

Changes in the bird population of Bolwarra, 1994-2011

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Greener garden suburbs, particularly when adjacent to other habitat-types, can provide a permanent or temporary home to a great variety of avian species. This paper looks at one such area close to Maitland, NSW and compares the current situation that is easily observed with that which prevailed in 2000-01. It has become possible thanks to the rediscovery of two years of annotated monthly records that provide a clear record of the situation that prevailed at that time. An individual's impression of the changes over time may easily become distorted, unbalanced or incomplete unless the past situation is adequately documented. The paper is able to draw the conclusion (one mildly surprising to its author) that a great many more species are experiencing local increases than decreases. While these species may not usually be of particular interest to enthusiasts of rarities, they are an important part of a healthy bird population in the Hunter Region.

INTRODUCTION

Bolwarra is a suburb of Maitland to the north-west of the Hunter River crossing at Belmore Bridge, Lorn. The bird population is influenced by the presence of the river (upstream of Maitland) on its western side, and the riverside vegetation provides a corridor by which species that depend on trees may find their way to established suburban properties and their relatively leafy gardens with significant trees. A little new housing in Bolwarra itself has not significantly changed the village's environment in the past seventeen years, while tree-planting by a Landcare group active in the 1990s and by those associated with Bolwarra Public School has certainly improved the habitat for many species. Bolwarra lagoon, covering a substantial area east of the river and to the north-west of the sporting complex, used to be the site of a sewage treatment plant, though this has now closed, resulting in fluctuating water levels and a variety of waterside vegetation. It can dry out in times of exceptional drought, offering short-term foraging opportunities for a number of species as it does so. Hands Lagoon, between Paterson Road and Maitland Road (see **Figure 1**), in fact consists of three ponds that separate the main road to Tocal and Woodville from the village proper; one pond dries out quite quickly, another will do so in times of drought, and the third has almost done so during the drought of 2006-07. Open country in the vicinity of the northern lagoon is now grazed only by kangaroos, and bird life there is limited, while the Hunter Flats to the south and east may attract a variety of species depending on land use, and are

particularly valuable at times when crops need irrigation. The river is again present just beyond the flats to the south-east, after curling between Maitland and Lorn, though here it provides only limited cover for shy species.

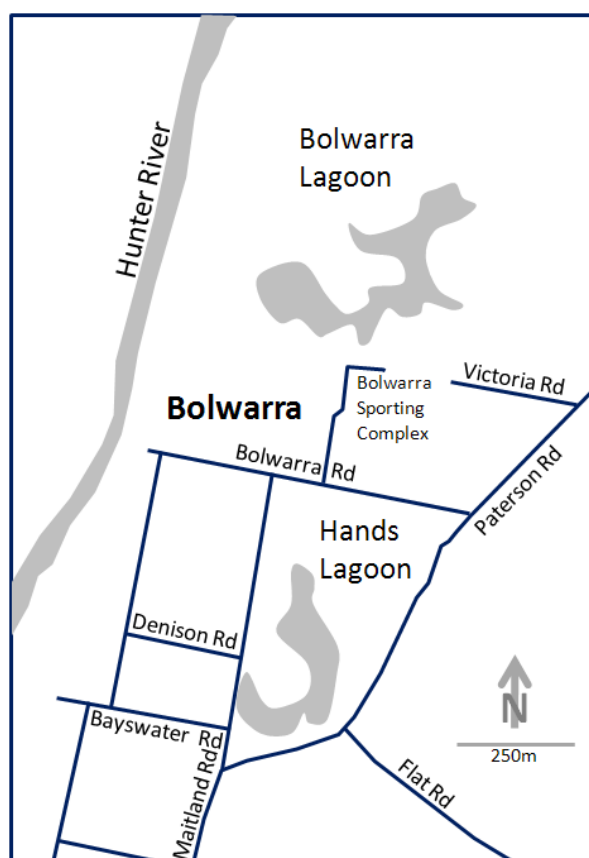


Figure 1: Map of area concerned

The variety of habitats offered by the suburb attracts many bird species, whether as residents, seasonal visitors, or migrants, and gives an indication of the potential significance of habitat created by low-density housing areas. Of particular interest is the growing ability of many species to adapt to the garden environment together with surrounding wetlands and agricultural land. In 2000 there were 122 species recorded, with monthly counts between 64 and 95; in 2001 there were 135 species recorded, with monthly counts always between 70 and 77.

METHODS

Regular walks along publicly accessible routes during the period 1994-2011, supplemented by continuous interest in the species around my garden (close to the intersection of Bolwarra and Paterson Roads), have enabled the development not only of an increasingly accurate picture of the bird-life of the suburb, but also of a sense of the way in which it is changing. The survival of a monthly list of species for the years 2000 and 2001 makes comparison relatively easy. These records cover 23 months, since I was away during August 2001. The fact that rainfall in these two years was neither particularly wet nor particularly dry gives greater validity to its use as a base line for the comparison. According to the figures for Tocal, 1998-99 was a particularly wet period, while 2002-03 was quite dry; average years are required if a balanced picture is to be achieved, since the Maitland area's climate has more in common with the Upper Hunter in dry years and with the coast in wet years, with corresponding fluctuations in bird populations.

