviour

The site, at the junction of Uriarra Road and Coppins Crossing Road, is 10 km to the WSW of Canberra City, and comprises mainly open paddocks in rolling country at the eastern base of Mt Stromlo. The area immediately to the south and west used to be dominated by the Mt Stromlo Pine Forest before the 2003 bushfires.

At the time, conditions were dry and grass in the paddocks was low, and there was earthwork activity to the west with the development of the new `Deek's Park'. A patch of rank vegetation, about a hectare in extent and adjacent to Uriarra Road immediately to the south-west of the intersection, was dominated by exotic weeds and regrowth including pine saplings, briars, blackberry, wattles, cassinia, great mullein and various tall, mostly dry grasses. The overall height of this vegetation ranged between one and two metres, with emergent old dried mullein stalks being prominent.

The chats were most commonly seen either within this patch of rank vegetation, in the paddock across the road in the south-east angle of the intersection, or on the fence wires on either side of Uriarra Road bisecting these two locations. On occasions the birds were seen to fly off about 500 m to the east to the vicinity of a small farm dam, the only obvious source of water in the area.

The chats were wary of observers, and I most often saw them vigilantly perched on fence wires or various shrubs. Patience, particularly if watching from within the car, was repaid by the chats returning to foraging, usually amongst the short dry grass of the paddock or along the roadside verges.

The breeding attempt

On Sunday 27 August, on my way out to Uriarra Crossing, I stopped to check on the chats. The two birds were located quickly and I noticed, after checking some not very successful digital photographs a little later, that the male was carrying something in its bill. By the time I returned from Uriarra Crossing my suspicions, initially doubtful, were stronger, and **I** determined to stake out the chats until **I** was convinced that the pair was either breeding or not.

Almost immediately I saw the male with what looked like a small caterpillar in its bill. Over the next half hour or so **I** watched both the male and female return several times to the patch of rank vegetation with grubs or caterpillars, though I was not able to discern exactly where they were taking them.

At this point I left the anonymity of the car and made my way into the rank vegetation to a point where I felt I would have a better chance following the chats' movements. They were, however, very cagey, and after nearly an hour of observation and several apparently deliberate diversionary tactics on the chats' part, **I** eventually located the nest in the base of a cassinia shrub. The nest and its location were both typical for the species (Beruldsen 2003, Higgins et al. 2001), being a neatly constructed bowl of fine twigs and coarse grasses well concealed on this occasion in the upright lower branches of the cassinia, about a quarter the way up the bush and 30 cm above the ground. The nest contained two half-grown nestlings.

This breeding attempt is fairly early, but well within the normal breeding season for this species of July to December. Working backwards, and assuming the nestlings were about 7-8 days old based on information in *HANZAB* (Higgins et al. 2001), the eggs were probably laid in the first week of August, about two weeks after the adult birds were first seen.

Very sadly, the patch of rank vegetation was completely slashed sometime during the following week, presumably as a necessary fuel reduction exercise in preparation for the coming bushfire season. The loss of the nest and nestlings was regrettable and, personally, a little distressing. The adult birds were not seen again either by myself or anyone else.

Status and significance

The White-fronted Chat is listed as a rare breeding resident in the ACT (Wilson 1999) but is somewhat more common to the north-east. Of the 433 records of the species in the COG database, 82% are from NSW, and 93% of these are from the area around Lake George, Bungendore and Lake Bathurst. Other NSW records come particularly from around Googong Dam to the east, Angle Crossing and Bredbo to the south, and Yass River valley to the north.

ACT records have mostly come for around the main lakes, especially Lake Ginninderra and Lake Tuggeranong in the mid- to late 1980s. Other locations include Lake Burley Griffin, Uriarra Crossing and Uriarra homestead, Naas River, and Molonglo Gorge. The most recent records were from Black Mountain Peninsula and Tharwa Sandwash in 2003.

Indications of breeding have been noted in nine of the past 26 years, mostly from around Lake Bathurst, but also from Lake Ginninderra in 1986 and Lake Tuggeranong and Stranger Pond in 1988. At least 30 chats were observed at Emu Bank (Lake Ginninderra) in 1986 of which at least half were juveniles (B Allan, pers. comm.). The database records include dependent young in September, November and December. In the vicinity of Lake Tuggeranong in 1988, chats were recorded carrying food in August and dependent young were recorded in October.

The breeding attempt at Uriarra Road/Coppins Crossing road was the first known breeding attempt since then, so it is particularly disappointing that it was unsuccessful.

Table 1. Number of records of White-fronted Chats in the COG database for 1980-2005.

