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AVIFAUNA AND LANDSCAPE CHARACTERISTICS OF TRAVELLING STOCK RESERVE 60, YASS SHIRE, NSW

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Abstract

A study of avian diversity and habitat types at TSR 60, dunng the spring of 2001, found that riparian vegetation supported a higher number of declining bird species than open woodland In contrast, open woodland supported a higher number of increasing species and species that have been associated with decreased avian diversity through aggressive competition and nestling predation The open woodland was subject to heavy grazing and removal of timber for firewood, both of which have been associated with decreased avian diversity, and was also subject to dieback possibly caused by high densities of sap-sucking invertebrates The impact of dieback raises doubt about the long-term viability of this ecosystem fragment

Introduction

Study site

Travelling Stock Reserve 60 (TSR 60) is a 24 3-ha block of remnant native vegetation located on Mountain Creek Road, 1 km north of 'Roseville' homestead in Yass Shire, New South Wales (35 08 30 S, 148 52 32 E, Umbarra map sheet 8627-I-S, 1 25,000) TSR 60 is managed by the Rural Lands Protection Board (RLPB) primarily to provide feed and water for travelling stock The reserve is one of the biggest of its kind in Yass Shire (K Bacon, pers comm)

Landscape context

TSR 60 lies on the edge of the Australian sheep-wheat belt, a zone which is favoured for agricultural production and which has lost more than 90% of its original native vegetation cover Much of the remaining native vegetation is in small **isolated** fragments The effect on populations of birds that are dependent on native habitat has been devastating (Reid, 1999) Land use around TSR 60 is typical of the general pattern throughout the sheep-wheat belt

The landscape context of the reserve, however, is atypical of the broader sheep-wheat belt It is situated in the foothills of the Brindabella Range 5 km to the west with the Murrumbidgee River 6 km to the east, and is in close proximity to the Brindabella and Namadgi National Parks These all provide large areas of native habitat and support large populations of wildlife Mullion Creek, which flows along the eastern boundary of TSR 60, rises in the Brindabellas and flows into the Murrumbidgee, providing a route for migrating wildlife The riparian vegetation along Mullion Creek also connects to patches of remnant and regenerating native vegetation in the immediate vicinity of TSR 60 The foothill country around TSR 60 appears to have a higher proportion of remnant native vegetation than is seen on flatter country

History - the long paddock

TSR 60 was established around the turn of the twentieth century as part of a State-wide system of Travelling Stock Routes Designated stock routes were established with wide road verges t o allow room for stock Reserves with grazing and water were dotted along the routes TSRs were used by drovers taking stock to markets and by farmers avoiding drought by taking their stock out on the 'Long Paddock' (Murray Catchment Management Committee, 1998, Nature Conservation Council, 2001)

Historically, the management of TSRs has seen intermittent grazing and a concerted effort to control weeds and other pests As a result, many TSRs remain in a natural or near natural state (Nature Conservation Council, 2001) TSR 60 has never been ploughed (R Rehwinkle, pers comm), but limited tree removal occurred around 1990 (K Bacon, pers comm)

Topography and soils

TSR 60 consists of flats, a dry drainage line and a ridge crest which runs parallel to adjacent Mullion Creek The under-lying geology is sedimentary, and soils vary according to the topography (R Rehwinkle, pers comm) The ridge line has thin gravelly soils with some rock outcrops, while the flats have deeper, loamier soils

TSRs and conservation

Travelling Stock Routes and Reserves cover approximately 2 7% of NSW This is about half the total area of National Parks and Nature Reserves (Murray Catchment Management Committee, 1998) The NSW Bio-diversity Strategy recognises the importance of TSRs for biodiversity conservation, and commits the NSW government to improving management of TSRs to maintain biodiversity values (Nature Conservation Council, 2001)

In some highly fragmented and cleared landscapes, TSRs contain important remnant native ecosystems, some of which are poorly represented in the reserve system They also provide habitat migration routes and native seed for rehabilitation and revegetation Activities on TSRs which involve clearance of native vegetation may require development consent under the Environmental Planning and Assessment Act 1979 (Nature Conservation Council, 2001)

Present management

The management of TSRs in NSW is governed by specific legislation - the *Rural Lands Protection Act 1998* - and is influenced by related legislation such as the *Native Vegetation Conservation Act 1997*, the *Threatened Species Conservation Act 1995* and the *Rural Fires Act 1997*

Policy and management guidelines for TSRs are produced by the State Council of Rural Lands Protection Local Rural Lands Protection Boards (RLPBs) are required to prepare management plans for TSRs which take into account the benefit to travelling stock, the adoption of appropriate stocking practices, conservation of wildlife (including critical habitat, threatened species, populations and ecological communities and their habitat), and the protection of TSRs against soil erosion and diminution of water quality RLPBs

are funded from rates and income earned from the lease of the land

Travelling stock have first priority use of TSR 60, but due to the decline in demand the reserve is offered for lease on an annual basis Under the lease conditions, the lessee must control weeds and pests and if this is done properly receives a discount on the lease price Trees and timber, including seedlings, may not be removed (K Bacon, pers comm)

A botanical survey of TSR60 by the NSW National Parks and Wildlife Service (NPWS) was completed in 1998 NPWS recommended that conservation values within the reserve would be maintained by continued grazing (R Rehwinkle, pers comm)

Methods

This study assessed habitat types, vegetation structure and the avifauna of TSR 60 Due to the small size of the reserve and the type of information required, a plot-based sample system was not employed Instead, surveys encompassed the whole reserve or specific habitats Surveys were carried out on 2, 7/8, and 16 September, and 7 October, 2001

Interviews were conducted with Yass RLPB ranger, Kevin Bacon, the owner of neighbouring 'Roseville Station' who leases TSR 60, and NSW National Parks and Wildlife officer Dr Rainer Rehwinkle who conducted a botanical survey of TSR 60 in September 1998

Habitat and vegetation structure

Botanical identifications were made using Harden (1990-1993), Costermans (1981), Brooker *et al* (1997), Cunningham *et al* (1981), and Auld and Medd (1987) Taxonomy follows Harden (1990-1993)

Habitat types were identified from vegetation associations and topography Assessment was carried out on representative sections of each habitat type Vegetation structure was assessed and characterised by the method of Walker and Hopkins (1990)

Birds

Birds were identified using Slater *et al* (1993) and Morcombe (2000) Taxonomy follows Christidis and Boles (1994)

Birds were surveyed using the Birds Australia Atlas survey method for an area search (Birds Australia, undated) The area surveyed included TSR 60, the surrounding agricultural land and nearby dams Four three-hour surveys were conducted, one on each visit t o the reserve Incidental bird sightings made during other vegetation and vertebrate fauna surveys also contributed to the full TSR 60 bird list provided in Appendix 1 Bird species were recorded by presence only (ie not counted) and were allocated to habitat types as follows Open Woodland at TSR 60 (OW), Riparian vegetation associations along Mullion Creek within TSR60 (R), Agricultural land around TSR 60 (A), and Developed areas around TSR60 including buildings, roads and dams (D) Recording rates were compiled according to the number of surveys in which a species was recorded as follows Common (recorded in three or four surveys), Uncommon (recorded in two surveys), or Rare (recorded in one survey)

Results

Habitat

TSR 60 is predominantly open woodland with two vegetation associations A Yellow Box *Eucalyptus melliodora* and Blakely's Red Gum *E blakelyi* association is found on the flats and along the dry drainage line, while a Red Stringybark *Eucalyptus macrorhyncha* and Peppermint *E dives* association is found along the edge crest The riparian strip along Mullion Creek is also in two sections Better soils on the flats at the south end support remnant Apple Box *Eucalyptus bridgesiana,* while the rocky gully at the north end supports a Stringybark / Peppermint association (see Table 1) Many of the trees are mature and contain hollows, however mistletoe is rare No trees were flowering during the study

The open woodland, including the riparian flats, is managed for grazing Grazing pressure was recorded as high during a NPWS survey in 1998 (Rehwinkle, pers comm) and remains so This habitat shows evidence of recent clearing, supports only one native shrub species, four noxious weed species, has dieback in some trees, but significant regeneration of Blakely's Red Gum The open forest habitat of the rocky riparian gully is less suitable for grazing and has been under less grazing pressure It has a closed canopy, more native shrub species, less evidence of clearing, fewer weed species, and no dieback (Table 2)

The open woodland structural class has been created by removal of timber TSR 60 is dotted with tree stumps and stacks of partially burnt logs The canopy cover has been reduced by this process The lessees report difficulties in keeping firewood cutters off the property There was evidence of removal of standing and fallen deadwood in the month prior to the survey This activity is illegal There is no sign of fire on live trees in the reserve

Table 1. TSR 60 habitats and structural characteristics

Habitat	Dominant trees	Structural class	Height class	Coverage
Flats	Yellow Box / Blakely's Red Gum	Open woodland	Tall	55%
Ridge crest	Red Stringybark / Peppermint	Open woodland	Tall	20%
Dry watercourse	Yellow Box / Blakely's Red Gum	Open woodland	Tall	15%
Riparian flat	Apple Box	Open woodland	Tall	5%
Riparian gully	Red Stringybark / Peppermint	Open forest	Mid-high	5%

Table 2. Summary of habitat features by structural class at TSR 60

	Open woodland	Open forest
Soil	loamy & gravelly	rocky
Number of native shrub species	1	4
Recent clearing / firewood removal	yes	no
Number of noxious weed species*	4	2
Dieback	yes	no
Grazing pressure	heavy	**light**

* Noxious weeds as listed for the Yass Shire (NSW Agriculture, 2001) Sweet Briar *Rosa rubiginosa* (OW + OF), Blackberry *Rubus fruticosus* (OW + OF), St John's Wort *Hypericum perforatum* (OW), Nodding Thistle *Carduus nutans* (OW)

Birds

In total, 68 bird species were recorded at TSR 60 and from the surrounding agricultural land (see Appendix 1) Of these, six species are defined by Reid (1999) as declining in the sheep-wheat belt, and 15 as increasing Only one introduced species, the Common Starling *Sturnus vulgaris* was recorded The largest number of species (39) occurred in open woodland habitat, closely followed by riparian habitat (35) Fewer species were recorded on surrounding agricultural land (17) and developed land (13) (Table 3) The high number of species in the riparian habitat is notable because that habitat covers only 10% of the total land area of TSR 60

The composition of species lists for open woodland and riparian habitats showed significant differences A disproportionate number of 'decliner' species (67%) were recorded from the riparian habitat, while a dis-proportionate number of 'increaser' species were recorded from open woodland (87%) and agricultural land (80%) (see Tables 4 and 5) Many of the 'increaser' species found in the open woodland have been associated with low bird diversity because of aggressive competition with other species or nestling predation (Birds Australia, 2001) Other species that were present in the open woodland that may also contribute to decreased bird diversity include the Grey Butcherbird *Cracticus torquatus* (Birds Australia, 2001), and the Grey Currawong *Strepera versicolor* which is a nestling predator (Morcombe, 2000)

Table 3. Summary of bird species by type and habitat at TSR 60

Species type or habitat	No of species	% of total
Native	67	98 5
Introduced	**1**	1 5
Declining*	6	8 8
Increasing*	15	22 1
Open woodland	39	57 4
Riparian	35	51 5
Agricultural land	17	25 0
Developed land	13	19 1

* As defined by Reid (1999)

Table 4. Proportion of each conservation status grouping by habitat

Species type	Woodland	Riparian	Agricultural	Developed
Increasers'	87%	26%	80%	20%
Decliners'	17%	67%	33%	0%
Low diversity[2]	100%	43%	57%	29%

Table 5. Habitat and guild distribution of declining' and increasing' bird species at TSR 60

	Species	Habitat3	Guild4	LD2
DECLININ	Speckled Warbler	R	Insectivorous	
	Eastern Yellow Robin	R	Insectivorous *	
	Varied Sittella	OW	Insectivorous	
	Rufous Whistler	R	Insectivorous	
	Restless Flycatcher	A	Insectivorous	
	Dusky Woodswallow	R, A	Insectivorous	
INCREASING	Nankeen Kestrel	OW, A	Carnivorous	
	Crested Pigeon	OW, D	Granivorous	
	Galah	OW, A	Granivorous	
	Sulphur-crested Cockatoo	OW, A	Granivorous	
	Eastern Rosella	OW, A	Granivorous	
	Yellow-rumped Thornbill	OW, R	Insectivorous	
	Noisy Miner	OW	Insectivorous	yes
	Magpie-lark	OW, A	Insectivorous	
	Willie wagtail	OW, A	Insectivorous	
	Black-faced Cuckoo-shrike	OW, A	Insectivorous	
	Australian Magpie	OW, R, A, D	Insectivorous	yes
	Pied Currawong	OW, R, A	Omnivorous	yes
	Australian Raven	OW, R, A	Omnivorous	yes
	Welcome Swallow	A	Insectivorous	
	Common Starling	A, D	Omnivorous	yes