During other years many significant records, whether from myself or from others, have been reported to the Hunter Bird Observers Club (HBOC) and recorded in their Annual Bird Reports (ABRs), providing a supplementary source of data. Further supplementary observations, based once again on monthly records, have been made available to me by local resident Keith Howard. It is important to note that he was based on the western side of Bolwarra (just north of Denison Road) while I was based on the eastern side, and that one is inevitably spending more time in and around one's home. As a consequence, his records give greater prominence to the birds that prefer a damper or more thickly vegetated situation, while my records give better coverage of the eastern side. For recent times I lack the previous rigour of monthly records, but I continue to watch the same areas of the suburb, keeping notable records in diaries; naturally these records have been particularly likely to take note of any species that has previously been unusual for the area, and of numbers that had hitherto seemed exceptional.

Particular emphasis has been paid in this study to species other than passing rarities, since the value of the

habitat is primarily determined by its ability to support a species on a permanent or regularly recurring basis. Birds have been treated in families. Results have been tabled in an **Appendix**, giving the number of months that I recorded the species for the period 2000-01 (out of 23), with notes on its local status then and now.

RESULTS

Non-Passerines

Quail

Both Brown Quail *Coturnix ypsilophora* and Stubble Quail *Coturnix pectoralis* have been recorded intermittently, usually as species heard only. The latter has become much more common since I first puzzled over the source of its then unfamiliar but distinctive call in January 2000. Stubble Quail has been more widely reported in the Hunter Region since that time, with fewer than four records annually in the years 1995-2000 and none reported in 1997 or 1998 (Stuart 1996-2010), but increased records thereafter spiking in the drought year 2006. Since calls have often been audible from my front garden since that time, it is unlikely that I had overlooked the species to any considerable extent beforehand, and it is therefore safe to conclude that it is now much commoner locally than it could have been before. However, it is liable to arrive in spring in dry years, but otherwise not until summer. The six months in 2000 and 2001 when I recorded it locally are all from the December-March period.

Ducks and Swans

In 2000-01 Black Swan *Cygnus atratus*, Australian Wood Duck *Chenonetta jubata*, Pacific Black Duck *Anas superciliosa*, and Grey Teal *Anas gracilis* were present in all months, though Chestnut Teal *Anas castanea* was much less abundant and, like Hardhead *Aythya australis*, occasionally absent in 2000. Wandering Whistling-Duck *Dendrocygna arcuata* and Australasian Shoveler *Anas rhynchotis* were occasionally recorded. A Mallard-type was also recorded for a while. Apart from the disappearance of this last species and an increase in the numbers of Chestnut Teal relative to Grey Teal, no on-going changes have been noted. There have of course been habitat changes relating to water levels in and external to the study area, such as the suitability of breeding conditions west of the Great Dividing Range. Throughout the study other duck species have occasionally been recorded for brief periods.

Cormorants and Pelicans

The Little Black Cormorant *Phalacrocorax sulcirostris* and Little Pied Cormorant *Microcarbo melanoleucos*, like the Australian Pelican *Pelecanus conspicillatus*, were recorded throughout 2000-01, with Great Cormorants *Phalacrocorax carbo* present less often. Unusually, there were stray Pied Cormorant *Phalacrocorax varius* records for a period of two months. Darter *Anhinga novaehollandiae* was recorded fairly often. It is not felt that the situation has changed greatly, except after the drying out of lagoons has resulted in the killing off of fish stocks, though pelicans may be absent when there is flooding inland.

Grebes

The Australasian Grebe *Tachybaptus novaehollandiae* was recorded in all months, while the Hoary-headed Grebe *Poliiocephalus poliocephalus* was recorded only in three, a pattern still considered normal.

Pigeons and Doves

Apart from feral species, only the Crested Pigeon *Ocyphaps lophotes* was constantly present. The Bar-shouldered Dove *Geopelia humeralis* and the White-headed Pigeon *Columba leucomela* were occasionally recorded, though the latter species was present for thirteen consecutive months, visiting Keith Howard's property (pers. comm.). Hence, while my records do not indicate any noticeable change, there may have been a decline in White-headed Pigeon.