YEAR	ACT	NSW	TOTAL
1980	1	1	2
1981	1	1	2
1982	0	7	7
1983	0	5 dy	5
1984	1	21 ny	22
1985	3	35	38
1986	13 dy	18	31
1987	8	16 dy	24
1988	28 cf,dy	13	41
1989	10	21	31
1990	2	26 cf	28
1991	2	16	18
1992	1	19	20
1993	0	26 dy	26
1994	0	32	32
1995	1	21 cf	22
1996	0	19	19
1997	2	4	6
1998	0	8	8
1999	0	2	2
2000	0	10	10
2001	0	12	12
2002	0	4	4
2003	3	9 cf	12
2004	0	9	9
2005	0	2	2
total	76	357	433

References

Beruldsen G (2003). *Australian Birds: their nests and eggs.* G Beruldsen, Brisbane.

Higgins PJ, Peter JM and Steele WK (2001). *Hand book of Australian, New Zealand and Antarctic Birds. Volume 5: Tyrant-flycatchers to Chats.* Oxford University Press, Melbourne.

Lindner J (2006). Molonglo Valley Minibus Ecotour — Sunday 23 July. *Gang-gang* August 2006: 3.

Wilson S (1999). *Birds of the ACT: two centuries of change.* Canberra Ornithologists Group, Canberra.

The pair of White-fronted Chat nestlings in the nest (photo: Harvey Perkins)

ODD OBS

Mass migration of honeyeaters: their speed and longevity

On 4 September 2006 I checked out the Upper Shoalhaven route where I had first discovered a concentrated inward spring migration of honeyeaters (Brookfield 2000). It was on again! I counted 5500 honeyeaters in one hour, between 11:00 h and 12:00 h; they were flying west, zigging and zagging at tree-top level along the Jerrabattgulla Road on exactly the same route as before. There were more down in the valley, and more flying along the ridge top among the trees on Harts Road.

This time the composition of the flocks was different, with a ratio of 4:1; 4 Yellow-faced Honeyeaters *Lichenostomus chrysops* to each White-naped Honeyeater *Melithreptus lunatus.* There were also a few Red Wattlebirds *Anthochaera carunculata,* but mainly singles, twos and threes, none of the flocks of 25 that **I** had seen in the past; and a couple of White-eared Honeyeaters *Lichenostomus leucotis*. The mixed flocks were mainly larger than before, up to 300 at a time, and were in a hurry. We later paced them in the car, and reckoned they were going 20-30 kph.

They paused when they reached the staging point on Jerrabattgulla Creek (locally known as the Gully), near the Warragandra homestead, where they assembled in the bare poplars and willows at the bottom of the hill, and built up numbers before tackling the open space that confronts them before reaching Tallaganda State Forest to the west. Groups of 300 or so would burst out and whirl up, some quite high, and then would swoop back to the bare trees. This could be repeated two or three times, by which time more honeyeaters would have arrived, and then a large number would make the dash.

It is a great phenomenon to experience, as you can stand right next to the trees, and have the honeyeaters whirl over your head. Their undersides often look silver in the sunshine. And your binoculars are filled with disappearing dots. It was much more impressive than the Murrumbidgee autumn outward migration this year.

The coordinates for the location of the first sighting are 35° 40'10" S and 149° 36'25" E, and can be found on the Kain 1:25,000 and Araluen 1:100,000 maps.

As I cogitated about the possible total of migrating honeyeaters, and attrition en route, an obvious question was how far this particular stream had already travelled, and how much further they were going. There are still no answers to this, but there are a few pointers on longevity in *HANZAB* (Higgins et al. 2001).

The three main species mentioned above may live to 12+ years, which would mean that they could make 24 trips in a lifetime, presuming that they return each year. The juveniles that survive would have plenty of time for local navigational detail to be imprinted on their initial mental magnetic compass map (Brookfield 2002), which could explain the backtracking of small groups.

The total distance travelled in one migration is another question with somee some astonishing distances recorded for a few birds. The majority of recoveries for the three species are within 10 km of the banding site, but I do not know the age range of these birds when they were recovered.

For the ACT, there are at least two long-distance records of Yellow-faced Honeyeaters recovered after more than one year. The first bird was banded at Point Hut and was recovered three years later at Kurrajong, NSW, a distance of 240 km. The second covered 745 km between Point Hut and Grafton, NSW, in 45 months (Higgins et al. 2001). By what stages, and whether due to disorientation or unusual nomadism, is not known. There are few records of recovery of White-naped Honeyeaters at any great distance, and for the larger Red Wattlebirds there is even less information. There are many unsolved mysteries, and changing climate will doubtless present others.

References

Brookfield M (2000). Spring migration of honeyeaters. *Canberra Bird Notes 25:* 113-114.

Brookfield M (2002). The spring migration of honeyeaters into the Canberra region: what do we really know? *Canberra Bird Notes 27:* 126-132.

Higgins PJ, Peter JM and Steele WK, eds (2001). *Handbook of Australian New Zealand and Antarctic Birds.* Vol 5: 729.

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An Australasian Pipit's nest near Queanbeyan, NSW

On 14 August 2006, I was shown the nest of an Australasian Pipit *Anthus novaeseelandiae* on private property near Queanbeyan. It was ensconced beneath a small rock jutting out from a steep, grassy slope facing east. I'd assumed pipits, being ground nesters, built a fairly rudimentary nest, but this proved incorrect.