1 As defined by Reid (1999)
2 Species associated with low bird diversity (Birds Australia, 2001) due to aggressive competition or nestling predation
3 OW = Open woodland, R = Riparian, A = Agricultural land D = Developed land
4 Feeding guilds simplified from Er (1997), except * which was absent from that study

Discussion

A total of 68 bird species was recorded at TSR 60 and the surrounding area during the study Diversity appears t o be strongly influenced by the mix of habitats provided by the topography, soils, related plant associations and development activity such as dam construction Particularly important was the riparian strip which supported a disproportionate number of declining bird species which were not recorded in the other predominantly agricultural habitats Why this was the case could not be determined by this study Previous studies have shown that riparian vegetation is important for biodiversity out of proportion to the land area it occupies (Bentley and Catterall, 1997, Mac Nally *et al* 2000, Briggs and Seddon, 2001)

In contrast, the open woodland made a lesser contribution to the maintenance of biodiversity on a landscape scale Many of the species recorded within the open woodland were also doing well in the agricultural landscape and some of these are assumed to contribute t o the decline of species which are not so well able to cope with the broad-scale conversion of habitat Factors which influence bird diversity and distribution described by Reid (1999), Birds Australia (2001) and others that are relevant to TSR 60 include the following

1 Removal of trees and suppression of shrubs by grazing has a strong influence on animal populations (Major *et al* 2001) At TSR 60 reduction of vegetation has created an edge-like habitat
2 Edge habitat supports a variety of 'increaser' bird species which thrive in agricultural landscapes
3 Some edge species are associated with reduced bird diversity due t o aggressive competition and nestling predation (Birds Australia, 2001, Major *et al* 2001)
4 One edge species, the Noisy Miner, is associated with high densities of sap-sucking invertebrates (psyllids) High psyllid densities are associated with unhealthy trees and dieback (Birds Australia, 2001, Major *et al* 2001, McDonald, 2001)
5 Unhealthy trees support a lower bird diversity (Birds Australia, 2001, Ford *et al* 2001)
6 The reduction of bird diversity, through aggressive competition, nestling predation, and loss of food resources, means there are fewer psyllid-eating species to help protect the trees (Stone 1996, Grey *et al* 1997) and this may impede regeneration (McDonald, 2001)

It should be noted that grazing pressure and removal of timber is more prevalent and has had a greater impact on the open woodland than on the riparian habitat These two factors have been described as threatening processes within the NSW sheep-wheat belt (Reid, 1999)

An understanding of why the riparian strip at TSR 60 supports so many declining insectivorous birds, in comparison to the adjacent open woodland, could be useful in planning protective and regenerative measures Studies looking at the relationship between vegetation, invertebrates and insectivorous birds could be very useful

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A number of people contributed to this study of TSR 60 and my gratitude is extended to them Dr Rainer Rehwinkle of the NSW National Parks and Wildlife Service kindly provided botanical data for TSR 60 Mr Kevin Bacon, Rural Lands Protection Board ranger responsible for TSR 60, agreed to be interviewed, as did the lessees of the property Dr Mick Tanton of the School of Resource and Environmental Studies at the Australian National University ran the wildlife management course during which this study was made David McDonald kindly reviewed the manuscript

Further information

This paper is an extract from an unpublished report on the management of TSR 60 For an electronic copy of the full original report please contact the author

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Adam Leavesley is currently an Honours candidate in the School of Botany and Zoology at the Australian National University where he is studying referential alarm calling in White-browed Scrubwrens at the Australian National Botanic Gardens Prior to studying he worked as a journalist and public affairs officer, writing for the Evemng Post and Dominion in Wellington, New Zealand, Yahoo in the Umted Kingdom, and the Australian Bureau of Statistics in Canberra A member of COG for two years, this is his third contribution to Canberra Bird Notes

Appendix 1. All birds recorded at, or within a 1 km radius of, TSR 60

Common name	Scientific name	Habitat'	RR2	Br[a]	CS'
Australian Wood Duck	Chenonetta jubata	OW, R, D	C		
Pacific Black Duck	*Anas superciliosa*	OW, D	C		
Australasian Shoveller	*Anas rhynchotis*	D	R		
Hardhead	*Aythya australis*	D	C		
Australasian Grebe	*Tachybaptus novehollandiae*	D	C		
Little Pied Cormorant	*Phalocrocorax melanoleucos*	D	U		
Little Black Cormorant	*Phalocrocorax sulcirostris*	D	R		
White-faced Heron	*Egretta novaehollandiae*	OW, R	U		
Black-shouldered Kite	*Elanus axillaris*	A	R		
Brown Goshawk	*Accipiter fasciatus*	OW, R	R		
Wedge-tailed Eagle	*Aquila audax*	OW, R	C	x	
Nankeen Kestrel	*Falco cenchroides*	OW, A	R		I
Dusky Moorhen	*Gallinula tenebrosa*	D	C		
Eurasian Coot	*Fulica atra*	D	C		
Masked Lapwing	*Vanellus tricolor*	A	C	x	
Crested Pigeon	*Ocyphaps lophotes*	OW, D	R		I
Galah	*Cacatua roseicapilla*	OW, A	C		I
Sulphur-crested Cockatoo	*Cacatua galerita*	OW, A	C		I
Crimson Rosella	*Platycercus elegans*	OW, A	C		
Eastern Rosella	*Platycercus eximius*	OW, A	C		I
Pallid Cuckoo	*Cuculus pallidus*	OW	R		
Fan-tailed Cuckoo	*Cacomatis flabelliformis*	OW	U		
Southern Boobook	*Nmox novaeseelandiae*	OW	N/A		
Tawny Frogmouth	*Podargus strigoides*	R	N/A		
Laughing Kookaburra	*Dacelo novaeguineae*	OW, R	C		
White-throated Treecreeper	*Cormobates leucophaeus*	OW, R	C		
Superb Fairy-wren	*Malurus cyaneus*	OW, R	C		
Spotted Pardalote	*Pardalotus Utatus*	OW, R	U		
Striated Pardalote	*Pardalotus striatus*	OW, R	C		
White-browed Scrub-wren	*Sericornis frontalis*	R	C		
Speckled Warbler	*Chthonicola sagittata*	R	U		D
Weebill	*Smicrornis brevirostris*	OW, R	C		
Western Gerygone	*Gerygone fusca*	R	U		
Brown Thornbill	*Acanthiza pusilla*	OW, R	C		
Buff-rumped Thornbill	*Acanthiza reguloides*	OW, R	U	x	
Striated Thornbill	*Acanthiza lineata*	OW, R	U		
Yellow-rumped Thornbill	*Acanthiza chrysorrhoa*	OW, R	C		I

Noisy Fnarbird	*Philemon corniculatus*	OW	C		
Noisy Miner	*Manorina melanocephala*	OW	C		
Yellow-faced Honeyeater	*Lichenostomis chrysops*	R	U		
White-eared Honeyeater	*Lichenostomus leucotis*	OW, R	R		
Brown-headed Honeyeater	*Melithreptus brevirostris*	R	R		
White-naped Honeyeater	*Melithreptus lunatus*	R	R		
Scarlet Robin	*Petroica multicolor*	R	R		
Flame Robin	*Petroica phoenicea*	R	U		
Rose Robin	*Petroica rosea*	R	R		
Eastern Yellow Robin	*Eopsaltria australis*	R	C		D
Vaned Sittella	*Daphoenositta chrysoptera*	OW	U		D
Golden Whistler	*Pachycephala pectoralis*	R	C		
Rufous Whistler	*Pachycephala rufiventris*	R	C		D
Restless Flycatcher	*Myiagra inquieta*	A	R		D
Magpie lark	*Grallina cyanoleuca*	OW, A	C		I
Grey Fantail	*Rhipidura fuliginosa*	OW, R	C		
Willie Wagtail	*Rhipidura leucophrys*	OW, A	C		I
Black-faced Cuckoo-shrike	*Coracins novaehollandiae*	OW, A	U		I
Olive-backed Oriole	*Oriolus sagittatus*	R	R		
Dusky Woodswallow	*Artamus cyanopterus*	R, A	U		D
Grey Butcherbird	*Cracticus torquatus*	OW	U		
Australian Magpie	*Gymnorhina tibicen*	OW, R, A, D	C	x	I
Pied Currawong	*Strepera graculina*	OW, R, A	C		I
Grey Currawong	*Strepera versicolor*	OW	U		
Australian Raven	*Corvus coronoides*	OW, R, A	C		I
Satin Bowerbird	*Ptilonorhynchus violaceus*	D	R		
Red-browed Finch	*Neochmia temporalis*	R	R		
Welcome Swallow	*Hirundo neoxena*	A	C		I
Tree Martin	*Hirundo nigricans*	OW	R		
Silvereye	*Zosterops lateralis*	OW, R	R		
Common Starling	*Sturnus vulgaris*	D, A	U		I

1 Habitat OW = Open Woodland habitat and R = riparian habitat within TSR 60, A = agricultural grazing land (sheep and cattle) and D = developed areas (buildings, roads, dams) surrounding TSR 60

2 Recording rate C = Common (recorded in 3-4 of 4 surveys), U = Uncommon (recorded in 2 of 4 surveys), R = Rare (recorded in 1 of 4 surveys)

3 Breeding Where breeding activity was recorded it is indicated by an x

4 Conservation status in the NSW sheep-wheat belt following Reid (1999) D = declining, I = increasing

BIRDS OF THE UPPER MOLONGLO FLOODPLAIN, NSW: THE IMPORTANCE OF REMNANT GRASSLANDS AND WETLANDS

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Introduction

The natural temperate grasslands of south-eastern Australia have been drastically reduced in distribution and quality since European settlement (Benson and Jackson, 1994, Osborne *et al* 1993) Within the Australian Capital Territory only around five per cent of the original temperate grasslands remain in their natural condition (Sharp and Shorthouse, 1996) This modification has led to a change in the vertebrate species that inhabit these grasslands, and in some areas species have become locally extinct or drastically reduced in numbers as a result of the modification of the grasslands (Osborne *et al* , 1993) Many grasslands that have escaped the clearing process have been subjected to degradation and invasion by exotic grassland species (Benson, 1994) Degradation has, and still is occurring, as a result of pasture improvement activities, application of fertiliser, changed fire regimes and grazing for agricultural purposes

Activities such as increased grazing pressure, application of fertiliser and changed fire regimes result in a change in the species composition and relative abundance of the various species present in the grassland community (Benson, 1994, Benson and Jackson, 1994, Lunt, 1997) Land management activities such as changes in grazing pressure and pasture improvement, which can include poisoning, burning, ploughing, the application of fertiliser and the introduction of exotic seeds, have occurred in this area of study in recent times on a relatively large scale

The Upper Molonglo Floodplain presents a good example of a temperate grassland community that is, in this case, dominated by River Tussock Within the floodplain itself, various semi-permanent wetlands are present These wetlands are, for the most part, well vegetated and are around one metre in depth They range between 10 m and 200 m in length These 'wetlands' are the remainder of previous river courses (billabongs or ox-bow lakes)

The aim of this study was to identify the species of birds which seem to be more sensitive to the affects of disturbances to the natural habitats present on the Upper Molonglo Floodplain

Study area

The area of study is located within private property on the Upper Molonglo Flood Plain, 52 km south-southeast of the centre of Canberra The exact locality of the study area has been withheld at the request of the property manager The floodplain has a temperate climate, having warm t o hot summers and cold winters The two closest weather stations, Queanbeyan and Captains Flat, receive an average annual rainfall of 590 mm and 677 mm respectively (Bureau of Meteorology, 2001) The elevation of the study site

ranges from 730 m to 740 m On the floodplain itself, the main land use is agricultural, particularly sheep and cattle grazing Because of this grazing, a large portion of the floodplain has been pasture improved, thus highly disturbing the natural habitat