Hérons and their allies

In 2000-01 the White-faced Heron *Egretta novaehollandiae* was recorded in all months, with a maximum count of 60, while the White-necked Heron *Ardea pacifica* was intermittent. The Intermediate Egret *Ardea intermedia* and Cattle Egret *Ardea ibis* were also recorded in all months, while the Little Egret *Egretta garzetta* and the Eastern Great Egret *Ardea modesta* were less common. Bitterns were not recorded, though both Australasian Bittern *Botaurus poiciloptilus* and Australian Little Bittern *Ixobrychus dubius* have been known to visit (Stuart 2000 & 2007), as well as a Black Bittern *Ixobrychus flavicollis* in 2007 (Keith Howard, pers. comm.). I did not see the locally rare Nankeen Night-Heron *Nycticorax caledonicus* during that period, though it visited at least twice (K. Howard, pers. comm.). My current

impression is of an increase in Little Egrets relative to Intermediate Egrets. Nest numbers at the Hunter Wetlands Centre Australia confirm a fluctuating decline of Intermediate Egret as a Hunter Region breeding species between 1999-2000 and 2009-10, but offer no evidence that Little Egret has increased (Stuart 1996-2010). The Australian White Ibis *Threskiornis molucca* was usually recorded, as was the Straw-necked Ibis *Threskiornis spinicollis*; the former remains common near the lagoons, the latter abundant in the fields. The Royal Spoonbill *Platalea regia* was recorded in all months with a maximum count of 20, and the Yellow-billed Spoonbill *Platalea flavipes* occasionally (maximum 3 birds). Considerable variation is expected in these species according to conditions, but no long-term trends have yet been established.

Diurnal Raptors

Of the 21 species currently on the local Hunter Region list 15 were recorded in 2000-01, the most frequent being Australian Hobby *Falco longipennis*, then Nankeen Kestrel *Falco cenchroides*, Black-shouldered Kite *Elanus axillaris*, Collared Sparrowhawk *Accipiter cirrocephalus* and Peregrine Falcon *Falco peregrinus*. Somewhat less usual were White-bellied Sea-Eagle *Haliaeetus leucogaster*, Brown Goshawk *Accipiter fasciatus*, Wedge-tailed Eagle *Aquila audax*, Swamp Harrier *Circus approximans* and Spotted Harrier *Circus assimilis*. The Square-tailed Kite *Lophoictinia isura* was securely recorded for the first time in 2001, and occasional sightings continued for a while thereafter, but the species has not been recorded in recent years.

It was in the records for 2000 that I had downgraded the status of Little Eagle *Hieraetus morphnoides* to 'Now uncommon'; after being a familiar bird since 1994, it was recorded only 5 times that year and 3 times in 2001. Records had dropped further, but seem to have risen again recently, perhaps to 2000-01 levels but no more. The extent to which this species has suffered a decline in the Hunter Region is uncertain (Roderick & Stuart 2010), but the Bolwarra results agree well with trends that began to be published in 2005 in the ACT (Olsen & Fuentes 2005, Olsen & Osgood 2006), culminating in the nomination of the species for threatened species status in the ACT (Bounds 2008) and NSW (Debus & Soderquist 2008) and its eventual listing as vulnerable both there (2008) and here (2010). If vanishing rabbits, dying from calicivirus (*Lagovirus* spp.), had been partly responsible for

its decline (cf. Roderick & Stuart 2010: 3), it may be that the subsequent recovery of rabbits has by now assisted an incremental local recovery, matching a slight improvement already felt in the 2007 season in the ACT (Olsen *et al.* 2008).

The Peregrine Falcon is certainly not recorded as often in recent years, but it had usually been sighted attacking flocks of Rock Doves *Columba livia*, which have now been successfully expelled from some local barns. The Black Falcon *Falco subniger*, which was not recorded until 2002, has been sighted occasionally since then. While I feel confident that I recorded the Grey Falcon *Falco hypoleucos* in May 2001 the record was deemed to lack sufficient detail to be accepted as the first confirmed record of the species in the Hunter Region. Brown Falcon *Falco berigora*, was then uncommon locally, as was Grey Goshawk *Accipiter novaehollandiae*, and neither position has changed.

Crakes and Rails

Purple Swamphen *Porphyrio porphyrio*, Dusky Moorhen *Gallinula tenebrosa*, and Eurasian Coot *Fulica atra* were always to be found. Hands Lagoon could be home to very large numbers of coot in particular, though they are now much reduced. No other members of the family were recorded, though Bolwarra Lagoon has more recently been visited by most Hunter Region crakes and rails, a sign perhaps of improved hydrology.

Snipe, Stilts, Plovers and Lapwings

Surprisingly, Latham's Snipe *Gallinago hardwickii* was not recorded in 2000-01, though it had been seen most years previously, but changes in hydrology at Bolwarra Lagoon have since increased the chances of this species being present in reasonable numbers (to a maximum of 17 in December 2009 [Stuart 2010]). Species recorded were Black-winged Stilt *Himantopus himantopus*, Masked Lapwing *Vanellus miles*, Black-fronted Dotterel *Elsyornis melanops*, and three Red-necked Avocet *Recurvirostra novaehollandiae* that once appeared on Bolwarra Lagoon, while about 15 Banded Lapwing *Vanellus tricolor* were once recorded along Flat Road. Of these species the Black-fronted Dotterel, then classed as 'common', is suspected of being in long-term decline locally, and Keith Howard's records show that Black-winged Stilt have failed to use the lagoons regularly since the 2006-07 drought (pers. comm.).

Other migratory and non-migratory waders have been present occasionally in response to favourable conditions.