The nest was a neatly woven, cup-shaped structure, seemingly built entirely from grass. It contained two eggs which, while not shiny, were nonetheless lustrous. The background colour seemed to be a dark grey, but was hard to discern because it was peppered with a myriad of tightly-packed dots, some the size of large pin heads, others that of pin pricks.

The dot colours ranged from light grey to brown. I was fascinated by the eggs, which reminded me of little polished stones I've seen in lapidary displays. While nature awes with grandeur, it enthralls with tiny subtleties.

We retreated 30 metres from the nest and watched through binoculars. Three minutes later, we saw a pipit land near the nest. It scuttled hither and thither for 20 seconds, bobbing its hindquarters in typical pipit fashion - which, I believe, rules out the possibility it was a Skylark *Alauda arvensis* - before darting beneath the rock.

Interestingly, the landholder remarked that while both pipits and Skylarks occur in his cropping and grazing paddocks, pipits seem to be more numerous in the hilly areas. He added he's never

positively identified a Skylark on the hills.

John K Layton

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Black-winged Stilt uses Black Swans as an anti-predator shield

Rains in July 2006 brought some water back to the Morass (part of the Lake Bathurst basin, NSW), resulting in a shallow layer of water in the central area. On 30 July 2006 when I was counting the water birds on the Southern Morass, about 230 Black Swans *Cygnus atratus* were grazing on the new flush of grass. The only other water birds of note were a group of seven Black-winged Stilts *Himantopus himantopus.*

Around 10:25 h the stilts suddenly took to the air. I quickly realised that a Black Falcon *Falco subniger* had taken an interest in them, however, the pursuit did not last long and the Black Falcon returned to the spot from which the stilts had taken off. One of the seven stilts was still on the ground: I assumed this bird was injured and could not make a quick getaway with its mates. The Black Falcon swooped on the stilt which tried to avoid capture by dashing and thrashing around in the water and diving, but the water was so shallow that the stilt could only partly submerge itself and its upper back remained in the reach of the falcon's talons.

Interestingly, the stilt also tried to stay close to one of the nearby Black Swans and darted around it as the falcon repeated its attack. This swan became more and more agitated both by the frantic stilt and the Black Falcon that tried repeatedly to strike at the stilt and often flew close to the swan. Finally the swan lifted its lower body up, partly lifted its wings, stretched its neck to full length, and turned its head to wherever the action was, in a threat posture to both stilt and falcon. This combination of the swan's posture and the stilt remaining with the swan frustrated all attempts by the Black Falcon to capture the stilt.

After each failed attempt to strike at the stilt, the falcon would fly a short distance off quite close to the ground, turn, and then come again at great speed. After about 15 failed sorties, the Black Falcon flew to the remains of an old swan nest about 80 m away and rested there. This break in proceedings also gave the stilt a chance to recover and it just stood quietly, but no doubt with an eye on the Black Falcon. The irritated Black Swan and its companions swam away from the scene of great disturbance to their quiet grazing and resumed feeding about 30 m away.

After about five minutes had passed, the Black Falcon moved to another old swan's nest at the edge of the flooded area. The second resting site was more distant from the stilt than the first one, but on seeing the falcon again, albeit briefly, in the air, the Black-winged Stilt started running after the Black Swans and again sought their protective company. It was evident the stilt would rather move on foot than fly towards the swans so it must have been a partially impaired bird.

I could not wait any longer but had to continue with my survey of other parts of the Lake Bathurst basin, so I do not

know whether there was a sequel to the events I had witnessed.

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Rainbow Bee-eaters' nest near Binalong, NSW

At 08:30 h on 27 January 2006 as I walked along the bed of a soil erosion gully near Binalong, NSW, I saw a Rainbow Bee-eater *Merops ornatus* perched on a fence which stood a metre from the edge of the gully. I stopped some 20 m away, and the bird swooped down and disappeared into a hole 70 cm below the top of the bank. At this point the gully was some 2 m deep and the soil appeared to be a sandy loam.

A few seconds later, another bee-eater landed on the fence carrying in its bill food items which, through binoculars, appeared to be insects, probably no larger than European Honey Bees *Apis mellifera.* Ninety seconds later, the first bird shot from the burrow and described a shallow parabola for about 60 m before turning sharply to the right. Within ten seconds, the bird on the fence swooped into the burrow almost concurrently with the arrival on the fence of a third bird which also carried what appeared to be small insects. When the second bird left the burrow it followed the path of the first, and the third bird entered the burrow a few seconds later. So it appears the parent birds had at least one helper. Bee-eaters breed in simple pairs or in groups of a pair with 1-3 auxiliaries (Higgins 1999).

I watched for 75 minutes and noticed, on a few occasions, the instances of a bird entering or leaving the burrow and another arriving on the fence almost coincided, but usually the departure/arrival times varied between around five to ten minutes.