The vegetation within the study area was broken into two major groups for descriptive purposes, these being 'wetland' and 'grassland' The wetland vegetation is dominated by a native grassland riparian zone, which consists mainly of River Tussock *Poa labillardieri* Scattered Willows *Sala sp* are also present along the main river channel and on adjacent wetlands Aquatic vegetation in the main channel of the Molonglo River consists mainly of the Tall Spike Rush *Eleocharis sphaecelata,* Bulrush *Typha sp* , Common Reed *Phragmites australis,* Pond Milfoil *Myriophyllum sp* and various aquatic grasses The wetland aquatic vegetation is similar to that of the river except for lacking Bulrushes, having higher coverage of Pond Milfoil and also generally having a higher percentage of vegetative coverage

Native grasslands in the area are dominated by River Tussock at a height of 0 4-1 5 m Within these grasslands are scattered windbreaks of *Eucalyptus sp* , as well as small patches of naturally occurring Snow Gum *E pauciflora* There are also large areas of pasture-improved grassland, which consist predominately of *Phalaris sp*

Methods

Bird surveys were done opportunistically, as birds were not the main focus of the project being undertaken During each survey period, notes on bird species richness, abundance, breeding activity and habitat type were made The period of study commenced on 17 November 2000 and ceased on the 16 February 2001, and included 31 days in the field

Results

Birds observed in wetland and grassland habitats are summarised in Tables 1 and 2 These are followed by brief accounts of select species considered to be of special interest in the local context

Table 1 Species that are seemingly dependent on well-vegetated waterways with a native riparian zone, and other less-specialised non-dependent generalist species

Dependent	Buff-banded Rail	*Gallirallus philippensis*
	Baillon's Crake	*Porzana pusilla*
	Purple Swamphen	*Porphyrio porphyrio*
	Latham's Snipe	*Gallinago hardwickii*
	Clamorous Reed-Warbler	*Acrocephalus stentoreus*
	Australian Wood Duck	*Chenonetta jubata*
	Pacific Black Duck	*Anas superciliosa*
Non-dependent	Little Pied Cormorant	*Phalacrocorax melanoleucos*
	Great Cormorant	*Phalacrocorax carbo*
	White-faced Heron	*Egretta novaehollandiae*
	White-necked Heron	*Ardea pacifica*

Table 2 A list of the species observed utilising River Tussock, pasture improved, or either grassland type, within the Upper Molonglo Flood Plain

		River Tussock	Pasture improved	Either
Stubble Quail	*Coturnix pectoralis*			
Brown Quail	*Coturnix ypsilophora*	*		
Australian Shelduck	*Tadorna tadornoides*		*	
Australian White Ibis	*Threskiornis molucca*		*	
Straw-necked Ibis	*Threskiornis spinicollis*			*
Black-shouldered Kite	*Elanus axillaris*			*
Wedge-tailed Eagle	*Aquila audax*			*
Swamp Harrier	*Circus approximans*			*
Brown Goshawk	*Accipiter fasciatus*			*
Brown Falcon	*Falco berigora*			*
Nankeen Kestrel	*Falco cenchroides*			*
Masked Lapwing	*Vanellus miles*			*
Superb Fairy-wren	*Malurus cyaneus*			*
Magpie-lark	*Grallina cyanoleuca*			*
Willie Wagtail	*Rhipidura leucophrys*			*
Australian Magpie	*Gymnorhina tibicen*			*
Australian Raven	*Corvus coronoides*			*
Little Raven	*Corvus mellori*			
Singing Bushlark	*Mirafra javanica*			
Skylark	*Alauda arvensis*			*
Richard's Pipit	*Anthus novaeseelandiae*			*
European Goldfinch	*Carduelis carduelis*			
Golden-headed Cisticola	*Cisticola exiles*			
Common Starling	*Sturnus vulgaris*			

* Denotes that the species utilised that vegetation type(s)

Wetland birds

Baillon's Crake

Baillon's Crakes were restricted to well vegetated wetlands dominated by the Tall Spike Rush *Eleocharis sphaecelata*, it was the most common crake or rail on the floodplain This species was always observed as single individuals Due to their cryptic nature and given that this species was observed on five occasions, it was assumed that this was a common species The Baillon's Crake also utilised the native riparian zone as shelter when flushed from the wetland

Purple Swamphen

The Purple Swamphen was observed on only two occasions throughout the study On both of these occasions a single bird was disturbed from a nest that contained four eggs The nest was subsequently deserted and totally disappeared within the week after the first observation Due to this species being relatively easily detectable under most circumstances, it was rated as being rare on the floodplain When this species was observed, it did seem t o depend on a good cover of Tall Spike Rush for concealment

Buff-banded Rail

A pair of Buff-banded Rails with four hatchlings were observed at night on one occasion (20 Dec 2000) The hatchlings were sheltering in a Tussock Rush *Carex appressa,* with the male and female both present at close proximity (<5m) Upon re-visiting the site five minutes later, the hatchlings were sheltering under one of the parent's bodies, during which time the other adult bird was making unusual sounds behind our location, trying to distract our attention These unusual sounds were combined with the same bird running between River Tussock clumps in front of us This unusual display of behaviour had achieved its purpose, as by the time we had returned to the original location, the other adult and the hatchlings had gone From the limited observations of this species it seems as though it is dependent on heavily vegetated wetlands on the floodplain

Latham's Snipe

Latham's Snipe were observed on eight occasions throughout the study The species was seen as a solitary bird through to groups of four On all occasions the species was associated with well-vegetated wetlands or damp areas of River Tussock in depressions adjacent to wetlands This species was observed mostly after being flushed whilst walking in the area

Clamorous Reed-warbler

Clamorous Reed-warblers were quite common along the main river channel This species was most commonly associated with stands of Common Reed *Phragmites sp* and Bulrushes *Typha sp* Single birds through to groups of four were observed in the study area Although presumably suitable habitat was present at some of the wetlands associated with the river, Clamorous Reed-warblers were never observed in these wetland habitats

Grassland birds

Brown Quail

Brown Quails were uncommon on the floodplain and were confined to River Tussock grassland Single individuals or pairs were observed mostly after being disturbed by vehicle activity All records of this species were confined t o larger patches (>5ha) of River Tussock grassland, the species was apparently absent from smaller patches Although detected at regular intervals, and despite consistent visits to the study area, the Brown Quail was seemingly absent for periods of 2-3 weeks on two occasions during the study period

Singing Bushlark

Singing Bushlarks were uncommon on the floodplain, and, as with the Brown Quail, were restricted to larger patches of River Tussock grassland Singing Bushlarks were seen as individuals or in groups of two on most occasions

Groups of three or four birds were observed less often Males were particularly obvious when, in late November and throughout December, they performed their characteristic song flight

Golden-headed Cisticola

Golden-headed Cisticolas were more common on the floodplain than the previous two species Whilst most sightings were made in River Tussock grasslands, this species did seem to, on occasion, quite readily utilise smaller patches of River Tussock grassland and even areas of mixed native and exotic (predominantly *Phalaris sp)* grassland From the observations made it was evident that this species was more dependent on native grasslands for their habitat requirements Single individuals through to groups of seven were observed throughout the study

Discussion

Five species were considered to be dependent on well-vegetated waterways with a native riparian zone (Table 1) A further three species were identified as being seemingly restricted to River Tussock grasslands for their habitat requirements (Table 2) These habitats are potentially under threat from current farm practices and from the observations made, these species' persistence in the area could be under serious threat if any major destruction or modification of these habitats occurred in the future

Of the 'wetland' birds within the Canberra Ornithologists Group (COG) area of concern, the White-necked Heron is considered by Wilson (1999) to be an 'uncommon visitor' and the Latham's Snipe an 'uncommon non-breeding visitor' The Buff-banded Rail is considered to be an 'uncommon breeding summer migrant', whilst Baillon's Crake is classified as a 'rare warm weather visitor' by the same author

Of the 'grassland' birds in the COG area of concerm, the Stubble Quail, Black-shouldered Kite, Swamp Harrier, Little Raven and Golden-headed Cisticola are classified as being 'uncommon breeding species/residents' by Wilson The Australian Shelduck and Brown Falcon are classified as 'breeding residents present in small numbers', the Brown Quail a 'rare breeding visitor' and the Singing Bushlark a 'rare breeding resident/migrant' by the same author The Singing Bushlark is also listed as being an 'unusual' species by COG

Thus, this survey of the Upper Molonglo Floodplain identified 13 species that are classified as being at least 'uncommon' in the COG area of concern This should render the area important in respect to its contribution to the diversity of avifauna in the COG area of concern The Upper Molonglo Floodplain avifauna represents species typical of wetland and grassland communities that are under-represented in the COG area of concern

This set of observations was collated to give a rough idea of which species appear to be more dependent on natural community types and those that seem to be more generalist, and do not have such a narrow niche in respect to habitat preference The species with a higher dependence on natural community types should be the focus of future monitoring efforts, as they appear to be more sensitive to habitat change and thus a better indicator t o

the general health of the environment These should be **interpreted** as preliminary observations only, as biases such as non-random sampling and the short period of study could have jeopardised the results and conclusions made from this study Despite this, it is hoped that this knowledge could be built upon so in future indicator species could become true and accurate indicators of environmental health, so as to aid in future management decisions

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CANBERRA'S PART IN THE STORY OF AUSTRALIAN ORNITHOLOGY

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In 1997, Dr Norman Wettenhall approached me to write a history of the discipline of ornithology in Australia to coincide with the centenary of the Royal Australasian Ornithologists' Union (RAOU), since 1996 known as Birds Australia (BA). I was based in Canberra and BA was in Melbourne, but he had no problems about this The organisation was national and he wanted national coverage — and he didn't want a book about a club Nor was he worried that I was not a practising ornithologist He was seeking a popular history of people and ideas about birds So *The Flight of the Emu* was born — with a title that evokes the major Australian journal of ornithology that is now in its second century The flying was important too It was for the all the ideas about Australian birds that evolved in the twentieth century

I quickly discovered that being in Canberra was no disadvantage to my task Canberra and its people have made a disproportionate contribution to the national stories of Australian ornithology in the twentieth century Because of its diplomatic mission, many people pass through Canberra with knowledge of birds in other places and a well-trained comparative eye The Council for Scientific and Industrial Research (later CS1RO) had a large presence here from the 1920s, and the universities have attracted scientists since the 1940s — and many scientists, even those with no formal qualifications in zoology, are interested in birds

Canberra's bird-rich location above all prompts an interest in birds in everyone who comes to visit or to live here We are in a transitional zone between the inland (arid zone) and the coastal zone We are also on the way up to the highest mountains, and so we are in the path of altitudinal migrations And the suburban developments since the 1920s have changed dramatically the environments available to birds We live in a well-watered, heavily treed oasis surrounded largely by dry open plains and it attracts birds

Norman Wettenhall (1915-2000) was very fond of Canberra It was his place of annual escape from his busy paediatric practice in Melbourne The Australian Paediatric Association, established in 1951, had a meeting every year in Canberra for about two decades They chose Canberra because there were no paediatricians here at the time — everyone was away from home and therefore free to mingle and exchange ideas Norman would skip a session or two, and make sure he visited Robert Carrick or someone else at the CS1RO Wildlife Survey Section and have a break from paediatrics They would watch Carrick's magpies together along the drive at Gunghalin, and talk about ideas of territory and helpers at the nest

The early years of Canberra and some of the `part-timers'

Wettenhall was one of many 'part-timers' who enjoyed Canberra His first visit here was in about 1930 with his younger brother and his father (who was also a paediatrician) They came to visit Sir Cohn MacKenzie and the collections of the Australian Institute of Anatomy, which was then still being built (It is now ScreenSound, the film and sound archive) They camped on Acton Peninsula in chilly conditions in the May school holidays 'My mother had died in 1928 (when Norman was only 12) and my father had two sons I don't think he knew quite what to do with them, so we went camping', he said in an interview (19 March 1998) Birding became an important hobby, and something that tided him through that difficult period In 1999 he returned to see again MacKenzie's 'wet specimens' that had impressed him so much as a boy The bottles of Australian animals preserved in formalin are now part of the Collections of the National Museum of Australia The idea that one could and should study Australian fauna stayed with him Although Norman's working life focused on human anatomy and physiology (particularly hormones) he read widely in ornithology, and was a particular supporter of studies of Australian birds

The decision to situate the national capital in Canberra prompted other early visits to the area In November 1921, before the city was built, the Melbourne journalist and popular nature writer, Charles Barrett (1922) visited the Federal Capital Territory, and documented the 'Birds around a Homestead' He saw 'flocks of White-browed Babblers' and photographed the open paddocks with occasional trees that are favoured by the woodland birds that are in sharp decline today