Cockatoos, Lorikeets and Parrots

The description 'now common' in records for 2000 suggests that the Yellow-tailed Black-Cockatoo *Calyptorhynchus funereus* had been increasing. It was present in eight months that year and all months the following year. It is still seen or heard very regularly, but usually in small numbers. It was then marginally more often recorded than the Sulphur-crested Cockatoo *Cacatua galerita*, but the latter has increased more noticeably since. Little Corella *Cacatua sanguinea*, then described as 'uncommon' locally, was nevertheless recorded quite often, to a maximum of six birds, but Long-billed Corella *Cacatua tenuirostris* was absent in one month only, with up to 80 birds present. The latter species is now even more common than before, and during the period of writing I have regularly witnessed flocks of 150 birds or more. Galahs *Eolophus roseicapillus*, first recorded locally by Keith Howard in 1980 (pers. comm.), were, and still are, always present, often in very large numbers.

Rainbow Lorikeets *Trichoglossus haematodus* were the only lorikeet species present, being recorded in five months in 2000, resulting in my revising its local status from 'uncommon' to 'common', and seven months in 2001. It was usually absent here when I moved into the area in 1994, but now it seems to be permanently present. Musk Lorikeets *Glossopsitta concinna* are now recorded in several months each year, especially in autumn, while Little Lorikeets *Glossopsitta pusilla* are seen somewhat less frequently, mostly overflying. Both species typically appear in numbers between six and twenty. Scaly-breasted Lorikeets *Trichoglossus chlorolepidotus*, however, are still only occasionally found locally. The obvious conclusion is that lorikeets are adapting rapidly to the nectar resources of garden areas with an increasing range of flowering trees.

Australian King-Parrot *Alisterus scapularis*, Red-rumped Parrot *Psephotus haematotus*, and Eastern Rosella *Platycercus eximius* were also common in 2000. Crimson Rosella *Platycercus elegans*, which subsequently has occasionally strayed into the area, was not recorded. Very little has changed since, and apart from the lorikeets and an occasional vagrant or escapee, no new parrot species has arrived.

Cuckoos

The presence of cuckoos is hard to overlook in the spring months, with Eastern Koels *Eudynamis orientalis* (present Oct.–Feb. both years) and Channel-billed Cuckoos *Scythrops novaehollandiae* (present in three of these months both years) making the most impact. For Horsfield's Bronze-Cuckoo *Chalcites basalis* there were three end-of-year records, and Shining Bronze-Cuckoo *Chalcites lucidus* appeared in September 2001. Pallid Cuckoo *Cacomantis pallidus* appeared in only one spring month both years, while Fan-tailed Cuckoo *Cacomantis flabelliformis* was present in three widely separated months. While there are variations from year to year attributed to changing weather patterns, there has not been much overall change.

Night Birds

Unless targeted searches are made night birds are usually under-recorded. Even so, Southern Boobooks *Ninox novaeseelandiae* were often recorded up until October 2000, and thereafter only in February 2001. It has never been a 'regular' since. Barking Owl *Ninox connivens* has not been heard clearly since 1994. What was believed to have been a Powerful Owl *Ninox strenua* was heard in the distance in March 2000, and an Eastern Barn Owl *Tyto javanica* was heard in April 2001, but neither species appears to stay in the area. There were Australian Owlet-nightjar *Aegotheles cristatus* records in November of both 2000 and 2001, but it has not been heard in recent years. I did not record Tawny Frogmouths *Podargus strigoides* during those years, but a White-throated Nightjar *Eurostopodus mystacalis* was present in December 2001. It is difficult to escape the conclusion that the fortunes of nocturnal birds have declined since that time, and the clearing of degraded bushland for housing at Bolwarra Heights may be related. At the time of the environmental impact assessment for this development it became clear that the area hosted an unexpectedly large population of gliders, as well as being an important home for insect-eating bats, and such bats are seldom seen in the area now.

Kingfishers, Dollarbirds and Bee-eaters

In 2000-01 Laughing Kookaburras *Dacelo novaeguineae* were always present; Sacred Kingfisher *Todiramphus sanctus* and Dollarbird *Eurystomus orientalis* were recorded, neither of them between April and September; there was one

December record for Rainbow Bee-eater *Merops ornatus*. This pattern is similar to the present position. Azure Kingfisher *Ceyx azureus*, though occasionally recorded outside these years, has never been a regular.

Other Non-Passerines

A Caspian Tern *Hydroprogne caspia* was present in October 2000. The species has appeared in other years, but no tern or gull species has in any year been recorded regularly. While Silver Gulls *Chroicocephalus novaehollandiae* may be found in large numbers at Maitland Waste Management Facility at East Maitland, I can recall only two Bolwarra sightings of single birds, while Keith Howard (pers. comm.) has recorded it just once but in greater numbers. White-throated Needletail *Hirundapus caudacutus* was recorded occasionally, from November to February; at no stage has it been more regular.