At one point, when there seemed to be no bird in the burrow or on the fence, I approached and noticed what appeared to be two attempted excavations, about 15 cm deep and some 50 cm on either side and slightly below the active burrow. With my face 30 cm from the burrow entrance, I was surprised by a strong smell of putrefaction. Although some rudimentary sanitation is practised, the accumulation of faeces, insect parts and deceased young give the nesting chambers a vile odour (Strahan 1994).

I returned to the site at noon on 2 Februry and, although I watched for only 30 minutes, the level of feeding activity seemed similar to that I'd seen previously.

References

Higgins PJ, ed. (1999) *Handbook of Australian, New Zealand and Antarctic Birds. Volume 4: Parrots to Dollarbird.* Oxford University Press, Melbourne.

Strahan R, ed. (1994). Cuckoos, Nightbirds & Kingfishers of Australia. Angus & Robertson, Sydney.

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COLUMNISTS' CORNER

Ten mildly contentious questions concerning birds

1. Do ACT Wedgies take small dogs? Stentoreus must confess to having no definite instance of this, although he does recall a *Canberra Times* report some years ago from the Deua Valley area, prompting a warning to the effect "Canberrans should leave the chihuahua in the Saab when they go peach-buying at Araluen."

Among recorded food items of the Wedge-tailed Eagle, HANZAB lists "dogs (including Dingo)", and there, in a study of breeding eagles in Mildura, is "Australian Terrier" as a specific prey item. Wedge-tailed Eagles nest in our suburbs, and can certainly take much larger prey than terriers. Ominously, there is no doubt that Canberra dogs are getting extremely small, some ridiculously so. In my view, the eagles will be aware of this, and are probably just waiting for this under-exploited food source to build up.

2. Should the Painted Honeyeater be assessed as vulnerable in the ACT? Well, it *is* officially vulnerable, so there you are. It seems odd to me that one ground for this is that it was "observed, estimated, inferred or suspected to be at risk of premature extinction in the ACT" by reason of an *"extremely small population"*. The ACT is at the fringe of the distribution of this nomad, and it is only recorded here every few years in small numbers. The last occurrence, in 2002-03, was in the greatest numbers on record. Stentoreus has noticed that in matters of endangerment there is a school of thought that seems to regard getting the maximum possible number of species onto the threatened list as a positive achievement.

1. Is the Night Parrot extinct? This definitely rarish parrot is only "critically endangered" according to the official listing, but who knows? There has been no authenticated record of it since 1990. The position is nicely summarised in the encyclopedic *Threatened Birds of the World:* "there has almost certainly been a decline in abundance, but all estimates of population parameters are essentially guesswork". *Now if we just knew those population parameters, we'd be in a better position to answer this one.*

2. What is the origin of Canberra's corellas? In the 1992 ACT atlas, both the Little and Long-billed Corellas were on a list of species described as "escaped from captivity or ... deliberately released". Since then, the annual pattern with Littles is that small numbers of breeding residents are augmented seasonally by a hundred or more transient birds. The former might have originated from captive birds, and indeed there have been published claims by former corella-owners to having made the release. On the other hand, the latest BA atlas shows that Canberra is within a continuous distribution over much of Australia, suggesting a progressive natural expansion, like Crested Pigeons. Some would seek to explain even that evidence by the theory that there were mass widespread releases by a frustrated would-be exporter.

The Long-bills are more likely to have originated from caged stock, being far from their homeland in western Victoria.

5. Do cattle improve conditions for waterbirds at Kellys Swamp? Most birdwatchers do not like the sight of the ambling herd in their binoculars, and the fencing is definitely a worry. However, it is hard to accept that the at-times amazingly bird-attractive soupy mud would be as fertile as it seems to be without our walking manure distribution facility. Selective grazing as a management tool is an issue for several of our nature parks.

6. What is the status of the Blue-billed Duck in the ACT? The point here is that there are probably about 15 of them, maximum, and only at the Fyshwick Sewage Ponds. On the other hand since about 1990 they could always be found at the Ponds by anyone who wanted to see one. Stentoreus takes the view that "rare" and "uncommon" are unsatisfactory and confusing labels, unless clearly defined. The status of the Blue-billed Duck is that on a given day there are a dozen or so of them at Fyshwick Sewage Ponds and probably none anywhere else in the ACT.

Are they "breeding"? Well, there's another curious label. There is some evidence that they did so here on one occasion, if that's what qualifies them for the label.

7. *Is the native Noisy Miner a greater threat to small birds than the Common Myna?* I suppose the first question is whether the Common Myna is any threat at all apart from competing for hollows, if relevant. My own observations are that Noisy Miners are moving into more and more areas around Canberra, and that where they do so there are fewer small birds.

The Sydney-based *Birds in Backyards* project cites the tendency of Noisy Miners to displace other birds in its "Birds behaving badly" website note. At a BA seminar on urban birds in March this year, one researcher's presentation specifically compared the two species and noted that only the native bird had a marked adverse effect on small-bird numbers. You can see it happening. This spring there were abundant Noisy Miners through our woodlands, and the sight of a Noisy Miner vigorously chasing a small bird, typically a weebill or a pardalote, was a common one.