Gregory Mathews —*Bards of Australia*

The expatriate, independently wealthy Australian, Gregory Mathews came to have a major influence on Canberra's place in Australian ornithological history His story begins in the first decade of the twentieth century when he decided to follow in the footsteps of Gould and produce a set of coloured plates of the birds of Australia Richard Bowdler Sharpe, the Curator of Birds at the British Museum encouraged this, but suggested that before embarking on the expensive task of employing an artist and commissioning plates, he needed to prepare a full and up-to-date list of Australian birds There were guides, but all were controversial Mathews the perfectionist decided to build from scratch He sent collectors out into all parts of remote Australia to supplement the collections at the British Museum By the 1920s Mathews' collections eventually amounted to more than 40,000 skins and 5,000 reference books and journals His *Birds of Australia with hand-coloured plates,* was published in fourteen volumes in London between 1910 and 1927 About this time he ran into financial difficulties and, having finished the plates, he sold the skins to another great collector, Lord Rothschild Parting with them was a wrench, but the bitterest blow came soon after, when Rothschild himself, under financial pressure from an indiscreet ex-mistress, was forced to sell the whole Mathews collection along with his own The

Australian government, in the grip of a depression, failed to buy Rothschild out Eventually 82,000 skins were boxed up and sent to the American Museum of Natural History in New York in 1931 Mathews was not the only one upset Rothschild's recently retired curator Ernst Hartert, who had moved to Berlin, `broke down and wept when he received the letter' telling of the sale

Mathews determined that although the skins had gone, the books at least should come to Australia He presented his collection of ornithological reference books and journals to the new National Library of Australia in Canberra in 1939 He came out from England and lived in Canberra between 1940 and 1945 to supervise the safe-housing of his books During those war years he wrote an autobiography *Birds and Books the story of the Mathews ornithological library,* which was published in Canberra in 1942 In his time in Canberra, he also compiled a *List of Birds of the ACT* (1943) Many of the books in the Petherick Collection have the distinctive Mathews bookplate featuring Australian birds The historical resources on Australian birds in the National Library of Australia are easily the best in the world, largely because of this collection, and because of the commitment of the library to continue subscribing to Mathews' major journals (including *Emu* and *Ibis)* in the many years since

Tracking the visitors

Not all the visitors who came and went from Canberra were people One of the favourite visitors beloved of Canberra birdos is the Yellow-faced Honeyeater *Lichenostomus chrysops* A systematic interest in documenting our migratory birds dates from the 1940s Donald W Lamm had two stints at the American Embassy in Canberra, the first from 1947-50 He later returned from 1960-64 He was an important influence on Canberra's birding community, bringing an international eye and a strong commitment to publishing findings Lamm worked with CSIRO biologist John Calaby, better known as a mammalogist than a birdo, to undertake one of the earliest — possibly the very earliest — transect surveys used in Australian ornithology

Between September 1947 and September 1949, Lamm and Calaby (1950) walked a section of the Murrumbidgee River corridor thirty-seven times, observing birds all the way The transect-survey technique has become very important — as people have realised that active methods such as walking along a transect or searching an area turn up more birds than stationary observation It was through this repeated, active survey that they were able to document the altitudinal migration of the honeyeaters as they escaped the mountains in autumn and returned for the summer They published 'Seasonal Variation of Bird Populations along the Murrumbidgee in the Australian Capital Territory' in *Emu*

This was an important model for surveying birds that inspired other studies elsewhere in Australia and complemented the later Brindabellas banding study, in which Lamm was also a participant in the 1960s A number of COG members will be familiar with the transect survey method through participation in the more recent work of

David Lindenmayer (2002) in an area near Tumut, New South Wales He is studying the landscape ecology of patches of native vegetation embedded in forests of radiata pine using bird populations Thanks to the efforts of the COG volunteers who made the numerous transect observations, he has amassed a very large data set with 165 sites and 90 species of birds Such a method and the skilled observer base, has allowed him to map the changes in bird populations, not simply record presence or absence of a species The results are complex He has found a complex `reassemblage' of bird species in the disturbed areas, rather than a fixed or depleted community of birds In other words, he did not find fewer birds, rather, he discovered that some bird species replaced others as the landscape changed

Changing landscapes

Canberra itself is a radically changed landscape despite the fact that its hilltops have remained clad in bush in accordance with Burley Griffin's original concept Suburban development has been extensive — particularly since the 1960s when many government departments moved from Melbourne to Canberra In 1964 Lake Burley Griffin replaced the racetrack near the Molongolo River and made a new all-year-round wetland habitat, more reliable than Lake George Lakes Ginninderra and Tuggeranong and the Gungahlin Pond have added additional water points in ensuing years The suburban growth has provided many more trees than were there before Most of Canberra has developed since the fashion for native gardens took off in the 1960s The Society for Growing Australian Plants was established in 1957 in Victoria to encourage such gardening, and had spread to all states and the ACT by 1962 The idea of gardening for birds, by planting grevilleas and other nectar-rich native plants followed soon after

What have these changes meant for birds' It would be difficult to answer that question if we had not had the detailed work of Don Lamm and David White (1949), 'Changing status of Avifauna in the ACT' Lamm and White documented the avifauna in the pre-lake era, comparing it with earlier observations, including those of George Bennett who travelled extensively in the Yass area in the 1830s and kept excellent natural history notes The next observations were from the 1920s, when Charles Barrett's notes appeared and also an important list by D P Jones (1929) 'List of Birds of Canberra, the Federal Territory', based on his observations from 1913-28 around Duntroon Barrett and Jones were both conscious of setting `benchmarks' before the city was built, Barrett commenting that 'bird life should remain plentiful on the plains and among the hills long after the city has been built and peopled' Lamm and White also incorporated the Mathews survey from the 1940s, and personal records and anecdotal observations of change from people like Francis Ratcliffe who had arrived in Canberra in the 1930s Lamm was well aware of the value of documenting bird-life in the regions of rapidly developing cities, noting that these are not always predictable, and citing the American examples of the increase in robins *(Turdus migratorius)* on the east coast with city developments But he and White could not have known just how timely their survey was with the

rapid change that followed in the next decade

Professional ornithology in the ACT from the 1950s

The establishment of the CS1RO Wildlife Survey Section at Gungahlin in 1949 brought a core group of some of the best ornithologists in Australia (and internationally) to Canberra Birds were a genuine personal interest of the first Officer-in-Charge, Francis Ratcliffe, and a professional as well as personal interest of the first Chief Harry Frith (Wildlife became a Division in 1962, about a year after Frith had taken over as Officer-in-charge) Although the Section had little time and no financial support for curiosity-driven research, there were enough birds regarded as 'pests' to ensure that considerable ornithological work was undertaken officially, much of it near Canberra Robert Carrick work on territory in magpies was one of the reasons that Australian Bird Banding Scheme (ABBS) was established in Canberra under the auspices of CS1RO

`Unofficial' ornithology was also important for these professionals Ian Rowley, working initially as technical officer to Carrick magpie project, used his unofficial time at weekends, lunchtimes and in the evenings to begin a lifetime's work on fairy-wrens Later, he also colour-banded ravens *(Corvus coronoides* and *C mellori)* and White-winged Choughs *Corcorax melanorhamphus* and studied their territorial and co-operative breeding behaviours over a ten-year period near Canberra The chough studies continue to the present with the work of Andrew Cockburn, Rob Heinsohn and their students at the Australian National University (see, for example, Heinsohn and Cockburn (1994))

The banding scheme provided an important bridge between amateur and professional ornithologists The idea that big international questions could be tackled by observing Australian birds justified the commitment of the CS1RO to a scheme 'to harness the mass effort of the large numbers of amateurs interested in the field study of birds', as Robert Carrick wrote in his first ABBS report Whilst in most states, banding in the 1950s and 60s focused on waders and seabirds, the land-locked ACT team was interested in passerines, particularly the migrating honeyeaters Steve Wilson, an indefatigable bander and enthusiast, took up the challenge of mist-netting Before mist-nets, cuckoos and swifts had been regarded as untrappable' By the time Warren Hitchcock (1964) was reporting on the first ten years of the ABBS, 34,000 birds had been trapped in mist-nets, a significant number of them in the Brindabella mountains at dawn in very chilly conditions From April 1961 until May 1982 Wilson conducted 292 banding trips to New Chums Road A computer analysis of the 10,540 birds captured and banded between 1961 and 1979 showed 52 different species, with a total of 4,597 retrapped later (Tidemann, Wilson and Marples 1979)

1963 ACT Branch of RAOU

Wilson was at the heart of Canberra birding activities from their inception—and his enthusiasm continues to the present On 25 November 1963, a group including John McKean and Warren Hitchcock from CS1RO Wildlife, Don

Lamm and Stephen Marchant met at Wilson's home in Narrabundah and decided to establish an ACT branch of the national body, RAOU

The driving force for this initiative was the newly-arrived geologist Stephen Marchant, who came from England to the Bureau of Mineral Resources in May 1963. Like Lamm he was widely travelled He had done war service in New Guinea and New Britain, and had also worked in Africa, Egypt and in South-east Asia Although he was not trained as an ornithologist, he had been active in the Cambridge University Bird Club in 1936, and quickly sought out the local Canberra birding community through the artist-ornithologist, Betty Temple-Watts, who was married to one of Marchant's colleagues at BMR Within two months Steve Wilson had enlisted him in the Brindabella mist-netting trips It was Stephen Marchant who observed that while there were branches of the RAOU in every state, the ACT did not have one and so the meeting was convened to address this lack Marchant found himself Chairman of the new group, much to his surprise 'I thought that I was too recent an arrival in Australia or ACT', he commented.

The national Nest Record Scheme was a particular initiative of this era Marchant modelled this closely on a similar scheme run by the British Trust for Ornithology, and ran it himself for most of the 1960s. It was very much dominated by Canberra and district records for many years

1969 Foundation of COG

By 1966, Marchant felt that while the Nest Record Scheme and the banding was progressing, the national organisation in Melbourne was stagnating, and needed a new constitution, and influx of new ideas Through the ACT branch he sent 'An Appeal for a Critical Review of the Affairs of the Union' to the national council in Melbourne for discussion at the annual meeting This very tough but fair document panicked one conservative member of council who hid it in the RAOU library until the Council meeting, by which time it was too late to discuss it The result was major ructions in a national council that was very disorganised, and trying hard to not change Some changes came, despite resistance, and the RAOU meeting in Canberra in 1968 was the beginning of a new style of scientific congress, with a tightly organised field trip But the journal *Emu* still lagged behind current scientific practice and the financial affairs of the RAOU were a disaster

Eventually the RAOU did get its affairs in order and on 15 April 1970, approved revised Articles of Association, which abolished State branches There is more than a little irony in the fact that this led to the group most active in the RAOU reform process breaking away to become the Canberra Ornithologists Group (COG) However, the two groups remained close — and most COG members remained *Emu* subscribers — especially as, from 1969, Stephen Marchant had taken over as editor, and tightened up the style of the journal

Canberra's international face — 1974

When the International Ornithological Congress agreed to have its first-ever southern hemisphere meeting in Canberra in 1974, the young city of Canberra and its local ornithologists found themselves under international scrutiny The conference's official sponsors were the RAOU (whose affairs were put in order only just in time) and the Australian Academy of Science It would never have worked, however, without the leadership of Harry Frith and his team from CS1RO Wildlife (including all their families) and the local birding community, including COG and the Australian National University Biological Society Almost all the international and interstate delegates attended one or other of the two day tours near Canberra (Tidbinbilla and Burrinjuck Park) on Wednesday 14 August, despite the fact that it was snowing

Local support was critical from day one, when a last-minute transport strike stranded delegates on their way to the Congress — including the President, who was stuck in Perth The opening session had to be delayed for eight hours and the whole first day's proceedings were rescheduled over the rest of the week In the meantime, those who had arrived had to be entertained A busload of ornithologists went birding at a property `Nanima' near Yass that afternoon, courtesy Mr M Darmody, who obliged at very short notice

International Ornithological Conferences had been held every four years since 1884, but only once before had they been outside Europe — and that was to the very well-endowed and long-established Cornell University in upstate New York Canberra was a real newcomer in such company, with many of the buildings used by the delegates only being built a year or two before the conference Despite the bitter weather (August was probably not the best month to choose, but was dictated by the needs of the mostly European and North American international delegates), the air-traffic strike and a narrowly-averted blockade on oil for heating, the conference survived to be a grand success The bird-rich city of Canberra was much appreciated by those who had travelled from afar