Passerines

Bowerbirds

The Satin Bowerbird *Ptilonorhynchus violaceus* is now a familiar species locally, seen at any time of year. It was a surprise, therefore, to discover that it was often difficult to find in 2000-01, in spite of the fact that a nest was discovered in November 2001. An active bower has often been present, and young have frequently been raised in recent years. Given the increased habitat provided by maturing tree-plantings, it is not surprising that the species is increasing. Of two reports of the Regent Bowerbird *Sericulus chrysocephalus* appearing locally, one was in 2000 (Keith Howard, pers. comm.).

Fairy-wrens, Scrubwrens, Pardalotes, Thornbills and Gerygones

The constantly present Superb Fairy-wren *Malurus cyaneus* has alone represented this family, while White-browed Scrubwren *Sericornis frontalis* were occasional. The Striated Pardalote *Pardalotus striatus* was much commoner than the Spotted Pardalote *Pardalotus punctatus*, and has almost always been present. The Spotted Pardalote has been heard more frequently of late, though it remains uncommon locally. Of the thornbills, I could find only Yellow Thornbill *Acanthiza nana* and Yellow-rumped Thornbill *Acanthiza chrysorrhoa* in 1994, and both were recorded each month in 2000-01; Brown Thornbill *Acanthiza*

pusilla was recorded, but once only. White-throated Gerygone *Gerygone albogularis* visited from September to March. Recently there has been a considerable increase in records of the Brown Thornbill, and a suspicion of a decline in the White-throated Gerygone.

Honeyeaters

Many nectar-feeders move in search of suitable blossom, so that only with caution can trends be postulated. Of the larger honeyeaters Red Wattlebird *Anthochaera carunculata* and Blue-faced Honeyeater *Entomyzon cyanotis* were continuously present in 2000-01, while the irruptive Noisy Friarbird *Philemon corniculatus* was commoner in 2000 than in 2001. There were near-continuous winter records for Yellow-faced Honeyeater *Lichenostomus chrysops* in both years, but the bird did not (and still does not) regard the suburb as suitable breeding territory. There were just two records in April and August for White-naped Honeyeater *Melithreptus lunatus*, and a single October record for Brown-headed Honeyeater *Melithreptus brevirostris*, as also for Scarlet Honeyeater *Myzomela sanguinolenta*. Keith Howard (pers. comm.) once recorded Lewin's Honeyeater *Meliphaga lewinii* in 2000-01. Eastern Spinebill *Acanthorhynchus tenuirostris*, then regarded as locally 'uncommon', was nevertheless regularly recorded, and I should now class it as 'common'. I now see both the Eastern Spinebill and the Scarlet Honeyeater with some regularity, though in the latter case Keith Howard (pers. comm.) has been recording them less, probably illustrating different trends in different parts of the suburb. However, the more striking increases have been in the Striped Honeyeater *Plectorhyncha lanceolata*, absent in 2000-01 but quite often present over the last three to four years, and White-plumed Honeyeater *Lichenostomus penicillatus*, originally absent, 'uncommon' in 2000-01, and now permanently present. Both these species have nested in recent years. The fact that Bolwarra itself has not been colonized by Noisy Miners *Manorina melanocephala*, common in Bolwarra Heights, has no doubt been to the advantage of the smaller honeyeaters.

Whistlers, Flycatchers and Fantails

I had formerly been aware of visits from both Rufous Whistler *Pachycephala rufiventris* and Golden Whistler *Pachycephala pectoralis* during the winter months. Though the normal status of Rufous Whistler is that of a summer visitor to the Hunter Region, the Bolwarra winter records

suggest that for some birds it may be enough to move nearer to the coast and to a lower altitude. In 2000, however, I continued to record it into spring, and it now appears to breed regularly. A Restless Flycatcher *Myiagra inquieta* had wintered in Bolwarra regularly, and during 2000 was found in all months April to August. The bird did not reappear in 2001, and none now visits us at any time of year. Since I suspect that we are talking about a single bird it is impossible to deduce any trends from this. Related species such as Leaden Flycatcher *Myiagra rubecula* and Black-faced Monarch *Monarcha melanopsis* have occasionally been seen on migration before and since, but none was recorded during 2000-01; there was, however, a single 2001 record for Rufous Fantail *Rhipidura rufifrons*, while K. Howard (pers. comm.) recorded Rose Robin *Petroica rosea* in the winter of 2000. In 2001 the Grey Fantail *Rhipidura albiscapa* was recorded in all months for the first time, but not in February or September 2000. The species has been becoming more prolific locally, and can now be found in my garden most days. Hence it is now probably commoner in the leafy parts of Bolwarra than the Willie Wagtail *Rhipidura leucophrys*, which has always been in residence. This increase in the Grey Fantail came over a period when it was becoming noticeably less common in surveys of Hunter woodlands. For instance, regular surveys of a site at Vacy (32°30'55"S, 151°32'20"E) between 2003 and 2009 saw the reporting rate drop to below 50% in 2005-08, and when it was recorded it was listed later in my surveys, suggesting decreased visibility. The reporting rate for the species also decreased on my upper Hunter surveys (Tarrant 2008: 25), and aspects of the decline have been of concern in other studies (M. Newman, pers. comm.).