8. Did the Brush Turkey occur in the ACT? We are talking, of course, about a time before there was an actual ACT. The matter is the subject of an insightful piece in *Canberra Bird Notes* of September 1999, by Tony Howard and Isobel Crawford. The authors are inclined to think that early reports of this species were accurate.

The interesting thing is that the speculation turns on what kind of vegetation existed in the ACT at the time of European settlement. Stentoreus had thought that this would have been something like what you get in the better parts of some present-day nature parks, tall eucalypt woodland, minus the exotics and plus a bit of native grass and low shrub. The idea that the local vegetation could have approximated to the rankness of 'Indooroopilly Mulched' or `Toowong Tanbarked' (favoured vegetation types of the Brush Turkey in

Brisbane suburbs) comes as something of a surprise. Still, given the number of species that have retreated from the drastic effects of agriculture, who knows what might have been here originally?

9. Do birds think? Much has been written on this. Stentoreus accepts that birds do not 'think' in a mathematical sense or verbally (i.e. with words). The matter is complicated because much human thought uses words. Brian probably thinks: "It's spring and a nice day, and I've got nothing else on, so I think I'll drive to Uriarra Crossing and see if there's a Common Sandpiper there again this year." Or does Brian just get in the car and drive off in response to an urge, like a migratory bird?

However, much human activity, say fish-filleting, motoring, or tennis, takes place with no verbal thought process preceding the relevant action. Why shouldn't foraging finches or squabbling magpies be entitled to behave in the same way? When the Common Sandpiper sets off from Siberia, surely it can "think" it's time to leave without deciding, in so many words, that it's going to "Uriarra Crossing", or to "Australia", or even that it's going to "fly". Mind you, the Common Sandpiper is not the first bird I'd pick for an experiment in thinking behaviour.

10. How many species of birds could you see in the ACT in a single year? Let's assume our spotter (S) is prepared to devote two days of each week to searching for birds, and will chase up promptly any reports of rarities on the grapevine. Escapees will count. S should definitely get over 170 certainties (A), unless it is a very poor year [included examples: Crescent Honeyeater, Common Koel; not included: Masked Woodswallow, Channel-billed Cuckoo].

Then there are 38 (B) species that S would see given *moderate* luck, as regards being in the right place at the right time, and their movement patterns being favourable [included examples: Spotted Harrier, Barn Owl; not included: Glossy Ibis, White-bellied Cuckoo-shrike]. A further 45 (C) species could be ticked given *good* luck e.g. Little Bittern, Grey Goshawk, Regent Honeyeater. S should get at least 25 of the B species and 10 of the Cs, and perhaps fluke a couple of the very rare Ds. S would have a good chance of getting more than 210, largely depending on what happened with the migratory waders, most of these being in the C group.

A. stentoreus

Birding in cyberspace, Canberra-style

Do you subscribe to any **professional ornithological journals?** Perhaps, like your columnist, you do not but have an active interest in what is being published and like to read particular journal articles. In the past I have mentioned that *Emu - Austral Ornithology*, accurately self-described as "the premier journal for ornithological research and reviews in the Southern Hemisphere", is available online at the singularly difficult-to-remember URL <www.publish.csiro.au/nid/96.htm>. There you can peruse the tables of contents of the issues and, pleasingly, the individual articles' abstracts.

The issue current at the time of writing (vol. 106, no. 3) contains the following articles that are of particular interest to me (and probably has others that you would like to read):

Theft of bower decorations among male Satin Bowerbirds *(Ptilonorhynchus violaceus):* why are some decorations more popular than others? by Janine M. Wojcieszek, James A. Nicholls, N. Justin Marshal1 and Anne W. Goldizen

Effect of variation in snowpack on timing of bird migration in the Snowy Mountains of south-eastern Australia, by K. Green

Trophic relationships between neighbouring White-bellied Sea-Eagles *(Haliaeetus leucogaster)* and Wedge-tailed Eagles *(Aquila audax)* breeding on rivers and dams near Canberra, by Jerry Olsen, Esteban Fuentes and A. B. Rose

Having perused the abstracts, I feel that I have gained the info I wanted from the first and third of these, but I'd really like to read the full article by Ken Green as I regularly bird in the Snowy Mountains. So what do I do next? One option is to visit the National Library of Australia (perhaps our greatest cultural asset) and read the issue there. At the Library I could photocopy it, too, without breaching copyright. But it is inconvenient for me to visit the Library this week so I turn to option #2: order a copy of the article as a pdf file from the publisher. Well that's pretty good, easy to do by clicking on the 'buy now' link for virtually instant access. But it costs $25 per article, a bit steep for five pages, don't you think?