The theme of the conference, 'the two hemispheres', served to highlight the new and emerging work on birds from the southern hemisphere The idea of Gondwanan radiations' — bird families like the Corvids that had evolved in the south and migrated north — was a new and exciting one for many from the north Co-operative breeding strategies, relatively common in Australian birds but unusual in Europe and North America, were also much discussed

Canberra Garden Birds Survey and the *Atlas of Birds of the Australian Capital Territory*

In 1981 COG commenced an important longitudinal study of the avifauna of suburban gardens, a study which continues to this day The results from the first 17 years of this survey were published by COG in *Birds of Canberra Gardens* At that stage, an astonishing 44,000 weeks of observations in 270 gardens went into discovering that more than 200 species had been seen in

suburban gardens (or above them, in the case of eagles) well up on the 174 species recorded in 1950 by Lamm and White The idea of garden observations has caught on elsewhere too The Bird Observers' Club of Australia 'Birds & Gardens Survey' was undertaken at regular intervals between 1988 and 2000, mapping the relations between birds and plants predominantly in Melbourne gardens, and trying to identify what attracts native birds to gardens Sydney is the focus of the latest in these projects, with its Birds in Back Yards (B1BY), which began in 1999 Birds Australia's Southern New South Wales and ACT Group (SNAG) is sponsoring this project In Queensland, Peter Woodall coordinated garden bird surveys in 197980 and again in 1999-2000 for the Queensland Ornithological Society (now Birds Queensland)
Building on 200,000 observations made between 1 September 1986 and 31 August 1989, the Canberra Ornithologists Group on commission from the National Capital Development Commission (later the National Capital Planning Authority), created the 1992 ACT Bird Atlas The Atlas, edited by McComas Taylor and COG, documented 226 species (including 11 aviary escapees) The fine scale of the Atlas and the seasonal coverage in all cells (and monthly coverage in most), ensured that COG was one of the leaders in Australia in bird-atlassing Although counting was not part of the actual procedure, the reporting rate was analysed closely so that status (very common to very rare) could be represented 'Common' was not necessarily an indicator of great numbers, but was correlated with reporting rates, reflecting the spread of species and their visibility to observers Annual reports in *Canberra Bird Notes* (published since 1975), and summaries associated with the Waterbird and Garden Bird Surveys provided some historical background and incidental records The presentation of the atlas also broke new ground Rather than the standard 'dots-in-the-box' technique, they presented the distributions using a contouring method to indicate areas of high to low probability The new national atlas due out in 2002 from Birds Australia will have seasonal maps, but could not hope for the detail of the fine- scaled ACT Atlas

Reflecting on Canberra's contributions to Australian ornithology

This brief survey, far from exhaustive, makes evident some of the outstanding contributions made by the local amateur and professional ornithological community in Canberra to the national birding effort over the twentieth century The signs are already there that this will continue in the twenty-first, with the first President of Birds Australia this century being Canberra ecologist and birdo, Henry Nix

I feel that the last word should be with Steve Wilson, whose reflective work *Birds of the ACT Two Centuries of Change* (published by COG in 1999) gathers together and summarises much of the data generated in projects mentioned above, and many others Steve and his wife, Nonie, exemplify the amazing initiative and drive of Canberra's ornithologists Unfussed by the challenges of new technologies, Steve, aged 86, went out and bought a computer to do this project, which they

then undertook together with remarkable teamwork, Nonie typing the text whilst Steve operated the mouse

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Libby Robin is an environmental historian at the Centre for Resource and Environmental Studies, Australian National University Her book, The Flight of the Emu, *is published by Melbourne University Press, and available from 'all good bookshops' (including The Birding Shop (Melbourne), The Co-op Bookshop, ANU (Canberra) or online from the publisher at http //www mup unimelb edu au/catalogue/0 52284987j html)*

Charles Barrett's view of the Federal Capital Territory in 1921 [Photo: *Emu* 1922]

ODD OBS

A meal with a sting: magpie eating European wasps

The diet of the Australian Magpie *Gymnorhina tibicen* is varied with material collected from stomachs ranging from seeds to skinks (Barker and Vestjens, 1990) Despite the wide range of dietary items it came as a surprise to find a magpie eating European wasps *Vespula germanica*

The afternoon of 10 May 2002 was warm and the wasps were very active, entering and leaving a nest in the ground near an out-building at CS1RO Sustainable Ecosystems in Gungahlin, ACT Close to the nest an adult magpie was seen jumping up and down causing the wasps to attack The bird then caught the wasps one by one from the air and proceeded to swallow them two to three at a time after rubbing the beak on the ground There was no indication that the wasps were dismembered in any way and appeared to be swallowed whole Over a period of about five minutes the bird consumed at least eleven wasps

A species well known for taking venomous bees and wasps is the Rainbow Bee-eater *Merops ornatus* A behaviour known as bee-rubbing enables the birds to remove the sting or render it ineffective (Nicholls and Rook, 1962) The head of the insect is bashed many times against a perch and the bird's grip then transferred to the abdomen just anterior of the sting The sting is then made ineffective by rubbing the projecting tip of the abdomen against the perch During bee-rubbing the bird's eyes are closed to prevent the venom from squirting into the eyes (Higgins, 1999) Except for rubbing the beak along the ground, the magpie was not seen to exhibit any of these behaviours yet there appeared to be no ill effects on the bird

Whether this behaviour is to remove the sting or the venom is unknown The venom is not poisonous unless injected so bee-rubbing is probably used to remove the sting But, in this case it is unlikely because, unlike bee stings, wasp stings are not easily detached and the cursory wipe of the magpie's beak did not remove the abdomen

Barker and Vestjens (1989, 1990) list 124 bird species taking 'wasps', although no further details are provided Only in the Meropidae, Coraciidae, Acanthizidae (now Pardalotidae), Corcoracidae, Grallinidae (now included in Dicruridae) and Artamidae have the majority of species been recorded as taking 'wasps' whilst only the Rainbow Bee-eater and the Dollarbird *Eurystomus orientalis* are listed as taking Vespidae (true wasps) The Australian Magpie, although listed as taking Hymenoptera (ants, bees and wasps), is not recorded as taking 'wasps'

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Stubble Quail at 1 460 metres

On 2 June 2002 when walking in a delightful part of the Kosciuszko National Park, on the ridge between the Tantangara Road and Boggy Plains, at an altitude of about 1 460 metres (35° 53' S, 148° 37' E), our group came upon some quail Some of us caught a glimpse of more than two birds on the ground and I flushed one which was almost certainly a Stubble Quail *Coturnix pectoralis*

The habitat is fairly thick Snow Gums with a tussock grass and low shrub understory This was not a setting in which **I** expected to see quails Subsequent research in the literature indicates, however, they have been reported in such habitats HANZAB (vol 2) records them in 'alpine herbfield' and Green and Osborne (1994) state that the Stubble Quail 'is an uncommon summer resident of the subalpine and alpine zone, where it is usually encountered in tall alpine herbfield and tussock grassland'

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An impressive mixed feeding flock

On 16 May 2002 at approximately 10 00 h, **I** witnessed a fantastic aggregation of birds in a mixed feeding flock in Wamboin, about 20 km from Canberra (COG grid Q12) The birds were feeding near our house, mainly amongst Brittle Gum *Eucalyptus mannifera* regrowth surrounding several 10-15 m trees, but also on the ground and in fallen timber Although we regularly experience large mixed feeding flocks, particularly at this time of the year, this was the largest aggregation both in abundance and diversity that **I** could recall It comprised the following species

Flame Robin *Petroica phoenicea* (M)
Scarlet Robin *P multicolor* (M,F) Golden Whistler *Pachycephala pectoralis* (2xM,F)
Varied Sittella *Daphoenositta chrysoptera (-20)*
Brown Thornbill *Acanthiza pusilla*
Yellow-rumped Thornbill *A chrysorrhoa* (-20)
Buff-rumped Thornbill *A reguloides (-12)*
Striated Thornbill *A lineata (-10)*
White-eared Honeyeater *Lichenostomus leucotis*
White-plumed Honeyeater *penicillatus* (4)
Brown-headed Honeyeater *Melithreptus brevirostris (7)*
Eastern Spinebill *Acanthorhynchus tenuirostris* (2)

Red Wattlebird *Anthochaera carunculata*
Striated Pardalote *Pardalotus striatus*
Grey Shrike-thrush *Colluricincla harmonica*
Superb Fairy-wren *Malurus cyaneus (5)*
Black-faced Cuckoo-shrike *Coracina novaehollandiae* (2)
Willie Wagtail *Rhipidura leucophrys* (2)
Welcome Swallow *Hirundo neoxena* (-15)

The sittellas, honeyeaters and robins seemed to be the core species, picking up various other residents as they moved through, and then separating again The sittellas moved methodically along and mainly downward on trunks and branches, the honeyeaters foraged mainly in foliage, the thornbills showed their usual niche preferences Brown in low shrubs, Yellow-rumped on the ground, Buff-rumped on the ground and probing bark, and Striated hang-gleaning and hovering in outer foliage The swallows were circling above the mixed feeding flock A sight (and sound) extravaganza of 100+ birds

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Xenophobic mynas

On 2 June 2001, at about 9 40 h, I observed a Spotted Turtle-Dove *Streptopelia chinensis* in our Kambah garden for the first time in the seven years we'd been there It was perched on the power lines over the back fence and, when I first saw it, was being mildly harassed by four Common Mynas *Acridotheres traits* The mynas would approach, squawking, to within about 30 cm of the turtle-dove, and behave in a very 'in your face' manner The turtle-dove was largely unperturbed by the attentions of the mynas, occasionally shuffling further along the wires to distance itself from them After several minutes the mynas seemed to lose interest and eventually flew off The turtle-dove remained placidly on the wires for a further two hours

A year later, at 8 10 h on Saturday 22 June 2002, I witnessed a similar event as three mynas confronted a male Superb Parrot *Polytelis swainsonii* (presumably an escapee, and the first I've seen in the area) in a leafless silver birch across the road Also in the tree were four Australian King-Parrots *Alisterus scapularis* and a pair of Eastern Rosellas *Platycercus eximius* The mynas flew into the tree and squawked at the Superb Parrot from a distance of just 30-40 cm They completely ignored the other parrots The Superb Parrot made a few casually indignant comments in reply but soon flew off and was not seen again The mynas left soon afterwards leaving the king-parrots and rosellas to continue preening

I am intrigued that the mynas were so disturbed by the presence of the turtle-dove and the Superb Parrot, and can only assume that it was because they were unfamiliar with them They have no problem at all with the Crested Pigeons *Ocyphaps lophotes* or any other parrots Of course, the mynas may simply have been more friendly than the other birds and were welcoming the newcomers to the neighbourhood'

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BOOK REVIEWS

The Flight of the Emu. A Hundred Years of Australian Ornithology 1901-2001 by Libby Robin Melbourne University Press 2001
492 pp, 24 colour plates, many black & white photographs

The Flight of the Emu hatched from the desire of Dr Norman Wettenhall, a long-standing devotee and significant benefactor of ornithology in Australia, to publish a history to coincide with the centenary of the Royal Australian Ornithologists Union (Birds Australia) He engaged Canberra-based Libby Robin, a science historian with a bent for natural history His brief was to write a history of the discipline of ornithology in this country

Wettenhall's s choice of author proved wise Libby has an encyclopedic knowledge, and is a thorough chronicler with an ear for a story Her enjoyment of birds stops short of the passion that so often stifles objectivity in ornithologists, indeed enthusiasts in any field She sweeps wide As she implies, ornithology has a wider embrace than any other scientific discipline Birds' beauty and accessibility, and their interesting habits, have always drawn amateur and professional scientists as well as bird watchers The outcome of her scholarship is more a history of these ornithologists than of ornithology

Canberrans figure large in *The Flight of the Emu*, particularly the last half Some like Harry Frith, John Calaby, John McKean have passed into history, others such as Henry Nix, Steve Wilson, Dick Schodde, Mark Clayton, Simon Bennett and Tony Howard are still very much a part of the ornithological community and players in its politics The index indicates that Canberra has garnered mentions on 34 pages, second only to Melbourne Canberra Ornithologists Group and *Canberra Bird Notes* add a couple of additional pages to the tally

The book is divided into 12 chapters, more or less in chronological order, three to a quarter century The chapter titles are self-explanatory, each chapter dedicated to a theme reflective of the period

Chapter 1 *A national ornithological union birds and the Australian national interest* deals briefly with ornithology in colonial times as a background, moving quickly to the early days of the RAOU A dinner attended by seventeen gentlemen with a strong interest in the natural history of birds was the genesis of the Union The centerpiece of the table was a ground thrush's nest complete with fresh-laid eggs, a clue to the prevailing interest of the time A few dinners later, in 1901, the year of Federation, the Union was launched Its objects were 'the advancement and popularization of the Science of Ornithology, the protection of useful and ornamental avifauna, and the publication of a magazine called *The Emu* ' Apparently, useless and unattractive species could fend for themselves

The scientific collections of skins and specimens for museums and private collections and live birds for display in zoos continued to be a preoccupation, as outlined in Chapter 2 *From Bass Strait to*

the Kimberley collectors, collections and the ornithological discovery of Australia By the time Gould had finished describing and illustrating all Australian birds in the late 1800s, about 95% of the 745 or so species found in Australia were known The early years of the 1900s were spent unearthing new species, improving knowledge of distribution and variation, and building strong reference collections in museums Shamefully, the 40 000 item Gregory Mathews Collection, the only collection of Australian birds to rival Gould's, after refusal by an Australian government ignorant of its worth, ended up in America, as had Gould's the century before.