Cuckoo-shrikes

Only the Black-faced Cuckoo-shrike *Coracina novaehollandiae* is resident, and its absence has never been observed. On the other hand the White-winger Triller *Lalage sueurii* is a summer migrant whose presence cannot be guaranteed, but it is hard to overlook when it is there. At least eight birds had arrived in October 2000. It bred locally in the 1999-2000 and 2000-01 seasons, with young fledging in both cases, but moved on after appearing in October 2001. In 2010-11 it did not appear at all, but almost certainly this reflects conditions locally and elsewhere, not any long-term trend. It was absent from other Hunter sites where I generally record it, and indeed unrecorded across the Hunter Region from March to December 2010 (Stuart 2011).

Orioles and Figbirds

Both the Australasian Figbird *Sphecothebes vieillotii* and the Olive-backed Oriole *Oriolus sagittatus* were usually present, and the position is still much the same. Their temporary absences are probably due to the lack of preferred food, for the only months when the figbird was not recorded (March-April 2000) fell in the middle of a 6-month absence (February-July) of the oriole. No trends can be ascertained, though an increase in trees and shrubs has probably assisted both species.

Butcherbirds, Magpies and Currawongs

Both the Pied Butcherbird *Cracticus nigrogularis* and the Grey Butcherbird *Cracticus torquatus* breed locally, and were usually recorded. The Australian Magpie *Cracticus tibicen* has always been common as is to be expected. Only the Pied Currawong *Strepera graculina* has had a change in status, for in 1994 it had been a hard bird to find at all, and was regarded as an uncommon winter visitor in 2000-01, appearing only between April and August. It has become commoner and at least one pair has been present all through the spring and summer for two consecutive years.

Crows and Ravens

Only Australian Raven *Corvus coronoides* had been recorded up to and including 2000-01. The only new species reliably recorded has been the Torresian Crow *Corvus orru*, which is occasionally seen and heard overflying.

Pipits

Australasian Pipit *Anthus novaeseelandiae* was still classed as common in 2000-01, and, though it was seldom seen, one acknowledged that its natural home was in the surrounding fields. Though a few birds may still be seen in the area of Flat Road, it has disappeared from some areas where it used to be seen and where habitat would still appear suitable.

Australian Finches

It was the Zebra Finch *Taeniopygia guttata* that was most recorded in 2000-01 (maximum eight), rather than the Red-browed Finch *Neochmia temporalis* or the locally rare Double-barred Finch *Taeniopygia bichenovii*. Though the Zebra Finch may still be found in greater numbers (though at a decreasing number of sites), the Red-browed Finch now breeds in my garden and elsewhere, and it

would certainly be recorded most months. Only in the case of the Red-browed Finch would I postulate any change in status.

Swallows and Martins

The Welcome Swallow *Hirundo neoxena* has always been a common bird, readily recorded, and the White-backed Swallow *Cheramoeca leucosterna* an occasional vagrant. Of the martins, the Tree Martin *Petrochelidon nigricans* was often recorded in 2000-01 throughout the year, and the Fairy Martin *Petrochelidon ariel* was recorded only once (Sept. 2000). However, there is a favourite nesting site for this species just across the river, and as a result the birds regularly stray across at the western side of the suburb (K. Howard, pers. comm.).

Old World Warblers

In 2000-01 this family was represented by four regular species: Little Grassbird *Megalurus gramineus*, Tawny Grassbird *Megalurus timoriensis*, Australian Reed-Warbler *Acrocephalus australis*, and Golden-headed Cisticola *Cisticola exilis*. Only the last would appear easier to find now, the reed-warbler seems to over-winter less frequently, and both grassbirds may be in local decline. The picture has been balanced by the addition of Rufous Songlark *Cincloramphus mathewsi* and Brown Songlark *Cincloramphus cruralis* to the list as spring and summer visitors in drier years since 2006.

Other Native Passerine Species

The Silvereye *Zosterops lateralis* was always present in 2000-01, and no change has been noted. Mistletoebird *Dicaeum hirundinaceum* did not appear in 2000-01, but has occasionally done so both before and after. Horsfield's Bushlark *Mirafra javanica* has occasionally appeared since late 2006, having been absent up until then. White-winged Choughs *Corcorax melanorhamphos* occasionally stray into the area from adjacent suburbs, but were not recorded in 2000-01.

Feral Species

Though all the widespread feral species are present, it is worth mentioning that the European Goldfinch *Carduelis carduelis* was almost always recorded in 2000-01, in numbers up to 30, but has since become much harder to find. Keith Howard (pers. comm.) relates this to the clearing of thistles from Water Board land in 2002. The Common

Blackbird *Turdus merula* was not present during that period, but can now be heard singing every spring and summer, mainly at the Maitland end of Bolwarra.