So what about option #3, **Copies Direct from the National Library of Australia** <http://www.nla.gov.au/copiesdirect> (or get there by searching for *Emu* in the catalogue and clicking on the 'Copies Direct' link at its catalogue entry). There you will see that it costs just $13.20 for up to 50 pages for the normal service. They say that the article, etc., will be delivered within five days, but in my experience it is usually faster than that. Priority service (delivery within three days) costs $19.80. Yet another fine service from the NLA.

A message on Birding-Aus, the national birding and announcement email distribution list, alerted me to an item at the web site of 666 ABC Radio Canberra. With the title **Canberra's very own big twitch,** it reports on a 28 September interview between presenter Louise Maher and prominent Canberra birder Alastair Smith: <www.abc.net.au/canberra/stories/s1751230.htm>. Accompanied by an Ian Fraser photograph of a dark morph White-bellied Cuckoo-shrike, the item reports that,

> Inspired by Sean Dooley's 'The Big Twitch' (in which a TV comedy writer and passionate bird watcher sets out to and succeeds in observing 700 different species in 12 months) Canberra resident Alastair Smith has embarked on his own quest. After a forensic examination of past data, Alastair set himself the target of seeing 200 species of birds in the ACT between January 1 and December 31 2006. And this week he's made it to 196, with the sighting of a White-bellied Cuckoo-shrike at Campbell Park...Wil1 Alastair reach his goal? Stay listening to the Drive show to find out.

I'm listening, and all the best Alastair for ticking the final four species before 31 December!

Would you recommend **Canberra as a top birding destination?** While we do not have a bird routes of Canberra brochure (good on you Barraba <www.barraba.org/birdroutes> and Cowra <email tourism@cowra.nsw.gov.au> for leading the way), we do have the useful *Pocket Guide to the Birds of Canberra* which is available at COG's web site <www.canberrabirds.org.au/PocketGuide/PocketGuideMain.htm>. Sydney birder Charles Hunter reported to Birding-Aus about his September 2006 visit to Canberra in which he was able to fit in a bit of birding. He advised that "I had a great weekend birding in Canberra last weekend (23rd/24th September). Good information on the Canberra Ornithologists Group (COG) website lead me to Jerrabomberra Wetlands and Campbell Park."

Charles went on to list the birds he had observed: 19 species at Jerrabomberra Wetlands including three lifers, and six species including one lifer at Campbell Park. He concluded: "A successful 3-4 hours birding. **I** strongly recommend these easily accessible locations."

A fascinating internet-based innovation, worth watching, is **SaaS: Software-as-a-Service.** Perhaps the best known is google.com, with its search engines and a host of related services. Also of interest are the emerging SaaS providers of office software. An example is gOFFICE.com which, according to its web site <www.goffice.com>:

> ...provides an online office suite which allows customers to quickly create documents via a web browser. The customer types in their browser, chooses a letterhead design and receives a professionally formatted PDF file in moments. Customers do not require Adobe Acrobat, as the PDF files are created on the gOFF1CE servers. The output from gOFFICE is of high quality.

Also provided are a large number of templates for your letters and the capacity to store files for free on their servers. This is necessary, of course, if you leave a document incomplete, planning to return to it later. Perhaps this is not for you as you have expensive office software on your computer so do not need web-based software? That's fine, but it could be that SaaS providers like gOFFICE are at the forefront of a trend that will become mainstream, as Microsoft is said to be very interested in this business model.

Reports of **close encounters with birds** appear from time-to-time on Birding-Aus, with three in September. Bill Stent is a cyclist who had a particularly close encounter with a Red Wattlebird:

> This morning I was riding to work, just starting along my home street (Kew East, Victoria), when I passed the nesting site of a red wattlebird. This individual, like some other red wattlebirds, tends to swoop at this time of year. They hurt less than magpies, but I've found them to be much more tenacious ... the wattlebird was in the process of attacking from behind as I turned my head. It was probably six inches and closing when I found myself face to belly. It broke off - or at least attempted to, and **I** got clouted by wings on each ear as well as a nose full of belly. **I** was lucky, thinking about it, not to get an eye ful1 of claws.

This reminded Peter Pfeiffer of "a funny/frightful experience two of my friends had":

> We had just arrived at a dry creek bed just out of Milparinka. Gazza and Pete were walking up the creek bed just checking things out when there was a hellava commotion. Screams and expletives, shock and laughter as they walked into two low flying, head-height Wedge-tailed Eagles cruising at a rate of knots down the creek towards them. As the Wedgies turned a slight corner in the creek to meet Gazza and Pete, there was a lot of flapping and carry on as they pulled up and rose vertically almost instantly they saw them. The Wedgies were just as startled and surprised as Gazza and Pete. This happened only about a metre or so in front of my fellow travellers and I observed the whole thing from about 10 metres.