Mathews introduced the trinomial system to Australian ornithology then proceeded to name a multitude of birds, many to win favour with friends and colleagues The resulting chaos took years to undo Of the 4000 taxa (species and subspecies) recognized by Mathews, 1200-1300 are now accepted Mathews' impressive collection of books, which did remain in the country, in the National Library, helped to unravel the mess Chapter *3 What's in a name Gregory Mathews and the 1926 checklist* chronicles the discussion within the RAOU on conformity in naming, both scientific and vernacular, ever a vexatious issue

Chapter 4 *An improving science education, protection and the collection controversy* takes the reader into the second quarter century, by which time the mood of the public was shifting towards nature preservation Major themes are the first setting aside of land for national parks, campaigns against the trade in egret plumes, nature writing and education The Union supported efforts to curb recreational 'schoolboy' collecting and to set a good example resolved that there would be no more egg or bird collecting on their annual campouts, but it continued By 1935, public sentiment had resulted in restraints being imposed on serious scientific collecting Presumably in protest, at the Marlo campout George Mack of the Museum of Victoria rose from breakfast to shoot a Scarlet Robin in front of the other, horrified campers The incident sparked a long and acrimonious debate, which polarised into (sentimental and/or ignorant) amateur vs (arrogant and/or self-serving) scientist, still an undercurrent today

After World War 1I, photography and sound recording showed that specimen collection was only one means of studying birds *Chapter 5 Beyond Marlo conservation and ornithology reunite* documents the beginning of the move away from a focus on individual birds to an interest in their habitats and the need for better understanding of their habits

CS1RO scientists recognised this need and quickly became the leaders in Australian ornithological research *Chapter 6 Migratory paths and life histories a national banding scheme* details the introduction of bird banding and formation of a national banding scheme, run by CS1RO Steve Wilson gets special mention as one of the first in the country to use mist nets In 1962 he began the New Chums Road banding project that was to span 20 years and become a training ground for a number of budding ornithologists. In one of her

one of Steve Wilson's 'little team of school boys that used to go banding' (p 158) was Barry Baker, who, in a nice twist of fate, went on to head the Australian Bird and Bat Banding Scheme Wilson was part of the group that in 1963 set up the ACT branch of RAOU, which, after the RAOU abolished branches in 1970, became COG

Chapter 7 *New ornithology professionals CSIRO, museums and universities in the post-war era* covers the increasing marginalisation of the RAOU and the rise of CS1RO and universities as centres of ornithological excellence ACT members of the RAOU became concerned at the organisation's poor professional profile and had come to realise that this reflected a deeper malaise Robin records the ensuing events in Chapter 8 *The 1968 revolution confrontation and change at the RAOU* The revolution began at the AGM in Canberra and a letter from the ACT branch, proposing sweeping reforms, played a seminal role There was even some skullduggery when the Canberra letter was apparently kept from council but found by chance hidden in a book The malcontents called on the RAOU to catch up with recent developments in ornithology, get its administration back on track and reassess its purpose and priorities The alternative was mutiny by professionals to form a new organisation The parallel to recent discontent with Birds Australia is remarkable, in both cases the outcome was a reinvigorated organisation

In 1974, CS1RO Wildlife's Chief, Harry Frith, brought the international ornithological world to Canberra Robin documents Frith's often overlooked influence on southern avian research and, in Chapter 9 *Going international the International Ornithological Congress of 1974,* despite a nationwide airline strike, his highly successful staging of the congress, at which COG assisted with excursions

Chapters 10 and 11 *Bird observing field guides, atlases and observatories* and *Conservation in the age of biodiversity science, community and the environment* deal with backyard birdwatchers and dedicated twitchers and tickers and their trappings, observatories, and the brokering of partnerships between professionals and volunteers to conduct nationwide atlases Canberra initiatives, the 1986-1992 ACT bird atlas and resulting book by McComas Taylor and COG, and Birds in Backyards, get a guernsey The conservation movement that fledged in the 1970s matures into a concern for the preservation of biodiversity This concern drives the purchase of two large properties by Birds Australia, funded by public appeal

In the final chapter *The state of the art a resurgent partnership* Robin argues that via projects such the ambitious *Handbook of Australian, New Zealand and Antarctic Birds,* and the continuing improvement of their scientific journal *The Emu,* the RAOU has reclaimed some of its influence on Australian ornithology

Three essays on birds — the Night Parrot, lyrebirds and Noisy Scrub-bird — form interludes between each quarter-century and reflect the flavour of the period An epilogue, and appendices on People of the Century, and lists of RAOU/BA

officers and staff, Australian bird journals and newsletters, congresses and campouts and the WW1 RAOU honour roll, extensive footnotes and comprehensive index complete the text

Among the two handfuls of colour plates that break the text into three, and the black and white prints inserted into the text itself, are last photographs of the now extinct Paradise Parrot, the 1917 RAOU meeting room complete with egg cabinets watched over by a fearsome stuffed Wedge-tailed Eagle, a group skinning birds around the campfire, and long-skirted ladies gathering mutton-bird eggs They give the book the feel of an old album of family holiday snaps, of idiosyncratic relatives and their more or less well-remembered visitors

Centred on the RAOU, and taking a generous definition of ornithology, *The Flight of the Emu A Hundred Years of Australian Ornithology 1901-2001* isn't, as already noted, as much a history of the science of ornithology as a reflection on its main protagonists Fortunately for the reader, the antics of ornithologists can be every bit as entertaining as those of the birds they study

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Canberra Birds. a report on the first 18 years of the Garden Bird Survey by Philip A Veerman 2002 Privately published by P A Veerman, 24 Castley Circuit, Kambah ACT

Some of Canberra's political entities are sometimes accused of being all gloss and no substance' However, the study of its garden birds has had both a glossy treatment with the publication of *Birds of Canberra Gardens* by the Canberra Ornithologists Group in 2000 and now has a more detailed and technical treatment with the publication of the book under review

Veerman's 2002 report starts with a review of other garden bird surveys both in Australia and overseas, which provides a context for the Canberra survey This is followed by a history of bird surveys in Canberra, including the Atlas and Annual Bird Reports This leads on to the start of the Garden Bird Survey (GBS) Its origins are described in detail, covering the different versions of the GBS annual charts and the instructions that were supplied with them Finally the methods used to analyse these data are described from the initial 'cut and paste' methods to the subsequent use of computer databases

The next section provides some overall results from the survey, with graphs showing various measures of participation in the survey and seasonal changes in the number of species recorded and the abundance of all birds Then follows some interesting graphs on the cumulative numbers of species recorded, showing that even after 18 years new species are still being added Breeding records are analysed as are the effects of observer effort on other parameters An interesting analysis compares some of the parameters, in particular the relationship between species abundance (A) and recording rate (R%)

Over 40 pages are taken up with this preliminary material. Then follows 50

pages of species accounts and 15 pages of seasonal and annual graphs for most of the species This is the real 'meat' of the report and the section that will be most heavily used by ornithologists The species accounts and the groups of species have a few lines of introductory text — in some cases these initial comments are so general that they have little value - but they are then followed by more specific comments on notable aspects of seasonal or annual variation, migration and breeding The seasonal graphs are presented as histograms and these generally show quite clearly whether there is seasonal variation or not Annual variation is shown by line graphs and linear regression lines are fitted to some of these graphs In some cases the trends do appear linear but in other cases some other form of analysis (curvilinear, GLM, etc) would probably have been more appropriate In any case there is no indication of whether the regressions are significant or not There is clearly scope for further work in this area

Finally there are eight appendices giving summary data for each species, breeding records, the sites and contributors, etc , followed by a list of references and the index

In the preface, Philip writes that the report is written for a diverse audience I think that it will be mainly used by researchers enquiring the detailed treatment of the results for comparison with studies elsewhere People who were involved with the survey will also find it of much interest but I think the casual birder is more likely to be satisfied with the glossy version

The Canberra Garden Bird Survey is a great team effort A large band of dedicated observers has been sufficiently motivated to record their garden birds over many, many years to provide a database that is unequaled in the world But that is the fun part, the real slog is in the data entry, analysis and write up Here Philip Veerman has made a very major contribution and is to be commended for the extraordinary amount of time and effort he has put into this project In the end he went ahead and produced it 'his way' and, while the manner in which this happened has upset some, the final result is that we have a large body of valuable information available to interested researchers

Far too many projects, including some that are publicly funded, are never fully analysed nor written up for publication That means that the information is essentially lost In the case of the Canberra GBS the opposite is true The observations have been collected over many years and are now entered in a modern database This report has provided a major analysis of the data and clear statement about the origins of the project The survey is ongoing and I am sure that, with this strong base, it will result in many more analyses and valuable publications in the future

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Peter Woodall ran the 1979-80 and 1999-2000 garden bird surveys for the Queensland Ornithological Society and is currently preparing the latter for publication

OBITUARY - DOUGLAS ROSS, 1923-2002

Douglas Ross, a Life Member and former Treasurer of the Canberra Ornithologists Group, passed away in Canberra Hospital on 15 March 2002, aged 78 Doug was born in Bloxwich, in the English county of Staffordshire, and was educated at Queen Mary Grammar School, Walsall, and Pembroke College, Oxford His classics degree was interrupted by war service with the Indian Army, which necessitated his learning Urdu, a pursuit he returned to in later life at the Australian National University When he returned to Oxford after the war, he completed a Politics, Philosophy and Economics degree, and then worked for OXFAM

In the early 1950s, Doug made the acquaintance of his wife-to-be, Barbara, through weekend archeological group digs on a Romano-British road and bridge in Shropshire They were married in 1955 and came to Australia two years later Doug's Australian working career was based in Canberra, firstly with the then Bureau of Agricultural Economics and then with the Treasury, where he worked in the Financial and Economic Policy Section There he specialised in developing double taxation agreements with many countries, including Malta, Thailand and the Philippines At Treasury, he developed a justified reputation for his skill at drafting ministerial replies to letters from constituents One such draft reply, in verse, for then Assistant Treasurer Frank Stewart warranted reproduction in full in the 2001 *Centenary of Treasury* publication, sadly, there is no record of whether Stewart used it Doug was awarded an OAM in 1985 for his services to the public service and to the Professional Officers Association

Doug's interests were exceptionally wide-ranging, from religion to philately, and from book collecting to Urdu But it is for his love of the natural environment, and his concern for its well-being, for which he will be remembered with fondness by so many in COG While at Treasury, there was rarely a day when he failed to check on the birds in the Parliamentary Triangle, and articles in *Canberra Bird Notes* attest to his quite remarkable sightings there, including Stubble Quail, Budgerigar and Nankeen Night Heron

Family holidays were often spent on the South Coast, at Dolphin Point, Potato Point or Narooma, where birdwatching was a popular pursuit, with daughter Clare developing an expertise from an early age in meticulous recording Another significant family event in later years was the honeyeater migration, which was observed from Michelago

For many years, Doug and his little dog Whisky would go on Sunday mornings to Jerrabomberra Wetlands to record the birdlife and later, those excursions became almost daily ones His concern for the wetlands is evidenced by his many articles and shorter observations in *Canberra Bird Notes* The return of the first snipe in mid-August was always a highlight for him Doug was also an avid supporter of the colony of greenfinches that lived for many years in the box-thorn thickets around the wetlands There was heated discussion over whether the box-thorn should be

removed for environmental reasons. In defence of the greenfinches, Doug took the position that we, as European imports ourselves, had few moral grounds on which to get rid of them!