DISCUSSION

While the status of much of the bird life of the area has remained constant over the last decade, there are some striking exceptions, sometimes indicative of wider trends.

- The Restless Flycatcher that was once regular has disappeared, or nearly so.
- The following species have undergone a noticeable decline (whether numerically or by months present), or are contracting their range: Intermediate Egret, Peregrine Falcon, Black-winged Stilt, Black-fronted Dotterel, Southern Boobook, Australasian Pipit, Little Grassbird, Tawny Grassbird, Australian Reed-Warbler, European Goldfinch.
- The following species have undergone a noticeable increase in observations (whether numerically or by months present), or expansion of range: Stubble Quail, Little Egret, Latham's Snipe, Yellow-tailed Black Cockatoo, Sulphur-crested Cockatoo, Little Corella, Rainbow Lorikeet, Musk Lorikeet, Spotted Pardalote, Brown Thornbill, White-plumed Honeyeater, Eastern Spinebill, Grey Fantail, Rufous Whistler, Pied Currawong, Satin Bowerbird, Red-browed Finch.
- The following species are new to the list and could be regarded as normal now, given the right season or right conditions: Black Falcon, Striped Honeyeater, Torresian Crow, Singing Bushlark, Rufous and Brown Songlarks, Common Blackbird.

The list of birds that are new or increasing their presence is far more impressive than the list of those that are declining. None of those in decline could naturally be described as 'garden birds'; rather, it contains birds of the lagoons and fields: but by no means all of them. No doubt land use affects the population of the fields, and water levels here and elsewhere affect what is found around the lagoons.

A word should be said about the number of species listed in NSW under the *Threatened Species Conservation Act* 1995 which have been recorded locally at some time. These include Australasian Bittern, Black Bittern, Square-tailed Kite, Spotted Harrier, Little Eagle, Grey Falcon (unconfirmed)

and Barking Owl. While not recorded in 2000-2001, Freckled Duck *Stictonetta naevosa* have occasionally been recorded since. Keith Howard (pers. comm.) has also twice recorded Black-necked Stork *Ephippiorhynchus asiaticus*. It is not claimed that the area has ever provided critical habitat for threatened species, merely that it is an area that they have been able to use at times.

CONCLUSIONS

The increase in the birds using garden areas of Bolwarra, and tree-plantings in public areas such as the sports field and Bolwarra Lagoon, confirms the considerable importance of 'green suburbs' for adaptable species, in the Hunter Region and no doubt elsewhere. It is one of the few habitat types of which it can generally be said that its avian species are thriving. Efforts should therefore be made to ensure that greener, low-density housing areas, particularly those that are adjacent to other environmental assets, such as creeks, lagoons, and vegetation corridors, remain low density into the future.

Monitoring of such areas on an on-going basis is not only a rewarding experience, but could provide an early indication of trends affecting the wider region and even the state as a whole. Greater alertness to the significance of the local decline of Little Eagles, as documented above, might have enabled an earlier appreciation of its vulnerability. If one takes the regional position as documented by reports to HBOC, one gets no hint of a decline until 2005, for until then the annual reporting rate of the species was considered too high to justify the listing of all records in the ABRs for 2001, 2003, and 2004. Since 2005 the reporting rate has dropped below the threshold of 12 annual observations and all records have been noted (Stuart 1996-2010).

Naturally local records can also alert one to regional population increases. In this case I note that the recent appearance of Striped Honeyeater in the Bolwarra area agrees well with the fact that it has in recent years been recorded at 9% more surveys at one of my Doyles Creek (Upper Hunter) sites and 43% more at the other (Tarrant 2008), while it has come to be regularly recorded after an initial absence at both my Martindale sites during the dozen years that I have surveyed them. Again, the arrival of Torresian Crows in Bolwarra and surrounding area, and into the Vacy area where I also conduct regular surveys, is paralleled by its

spread along the coast to south of the Hunter River (Stuart 1996-2011).

One must emphasise here that while it is easy to notice an influx of a new species into the area, the only guarantee that local decline will be noticed quickly is the keeping of systematic records, and their regular review.

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APPENDIX: List of common species at Bolwarra

This list includes species recorded by the author for at least three months during 2000-01, plus those that could now be recorded for three months in a period of two years. The list is not intended to cover all species that can be found in Bolwarra. For species found that could only be recorded in summer or in winter months at that time an S or W has been added to their status.

Species Name	Months, 2000-01	Status as on 2001 list*	Changes, 2009-11
Stubble Quail	6	Uncommon S	irruptive summer
Wandering Whistling-Duck	4	Rare	
Black Swan	23	Common	
Australian Wood Duck	23	Common	
Australasian Shoveler	2	Uncommon	
Grey Teal	23	Common	possible decrease
Chestnut Teal	19	Common	increased
Mallard-type	12	Uncommon	disappeared
Pacific Black Duck	23	Common	
Hardhead	17	Common	
Australasian Grebe	23	Common	
Hoary-headed Grebe	3	Uncommon W	
White-headed Pigeon	4	Uncommon	possible decrease
Crested Pigeon	23	Common	
Bar-shouldered Dove	3	Uncommon	
White-throated Needletail	3	Uncommon	
Darter	9	Common	
Little Pied Cormorant	23	Common	
Great Cormorant	8	Common	
Little Black Cormorant	23	Common	

Appendix: List of common species at Bolwarra (cont.)