And Wendy Moore contributed another wattlebird encounter story:

> I reckon I once observed a wattle bird being a show-off (of precision acrobatic flying) and exhibiting a sense of humour...
>
> One day, years ago, I had brought my chooks around to the front yard, then I still had a lawn before my native trees grew, for some fresh grass. My rooster, Mucky,... is a Silver Spangled Hamburg X (for those of you who know your chooks!). A very handsome, gentle, caring and genteel rooster.
>
> On this occasion a Red Wattlebird flew across the front yard and BETWEEN Mucky's legs. While the poor rooster was trying to come to terms with what unknown indignity had just befallen him, the wattlebird turned and repeated the process from the opposite direction, leaving a rather confused, shaken and disconcerted rooster in its wake. And an amazed and amused human bystander.

Birds in Backyards is an online resource well worth a visit: <www.birdsinbackyards.net>. It is "a research, education and conservation program focusing on birds and the urban environment. The program was developed in response to the reduction of bird species living in built up areas, the rapid expansion of these areas and the consequent loss of habitat. Initially a Birds Australia program, Birds in Backyards became a program of both Birds Australia and the Australian Museum in February 2005, when a partnership was formed."

It has a number of components. One is a list of 339 backyard species, particularly those found in south-eastern Australia. Clicking on the species' name takes one to a page with a large amount of authoritative information on it, including a distribution map from the Birds Australia ongoing atlas and a link to the species' call as an MP3 file. Then there is the Bird Finder: enter the bird's name, size, colour and/or shape. Or search the Featured Bird Groups, one of which is "Birds Behaving Badly" and another "The 40 Top Bird Songs".

Surveys are a feature of the site; you can contribute to those of particular interest to you. For example, at the time of writing there were five surveys open to receive data:

- *Koel survey:* Select this survey to send us your record of when Koels arrive at a location near you.
- *Channel-billed Cuckoo survey:* Select this survey to report your records of Channel-billed Cuckoos and their behaviour.
- *Superb Fairy-wren survey:* Use this survey to send us details of the location and group size of Superb Fairy-wrens in your suburb.

- *Backyard birds survey:* Choose this survey to provide us with information on the bird species that visit your garden.
- *Plant use survey:* Record the plants in your garden that are used by birds for food, shelter or other reasons.

Running findings on the current surveys, and the final products of completed surveys, are provided, along with a host of other information about birds in backyards, their habitat requirements and their conservation. Highly recommended.

Canberra birder Sandra Henderson alerted Birding-Aus list members to the Ockham's Razor program on ABC Radio National, 17 September, on which Melbourne birder Sue Taylor discussed the topic "Why watch birds". She is the author of the well-known book *Why watch birds: a beginner's guide to birdwatching* (CSIRO Publishing, 2005). At the ABC's fine web site you can listen to the broadcast, download a transcript or download an MP3 podcast for listening on your MP3 player on those drives to and from hot birding spots; visit www.abc.net.au/rnockhamsrazor/stories/2006/1741085.htm>. We can probably safely predict that, in the fairly near future, far more use will be made in birding of the MP3/podcast technology than there is at present.

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Details on how to subscribe to *Birding-Aus*, the Australian birding email discussion list, are on the web at http://www.birding-aus.org/. A comprehensive searchable archive of the messages that have been posted to the list is at <http://bioacoustics.cse.unsw.edu.au/archives/html/birding-aus>.
To join the *CanberraBirds* email discussion list, send an empty email message to canberrabirds-subscribe@canberrabirds.org.au. The list's searchable archive is at <http://bioacoustics.cse.unsw.edu.au/archives/html/canberrabirds>.

RARITIES PANEL NEWS

The endorsed "unusuals" on this occasion are, for the most part, birds which do occur from time to time in our region, but either unpredictably and/or in response to inland drought. The Panel continues to monitor the status of species such as the Freckled Duck, Pied Cormorant and Long-billed Corella and urges members to put in reports of all sightings of these species.

One surprising record is that of the Singing Honeyeater, seen by Michael Lenz in the vicinity of Tarago tip in July. The ACT area is just outside the normal range of this species, which is widespread inland; its presence here is possibly drought-related.

The bird which caused the most excitement was undoubtedly the Pink Robin in the Australian National Botanic Gardens in June, a bird many COG members "twitched" and photographed enthusiastically. All reports of the robin from the Gardens in Jun will be treated "as if endorsed" for COG publications. Pink Robins are not unheard of in our region. Steve Wilson banded 27 of them at New Chums Road in the Brindabellas from April 1962; and they can turn up irregularly in the winter months in the western ranges, in suburban gardens, as Muriel Brookfield can attest, and in the ANBG.

The Panel finds quite intriguing the continued presence of the Diamond Doves at "Bibaringa", as that species normally does not stay around long in such locations. We note Steve Wilson's comment about the species, in his *Birds of the ACT: two centuries of change:* "It is likely that we have a mixture of released and escaped cage birds, plus occasional wild birds."

This quarter's reports include the annual "unusuals" from Michael Lenz's Waterbird Surveys at Lake Bathurst. COG members are reminded that much of the surveying is carried out on private property. Should you wish to explore the area, Michael has indicated he would be happy to take people along with him — just phone him on 6249 1109 to make arrangements.