Doug was the principle architect of the early moves to gain proper preservation status for the wetlands and, while he would no doubt disapprove of the Kingston Foreshores development, the existence of Jerrabomberra Wetlands Nature Park today owes much to the persistence of Doug Ross and to the meticulous records he was able to present to support the need for its preservation.

Doug worked long and hard for COG with dedication and unfailing good humour. For nearly twenty years from 1972, he was one of the most regular and significant contributors to *Canberra Bird Notes,* chiefly on his beloved waterfowl but ranging across a wide range of other topics, from leucism in blackbirds to the honeyeater migration. He served as Treasurer from 1984 to 1989 The highlight of COG committee meetings would be the Treasurer's report on the club's finances. Doug was the master of the understatement: 'There is still a bit of fat in the accounts', he would say with a twinkle in his eye. It was in appreciation of his major managerial role in the administration of COG during a period of great growth and activity, as well as for his representation of COG on various consultative committees, that Life Membership was conferred on him in 1989

McComas Taylor and Barbara Allan, with assistance from Barbara Ross

Doug Ross, (Private collection)

Some contributions from AD Ross to *Canberra Bird Notes*

Displays by the male Musk Duck (1977) CBN 3(9) 12
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An odd feeding partnership (1977) CBN 3(9) 20
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Localised plumage abnormalities in blackbirds (1987) CBN
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CBN 13 33
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OBITUARY - JOSEPH BRYAN FITZGERALD, 1916-2002

I first met Bryan, who was a close neighbour in Ainslie, in the early 1970s when we were both members of MAMPA, the Mount Ainslie Majura Protection Association, formed to oppose developments in the Mount Ainslie foothills At that time I learned of his interest in birds Bryan had grown up on his father's cattle property, Kunderang, at the head of the Mackay River in northern New South Wales, and now part of Oxley River National Park His interest in birds must have developed at an early age and as a young man he had been a member of the RAOU before joining the RAAF at the beginning of the Second Word War I suggested that he join COG and took him to several meetings

Bryan soon became actively involved in COG affairs, serving as Assistant Editor of *Canberra Bird Notes* in 1980, Assistant Secretary in 1981 and 1982, Treasurer in 1983 and President in 1984 and 1985 Bryan was a very hard-working and astute President In his own gentle way he won great loyalty from his fellow committee members, and presided over a period of rapid growth and diversification He was also Secretary of the Rarities Committee for six years, from 1986 to 1991

I often joined Bryan on COG outings and surveys I came to know him particularly well when we collaborated on surveying four squares in the Kowen Forest area for the ACT Bird Atlas He was a delightful companion and a very good field observer He had wonderful eyesight and acute hearing I never ceased to be astonished at the accuracy of his bird-call recognition Joan Lipscombe, who shared the then proposed National Museum survey site at Yarramundi Reach with Bryan, also commented on his amazing capacity to hear and recognise bird calls, and on his equally amazing good humour when the heavens opened and drenched them

Bryan had a long and distinguished career with the RAAF During the war he served with the RAF, piloting Hudsons in Coastal Command operating from the Hebrides and later from North Africa and Gibraltar This was followed by service in the Middle East After the War he took regular commission eventually retiring from the RAAF after 27 years of service This was followed by a period as a trainer in the public service

Bryan enjoyed a very happy family life and he had a wide circle of devoted friends He married Joan in Sydney, after the war, in 1949 and they had four children, Anne, Roger, Tricia and Suellen, and five grandchildren He was generous with his time and much of it was spent unobtrusively helping others He was particularly active in Legacy helping the widows of fellow servicemen

Behind the geniality and the piety - Bryan was a very devout man - lay a personality of great courage and determination This was amply demonstrated by his long and valiant

fight with the cancer that eventually struck him down. His love of birds never left him - his doctor of many years, fellow birdwatcher and COG identity Jeffrey Clyde recounts that on a visit to Bryan's Ainslie home Just prior to his death, a White-eared Honeyeater flew into a eucalypt by the window Jeff pointed out the visitor to Bryan and Bryan's face broke into his characteristic broad grin.

I acknowledge the assistance of Bryan's family in the compilation of this obituary, and that of McComas Taylor, Jeffrey Clyde and Joan Lipscombe.

Alastair Morrison

Some contributions of J. Bryan Fitzgerald to *Canberra Bird Notes*

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White-throated Nightjar in Canberra (1983) CBN 8: 64.
Boobook meal (1983) CBN 8: 66.
Book review (Simpson and Day) (1986) CBN 11. 30.
Common Mynas at Bawley Point NSW and Ainslie ACT (1990) CBN 15: 13.
Letter to editor (duck hunting) (1995) CBN 20: 46-47

COLUMNISTS' CORNER

The views expressed by our columnists are personal views and do not necessarily represent the views of COG

A tale of three books

The deluge of bird books over the last 20 or so years had long since made Stentoreus steel himself against further acquisitions Notwithstanding that firm policy, my groaning shelves suffered the following additions over the last month

Where have all the passerines gone?

Frankly, it was the seductive price that led me to purchase RJ Ranjit Daniels' *A Field Guide to the Birds of South-western India* from a well-known remaindering outfit in Fyshwick A small book, its claimed original and outrageous price of $Al07 50 would have worked out at $1 per (small, mainly non-glossy) leaf, so the reduced price of $A9 95 was irresistible The book belongs to the category of gritty little field guides adorned with no-nonsense illustrations without artistic pretension

The introduction contains lots of general information about birds in south-western India (defined as embracing quite a lot of India, actually) in discussing the area's list of 508 recorded species, the author remarks on the 'peculiar' fact that the list is dominated by non-passerine species (313 species or 62%), whereas non-passerines account for only 41% of the world's bird species

Alas, this given-area passerine/non-passerine split is entirely typical Coincidentally, the Australian list of 870-odd species also has a 62% non-passerine content In general, non-passerines are more wide-ranging, so the proportion of passerines only climbs as the area being considered expands to take in relatively more narrow-ranging species

It is therefore not surprising that 87 (28%) of south-western India's non-passerines are also on the Australian list, compared to only seven passerines (not counting introductions) The latter include four rare visitors from the northern hemisphere (two swallows, two wagtails), but also two ACT breeders These are our Golden-headed Cisticola and, I am pleased to note, that welcome and communicative summer visitor, the Clamorous Reed-Warbler, *A stentoreus*

All the live birds - and some extinct ones

Getting back to the books, a much more weighty acquisition was volume 7 of the *Handbook of the Birds of the World* (HBW) This series, from the Spain-based publisher Lynx Echelons, aims to provide an illustration and detailed entry for every one of the world's bird species Unsurprisingly, 'ambitious' is the word routinely applied by reviewers to this project However, vol 7 completes coverage of the world's non-passerines, so HBW (beginning in 1992) has roughly kept pace with HANZAB (beginning in 1990)

Both series have had cause to revise their respective approaches to arrangement of volumes HANZAB, originally to be

five volumes, has devoted four volumes to non-passerines and now proposes three (two more to come) on passerines HBW was planned to run to 12 volumes, but as a result of a recent users' poll on the future editorial approach now proposes nine volumes on passerines, to a total of 16

There is a mildly startling feature of HBW 7 in this coverage of one sixteenth (notionally) of the world's birds not a single Australian species is included Jacamars to Woodpeckers' spans those limbs of the avifaunal tree beyond even the extended geographical reach of HANZAB Conceivably, some Australian purchasers of the series might decide to skip this volume

If they do, they will miss out on an extra that the HBW editors have chosen to include in this one, an unrelated 58-page presentation on the world's 'recently extinct' birds New Zealand features fairly prominently here, with responsibility for eight entries, including the sad instance of Stephens Wren, apparently consigned to oblivion by the efforts of a single cat, the pet of the lighthouse-keeper on Stephens Island

HBW is rather stingy about admission to its extinct list, and denies it to three birds that have 'E' status according to Christidis and Boles The (clearly extinct) emus of Kangaroo Island and King Island are excluded on the ground that they have not been shown to be specifically distinct from the mainland emu

The Paradise Parrot has undergone a sort of nominal resurrection Having been classified as Extinct by the author (Errol Fuller) in a previous work, it is found to have been treated already in the HBW parrot volume as having the slightly happier status 'almost certainly Extinct' Accordingly, it is omitted from the present list of extinctions

It follows that Australia is represented for this melancholy purpose only by certain former inhabitants of Norfolk and Lord Howe Islands the White Gallinule, the Norfolk Kaka, the Robust White-eye and the Tasman (Norfolk) Starling

Threatened birds ours and theirs

Hardly more cheerful is my third book, *Threatened Birds of the World* (TBW), published in 2000 Jointly by Lynx Edicions and Birdlife International (The latter is a consortium of national non-governmental bodies with bird-conservation objectives, and includes Birds Australia)

TBW is a large book and a mine of attractively-presented information It is recommended to anyone with a general interest in the global dimensions of the bird-conservation issue (I must say immediately that its more liberal `extinct' list does include both the abovementioned emus and the Paradise Parrot, although this pre-dates the Fuller reappraisals)

Fifty-nine species of significant global concern are listed for Australia, excluding Norfolk and Christmas Islands which are treated separately Of these, the following are of local interest

`Endangered' Swift Parrot, Regent Honeyeater
`Vulnerable' Superb Parrot

`Near Threatened' Speckled Warbler, Painted Honeyeater, Diamond Firetail

In each case the grading accords with that in *The Action Plan for Australian Birds 2000*, prepared for Environment Australia by Stephen Garnett and Gabriel Crowley Indeed, TBW draws heavily on the Action Plan's assessments with regard to many Australian species

For Canberra observers, it may be something of a surprise to find our familiar briar-haunting Speckled Warbler in the international list, in part because of the danger of 'weed invasion', the more so as the Southern Whiteface is regarded as relatively secure Those interested in the reasons will find them in the Action Plan (In short, the two species have, respectively, declined over `most' and 'only about 20%' of their respective ranges)

Some might see little purpose in comparing TBW and the Action Plan, the first resembles, in motor car terms, a glossy advertising brochure, the second a workshop manual However, Stentoreus, as an ignorant bystander, believes that a comparison raises some issues

First, TBW is concerned with global status, the Action Plan with status in Australia Given the standard IUCN criteria, the two should be the same, one would think, where the species occurs entirely or almost entirely in Australia Generally, this is the case, but a handful of differences do strike the eye TBW does not follow the Action Plan in treating the Australian Bustard and Flock Bronzewing as 'Near Threatened' TBW treats the Scarlet-chested Parrot as 'Near Threatened' but not the Turquoise Parrot, in each case the reverse approach to the Action Plan

Secondly, TBW is concerned with species, the Action Plan with the relevant 'taxon', which more often than not is a subspecies Frequently, the Action Plan determines a subspecies to be 'Near Threatened' or 'Vulnerable', while within Australia the other subspecies are, and the species as a whole is, of 'Least Concern' e g Glossy Black-Cockatoo, Major Mitchell's Cockatoo, Brown Treecreeper

TBW does not address separately the status of cross-boundary extensions of larger populations In the Action Plan the very small Australian population of the Singing Starling on an island a few kilometres from Papua New Guinea is regarded as 'Near Threatened' notwithstanding that it represents an abundant species in New Guinea If the political boundary were moved a few kilometres south, the status of these birds, presently assumed to be rather lonely Australian residents, would presumably change

Similarly, representatives on Australian islands in Torres Strait of the (apparently secure) New Guinea subspecies of the Willie Wagtail, Leaden Flycatcher and some dozen other species are also regarded as 'Near Threatened'

Conversely, *in relation to Australia*, TBW globally assesses as 'Near Threatened' the Sarus Crane and Black-necked Stork on the ground of severe reductions in their numbers *outside Australia* However, while acknowledging that global status, the Action Plan sees the Australian

populations, considered separately, as of 'Least Concern' (Although it does not seem material, the relevant subspecies for the crane is regarded as an Australian endemic, but the stork subspecies is shared with south-east Asia)

Do not these differing approaches send slightly different messages so far as future policies are concerned[9]