Species Name	Months, 2000-01	Status as on 2001 list*	Changes, 2009-11
Australian Pelican	23	Common	often absent
White-necked Heron	7	Uncommon	fluctuates
Eastern Great Egret	11	Common	
Intermediate Egret	23	Common	decreased
Cattle Egret	23	Common	winter roost established
White-faced Heron	23	Common	
Little Egret	14	Uncommon	possible increase
Australian White Ibis	18	Common	
Straw-necked Ibis	22	Common	
Royal Spoonbill	23	Common	
Yellow-billed Spoonbill	7	Uncommon	fluctuates
Black-shouldered Kite	19	Common	decreased
Square-tailed Kite	3	Uncommon	no recent records
White-bellied Sea-Eagle	9	Common	
Whistling Kite	7	Common	possible decrease
Brown Goshawk	7	Common	
Collared Sparrowhawk	14	Common	
Spotted Harrier	4	Uncommon	no recent records
Swamp Harrier	5	Uncommon	
Wedge-tailed Eagle	6	Common	
Little Eagle	8	2000: 'Now uncommon'*	records scarce
Nankeen Kestrel	19	Common	possible increase
Brown Falcon	3	Uncommon	
Australian Hobby	20	Common	
Peregrine Falcon	13	Common*	slight decrease
Purple Swamphen	23	Common	
Dusky Moorhen	23	Common	
Eurasian Coot	23	Common	decreased
Black-winged Stilt	23	Common	sharp decline
Black-fronted Dotterel	10	Common	decline
Masked Lapwing	23	Common	
Latham's Snipe	0	Uncommon S*	increasing
Yellow-tailed Black-Cockatoo	8	Becoming common	more common
Galah	23	Common	
Long-billed Corella	22	Common	still increasing
Little Corella	8	Common	increasing
Sulphur-crested Cockatoo	15	Common	increasing
Rainbow Lorikeet	12	Common	increasing
Musk Lorikeet	0	Absent	usual, irruptive
Australian King-Parrot	21	Common*	
Eastern Rosella	23	Common	
Red-rumped Parrot	17	Common	
Eastern Koel	10	Common S	increasing
Channel-billed Cuckoo	6	Common S	
Fan-tailed Cuckoo	3	Uncommon	
Southern Boobook	8	Common	sharp decrease
Laughing Kookaburra	23	Common	
Sacred Kingfisher	6	Common S	
Dollarbird	9	Common S	
Satin Bowerbird	13	Common	increased
Superb Fairy-wren	23	Common	
White-browed Scrubwren	4	Uncommon	
White-throated Gerygone	6	Common S	decreased
Yellow Thornbill	23	Common	

Appendix: List of common species at Bolwarra (cont.)

Species Name	Months, 2000-01	Status as on 2001 list*	Changes, 2009-11
Yellow-rumped Thornbill	23	Common	
Brown Thornbill	1	Uncommon	now usual
Spotted Pardalote	2	Uncommon	increased
Striated Pardalote	20	Common	
Eastern Spinebill	7	Uncommon	now common
Yellow-faced Honeyeater	11	Common W	
White-plumed Honeyeater	2	Uncommon W	now common resident
Red Wattlebird	23	Common	
Scarlet Honeyeater	1	Uncommon	now more usual?
Blue-faced Honeyeater	23	Common	more widespread
Noisy Friarbird	8	Common	
Striped Honeyeater	0	Absent	uncommon, but has nested
Black-faced Cuckoo-shrike	23	Common	
White-winged Triller	6	Uncommon S	irruptive
Golden Whistler	4	Common W	
Rufous Whistler	6	Common	
Australasian Figbird	21	Common	
Olive-backed Oriole	14	Common	
Grey Butcherbird	21	Common	
Pied Butcherbird	21	Common	
Australian Magpie	23	Common	
Pied Currawong	8	Uncommon W	now common, found in summer
Grey Fantail	21	Common	
Willie Wagtail	23	Common	
Australian Raven	23	Common	
Torresian Crow	0	Absent	now uncommon
Restless Flycatcher	5	Uncommon W	disappeared
Magpie-lark	23	Common	
Golden-headed Cisticola	17	Common	
Australian Reed-Warbler	20	Common	
Tawny Grassbird	11	Uncommon	decreased
Little Grassbird	12	Common S*	decreased
Silvereye	23	Common	
Welcome Swallow	23	Common	
Tree Martin	13	Common	
Zebra Finch	11	Common	less widespread
Red-browed Finch	9	Common	increased
Australasian Pipit	6	Common	decreased

* An asterisk marks corrections made to 2001 list, where an oversight could be established