ENDORSED LIST 68

Freckled Duck *Stictonetta naevosa*

2; 9 Jul 2006; Steve Holliday; Fyshwick Sewage Ponds GrL14

Pied Cormorant *Phalacrocorax varius*

1; 25 Apr, 13 May, 13 Jul 2006; Harvey Perkins; Lake Tuggeranong GrJ16

Black Kite *Milvus migrans*

1; 1 Jan 2006; Philip Veerman; Mugga Lane GrL15

Spotted Harrier *Circus assimilis*

1; 19 Sep 2005; Michael Lenz; Lake Bathurst GrL08

1; 14 Mar 2006; John Layton; Fyshwick Sewage Ponds GrL 14

Black Falcon *Falco subniger*

1; 28 Aug 2005; Michael Lenz; Lake Bathurst GrL08

2; 16 Apr 2006; Michael Lenz; Mt Ainslie GrM13
1; 30 Jul 2006; Michael Lenz; Lake Bathurst GrL08

Bar-tailed Godwit *Limosa lapponica*
1; 7 Nov 2005; Michael Lenz; Lake Bathurst East Basin GrY08

Marsh Sandpiper *Tringa stagnatilis*
10; 19 Sep 2005; Michael Lenz & Tom Green; Lake Bathurst East Basin GrY08
1; 4 Dec 2005; Michael Lenz; Lake Bathurst East Basin GrY08

Pectoral Sandpiper *Calidris melanotos*
2; 19 Sep 2005; Michael Lenz; Lake Bathurst East Basin GrY08
1; 10 Oct 2005; Michael Lenz & Tom Green; Lake Bathurst East Basin GrY08

Red-necked Avocet *Recurvirostra novaehollandiae*
1; 10 Oct 2005; Michael Lenz & Tom Green; Lake Bathurst East Basin GrY08

Pacific Golden Plover *Pluvialis fulva*
1; 10 Oct 2005; Michael Lenz & Tom Green; Lake Bathurst East Basin GrY08
14; 7 Nov 2005; Michael Lenz; Lake Bathurst East Basin GrY08

Caspian Tern *Sterna caspia*
1; 1 Aug 2005; Michael Lenz; Lake Bathurst East Basin GrY08

Diamond Dove *Geopelia cuneata*
1; 1 **Jul** 2006; Stuart Harris; "Bibaringa" GrH15

Long-billed Corella *Cacatua tenuirostris*
2; 10, 21 Aug 2006; Julian Robinson; Callum Brae GrL15

Fork-tailed Swift *Apus pacificus*
20; 2 Feb 2006; Philip Veerman; Kambah GrJ16

Brown Gerygone *Gerygone mouki*
2; 27 May 2006; Nicki Taws; Wybalena Grove, Cook GrJ13
8; 3 Aug 2006; Jenny Bounds; ANBG GrK13

Singing Honeyeater *Lichenostomus virescens*
1; 30 Jul 2006; Michael Lenz; gravel pits near Tarago tip GrY08

Scarlet Honeyeater *Myzomela sanguinolenta*
1; 21 Sep 2006; Nicki Taws; Wybalena Grove, Cook GrJ 13

Pink Robin *Petroica rodinogaster*
1; 8 Jun 2006; Geoff Dabb; ANBG GrK13
1 female; 7 Jul 2006; Muriel Brookfield; Wybalena Grove, Cook GrJ13

White-bellied Cuckoo-shrike *Coracina papuensis*
1 (dark morph); 27 Sep 2006; Ian Fraser; Campbell Park GrM13

Pied Butcherbird *Cracticus nigrogularis*
1; 30 Jan 2006; Michael Lenz; Lumley Rd, Lake Bathurst GrZ08

Singing Bushlark *Mirafra javanica*
1; 7 Nov 2005, 30 Jan & 30 Jul 2006, Michael Lenz; Lake Bathurst GrY08 & Z08

Zebra Finch *Taeniopygia guttata* Escapee
1 male (dead); 28 Jul 2006; Alistair Bestow; Lyons GrJ15

Canberra Bird Notes is published by the Canberra Ornithologists Group Inc and is edited by Harvey Perkins and Barbara Allan. Major articles of up to 5000 words are welcome on matters relating to the distribution, identification or behaviour of birds in the Australian Capital Territory and surrounding region. Please discuss any proposed major contribution with Harvey Perkins on 6231 8209 or email cbn@canberrabirds.org.au. Short notes, book reviews and other contributions should be sent to the above email address or discussed with Barbara Allan on 6254 6520.

Please note that the views expressed in the articles published in *Canberra Bird Notes* are those of the authors. They do not necessarily represent the views of the Canberra Ornithologists Group. Responses to the views expressed in CBN articles are always welcomed and will be considered for publication as letters to the editors.

Canberra Bird Notes 31 (3) September 2006

Articles

Odd Obs

Columnists' Corner

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