An important aim of both sets of assessments (TBW and the Action Plan) is to advise or influence governments The main business of government these days is choosing between competing priorities in deciding to commit resources Sectional and local concerns are frequently in competition with broader and global ones

The Singing Starling logic sets a value on local rather than global concerns Consistently with that logic, an individual Australian jurisdiction (the ACT, for example) could reasonably decide to give priority to preserving habitat for its own remnant population of species (or subspecies) X, regardless of X's national, let alone global, status This seems a rather right-wing approach, but one with ample precedents in other fields

A stentoreus

Birding in Cyberspace, Canberra Style

Winter birding Minus five degrees outside and no birds around the house but flying cane-toads (aka Common Mynas) Inside, though, the computer fan is blowing out nice warm air Just the time for cyberbirding'

The many COG members and friends who ventured out to the July 2002 monthly meeting heard Dr Chris Tidemann's update on the 'Minimising Myna' project He advised that the fourth issue of the project's occasional newsletter, *Feral Facts*, is now available online at the project's web site <http//www anu.edu.au/srmes/wildlife/myna html> He also mentioned a related study in The Land of the Long White Cloud aiming to quantify the impacts of the Australian Magpie in that nation, a feral pest if ever there was one That project's newsletter is called *Quardle oodle ardle* and is sadly not available online so far as your columnist and Google <www google.com> can ascertain Readers familiar with New Zealand poetry will recognise the newsletter's title from Dennis Glover's famous poem 'The Magpies', with its refrain 'And Quardle oodle ardle wardle doodle, the magpies said' Go on, read that out loud again! Find the poem in full online at <http //www cybonet co nz/nzpoetry/poe ms%20in°/020html/magpies html>

We Canberrans are proud of the Bush Capital's wetland birding site, Kellys Swamp and the Fyshwick sewage ponds, and for good reasons Sometimes, though, we want to visit somewhere a little further developed, and surely The Wetlands Centre Australia (formerly known as the Shortland Wetlands Centre) at

over the years, by people planning to visit in the future, and by those of us who Just like checking out great new birding web sites! Among its treasures are details of its events program and a comprehensive bird list

Talking of bird lists, more and more are becoming available online All local cyberbirders would be aware of the *Annotated List of the Birds of the ACT* at COG's web site <http //www canberrabirds dynamite corn au/chklist htm> Lists of birds of the world may be found at my favourite international birding portal ' Birdingonthe net' <http //birdingonthe net/> and the Australian checklist is at Birds Australia's comprehensive site <http //www birdsaustralia corn au/check list/index html> Australian State and Territory checklists can be easily generated by listing and survey analysis software such as Canberra-based birder Simon Bennett's Birdlnfo for Windows <http //www netspeed corn au/birds/birdi nfo>, or from the diverse web sites collated at 'Birdingonthe net' and elsewhere

Subscribers to the national birding email discussion list Birding-Aus (find its URL in the box at the end of this column) had a real treat on 1 July 2002 when a list member who monitors media releases issued by Dr David Kemp, Commonwealth Minister for the Environment and Heritage, spotted one with the title 'Over 7,000 Australians Take Birdwatching To New Heights' Find it online at <http //www ea gov au/minister/env/200 2/mr0 I july02 html> The media release marks the occasion of Birds Australia presenting to the Minister a report on the *New Atlas of Australian Birds* This project received financial support from the Natural Heritage Trust (The *New Atlas* proper will be published by Birds Australia in December) The Minister said, among other things

> As part of the Atlas project, over 7,000 amateur and professional birdwatchers have submitted an amazing 4 3 million bird sightings and 255,000 bird surveys These efforts have produced records for 759 bird species from over 130,000 locations that span the length and breadth of Australia, from Cape York and the Great Sandy Desert to Port Arthur in southern Tasmania I would also like to recognise the significant resources that the volunteer community put into this project, both in time and in purchasing specialist equipment

The online version of the media release includes some magnificent photos of birds and birders, and provides links to a series of fact sheets that should be of great interest to everyone involved in collecting data for the *New Atlas* They cover the following topics

- Comparing Atlases - a comparison of the key statistics
- The Work of an Atlasser - an insight into the involvement of the 7000 New Atlas volunteers
- Birds on Farms - the benefits to farmers of maintaining healthy bird populations and ways that can be achieved
- State Highlights - a summary of the key findings and statistics for each State/Territory
- Images - a range of high-resolution images of Australian birds
- Images - from the Launch of the New Atlas of Australian Birds

Late last year (if I recall correctly) BirdingAus members discussed the tragic loss of breeding Little Terns *Sterna albifrons* They were killed by a massive hail storm that hit their breeding area on the Victorian coast Adults, young and eggs were destroyed by hail stones the size of golf balls or larger The loss of these delightful birds is distressing, but one must accept that it was a natural process that could not be prevented What a contrast, then, to a 6 June 2002 online news item from the BBC

<http //news bbc co uk/hi/english/uk/eng land/newsid_2029000/2029292 stm> that was reported to Birding-Aus The headline read 'Vandals wreck little tern colony'

> The site of the largest colony of little terns in the UK has been virtually destroyed by vandals Electric fences protecting the site on the Norfolk coast were ripped out of the ground, nests wrecked and eggs smashed in the overnight attack The rampage sent the little terns, among the UK's rarest breeding sea birds, scattering at the height of the breeding season They are not expected to return to the colony on Great Yarmouth's North Denes beach this year Two thirds of the 90 nests have been destroyed in the attack which a spokesman for the Royal Society for the Protection of Birds (RSPB) said must have been malicious 'As they are the second rarest breeding sea birds in the country, we do our best to protect them from land predators and people to try to provide conditions to maintain the population of the birds in this country '

A sad note on which to end this column, but one that highlights the magnificent efforts of Australia's birders, and of Birds Australia, in completing the *New Atlas*, a project essential to understanding the status of our birds and preserving their habitats Do visit the Minister for the Environment's web site and see the *New Atlas* results, described above Remember, even if you are not connected to the Internet at home or at work, you have ready access through most public libraries See you online'

T alba

Details on how to subscribe to *Birding-Aus*, the Australian birding email discussion list, are on the web at http //www she melb catholic edu au/home/birding/Index html A comprehensive searchable archive of the messages that have been posted to the list is maintained by Andrew Taylor at http //www cse unsw edu au/birding-aus

To join the *Canberra Birding* email discussion list, send a blank email message to canberrabirds-subscribe@topica com, or join online at http //www topica com/lists/canberrabirds At this site can also be found a searchable archive of messages posted to the canberrabirds list

RARITIES PANEL NEWS

The following records were endorsed by COG's Rarities Panel at its 1 July meeting One record is still under consideration more information is being sought about a White-breasted Woodswallow report Interestingly, nine of the species represented on this list also figured in the previous one A fairly predictable newcomer was the White-bellied Cuckoo-shrike, these records being the first since 1998 and of birds seen in the usual autumn/early winter period The Panel intends to keep this species on its reportable list because of the difficulty of less-experienced birders in differentiating it from its larger relative, the Black-faced Cuckoo-shrike

Several of the records are noteworthy That of the call of a White-throated Nightjar in - or near - suburbia is unusual, the birds being rarely encountered even in more obviously suitable habitat in the ACT The upward, frantic call, sometimes described unkindly as that of a mad woman, is particularly distinctive The two Swift Parrot sightings, possibly of the same bird, are the first since that of 16 April 2000 in Namadgi In both cases, the Panel agreed that the generally small size of the bird, green body colour associated with a pronouncedly long red tail were the most useful diagnostic features While Swift Parrots are more likely to be recorded in flocks, the Panel leant to the view that these reports were of a wild bird, as Swift Parrots do not appear to be frequently kept in captivity

Another noteworthy record is that of the Spangled Drongo It represents only the sixth endorsed record for the ACT and is, typically, of an autumn observation The drongo is a coastal species, rarely recorded south of Sydney and rarely so far inland It presents few identification challenges, the combination of a deeply forked tail, a red eye and glossy black colouration associated with a bird of about 30 cm in size being diagnostic The Channel-billed Cuckoo record from the botanic gardens in December 2000 is also of considerable interest Again, this is a bird of the coastal areas which occasionally overshoots on its migratory path and may be sighted here in spring or autumn Its large size (60 cm), large heavy pale bill and long tail are diagnostic, as are its dramatic calls

Two further records of Spotless Crake, one from Kellys Swamp, the other from Sullivans Creek at the Australian National University, are encouraging and perhaps suggest that the bird is more under-recorded than rare Patience and good light seem to be the key to detecting this species in reedy locations It is pleasing to note that the party of Pied Cormorant which have been recorded in recent endorsed lists are still in residence, having been sighted now in varying numbers at the three urban lakes Apart from their large size, which is particularly apparent when the birds pose beside either the Little Black or the Little Pied Cormorant, the other feature to look for is the orange/pink colour around the eye

It was good to see that the Pied Butcherbirds in Bango Road bred successfully Those observers who frequent the north of our area should keep an eye out to see whether the birds

move any closer to Canberra in coming seasons

The Black Kite seen at the Belconnen tip was in all probability the same bird seen the following day at Kambah Pool, the markedly forked tail and lack of pale underwing markings being diagnostic in this species

ENDORSED LIST No 55, JUNE 2002

Pled Cormorant *Phalacrocorax varius*
2, 12 May 02, Barbara Allan, Lake Ginninderra (Gr J 12)
5, 3 Jun 02, Harvey Perkins, Lake Tuggeranong (Gr J 16)

Black Kite *Milvus migrans*
1, 6 Jan 02, Brendan Lepschi, Belconnen tip (Gr I-112)

Spotless Crake *Porzana tabuensis*
1, 20 Jan 02, John Goldie, Kellys Swamp (Gr L14)
1, 2 Jun 02, Harvey Perkins, Sullivans Creek, ANU (Gr Kl3)

Spotted Turtle-Dove *Streptopelia chinensis*
3, 12 Jan 02, Rosemary Blemings, Mt Rogers (Grl I l)

Long-billed Corella *Cacatua tenuirostris*
3, 20 Apr 02, Stuart Harris, Gorman House, Braddon (Gr L13)

Swift Parrot *Lathamus discolor*
1, 24 Apr 02, Jenny Bounds, Weston (Gr Jl5)
I, 26 May 02, Steve Holliday, Mt Ainslie (Gr L13)

Channel-billed Cuckoo *Scythrops novaehollandiae*
1, 20 Dec 00, David Mallinson, Aust National Botanic Gardens (Gr K13)

White-throated Nightjar *Eurostopodus mystacalis*
I (heard), 4 Nov 01, Lee Halasz, Watson (Gr L12)

Little Friarbird *Philemon citreogularis*
1, 6 Apr 02, David Purchase, Melba (Gr J 12)

Scarlet Honeyeater *Myzomela sanguinolenta*
1, 2 Mar 02, Mike Ogden, Mt Taylor (Gr J 15)

Spangled Drongo *Dicrurus bracteatus*
1, 20 Apr 02, Mat Gilfedder and Cathy Robinson, Downer (Gr L12)

White-bellied Cuckoo-shrike *Coracina papuensis*
I (light morph), 10 Sep 00, Adam Leavesley, TSR 56, Yass Road, 15km NW of Wee Jasper (Gr C7)
2 (1 dark, 1 light morph), 8 May 02, Richard Allen, Curtin (Gr J14)
1 (dark morph), 12 May 02, Richard Allen, Curtin (GrJ14)
l, 2 Jun 02, Richard Allen, Curtin (Gr Jl4)
1 (dark morph), 11 Jun 02, Mat Gilfedder, Downer (Gr Ll2)

Pied Butcherbird *Cracticus nigrogularis*
3 (2 adults, 1 juv), 23 Apr 02, Malcolm Fyfe, Bango Lane, 7km NE of Yass (Gr H1)

The COG office is located at Room 5, Griffin Centre, Bunda Street, Civic, If you wish to visit, please call 6247 4996 to arrange a suitable time.

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 of the distribution, identification or behaviour of birds occurring in the Australian Capital Territory and surrounding area. Contributions on these topics should be sent to Harvey Perkins, 42 Summerland Circuit, Kambah ACT 2902, or via email to harvey,perkins@anu.edu.au. Short notes, book reviews and other contributions should be sent to Barbara Allan, 47 Hannaford Street, Page ACT 2614 or via email to allanbm@ozemail.com.au. If you would like to discuss your proposed article in advance, please feel free to contact Harvey on 6231 8209 or Barbara on 6254 6520,

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