

Draft Revision (2009)

Flora and Fauna Guarantee Action Statement No. 34

Grey-crowned Babbler *Pomatostomus temporalis*

Description

The Grey-crowned Babbler (*Pomatostomus temporalis*) is a distinctive bird, 23–29 cm long, with a long, downward-curved bill, pale-grey crown, dark face mask, orange-tipped wings, and white-tipped tail. Its body is dark brown above and paler beneath. It is the largest of the largest of the four species within this genus in Australia. The loud call involves a ‘ya-hoo’ call and response between adult pairs, which may be repeated many times.

Distribution

The Grey-crowned Babbler is widespread throughout eastern and northern Australia (Blakers *et al.* 1984), and was formerly widespread through much of western, central and northern Victoria (Emison *et al.* 1987). During this century, however, Grey-crowned Babblers have disappeared from south-western Victoria (Learmonth 1964), and from most of Victoria south of the Great Dividing Range (Pescott 1983, Schulz 1991). Northern Victoria is the stronghold of extant populations, but here their range has also shrunk, and are now considered much less common (Harrop 1991, Officer 1991). In addition, Grey-crowned Babblers have apparently disappeared from south-eastern South Australia. They have become less common in parts of the Riverina (P. Maher pers. comm. 1996), the Pilliga Scrub in northern New South Wales (H. Recher pers. comm. 1996), near Sydney (Hindwood 1943), the Australian Capital Territory (Frith 1969) and some parts of south-eastern Queensland (Battaglene 1989, Schulz 1991).

Extant populations are scattered over northern Victoria, from near Murtoa in the west, east to Chiltern, and south to Eppalock and Avenel. They are most abundant in the region between Avenel and Benalla, the Hume Freeway and the Broken River. An estimated 150 groups (~ 600 birds) occur in this region. There are 80–90 groups around Boort and Loddon in the north-western Victoria (I. Davidson pers. comm. 2009).

Habitat

Grey-crowned Babblers occur across several broad grassy woodland communities, namely Grey Box (*Eucalyptus microcarpa*), Black Box (*E. largiflorens*), Yellow Box (*E. melliodora*), Red Ironbark (*E. sideroxylon*), Murray Pine (*Callitris glaucophylla*), River Redgum (*E. camaldulensis*) and Buloke (*Allocasuarina luehmannii*), each of which has been greatly depleted in extent since European settlement (Ahern *et al.* 2003; Frood & Calder 1987). Most of the known groups of Grey-crowned Babblers utilise remnant woodland habitats along roadsides or on private land. In many parts of rural Victoria, roadside vegetation constitutes the largest proportion of remnant native vegetation.

Life history and ecology

Grey-crowned Babblers live in groups of 2–12 birds, all of which participate in nesting activities and territorial defence. Babbler groups home ranges vary from 2–53 ha (Blakers *et al.* 1984) and increase with increasing group size (Counsilman 1977). Group size is also related to habitat elements such as the amount of wooded cover (Brown *et al.* 1983, Robinson *et al.* 2002).

Grey-crowned Babblers are insectivores that forage partly on the ground and partly on the trunks and branches of trees and shrubs. They prefer rough-barked trees and trees with peeling bark (Robinson *et al.*, in prep.). Family groups build a number of large, domed stick nests in saplings, shrubs or trees, usually some 1–6 m above the ground. These nests are used as dormitories for communal roosting at night. An extra nest is built for breeding. Adult birds have an average life expectancy of approximately four years (Brown 1987). Young birds stay with the family group for at least one year after fledging and may remain for two or more years. These birds are physiologically capable of breeding but instead act as non-breeding helpers. As breeding spaces become available in the population, some helpers disperse (Brown *et al.* 1983). Helpers also may disperse to try to establish their own breeding groups (Brown *et al.* 1983). Helpers contribute significantly to breeding success (Brown 1987), which implies that maintenance of larger groups with higher numbers of helpers will be important for the long-term survival of this species.

Conservation status

National conservation status

Grey-crowned Babbler (*Pomatostomus temporalis*) is not listed under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*.

Victorian conservation status

Grey-crowned Babbler (*Pomatostomus temporalis*) has been listed as “threatened” under the *Flora and Fauna Guarantee Act 1988*.

Grey-crowned Babbler (*Pomatostomus temporalis*) is considered “endangered” in Victoria according to the *Advisory List of Threatened Vertebrate Fauna in Victoria - 2007* (DSE 2007).

Threats

Overall, the Grey-crowned Babbler population has declined by an estimated 90% across Victoria and their range has decreased by more than 50%. It is predicted that most populations of the Grey-crowned Babbler remaining in Victoria have a greater than 50% chance of becoming extinct in the next 20 years (Robinson 2001b) as a consequence of a range of threats, including small population size, small group size, low breeding success, isolation, habitat loss and habitat degradation. Long term studies of the Violet Town and Euroa populations indicate that the population there has declined overall by 50% over the last fifteen years (Wilson *et al.* 2009).

<i>Standard threat</i>	<i>Source of threat</i>	<i>Explanation</i>
Habitat damage or loss.	Vegetation clearance.	Construction of new roads through Grey-crowned Babbler habitat further fragments their habitat. Vegetation clearance is also occurring incrementally on roadside reserves as part of roadside maintenance activities. The impact of this threat is considered to be high.
Habitat damage or loss.	Animals - introduced herbivores.	Over-grazing in remnant sites such as disused road reserves reduces understorey cover and biomass, a vital component of Grey-crowned Babbler habitat. The impact of this threat is considered to be high.
Habitat damage or loss.	Vegetation clearance.	Removal of coarse woody debris reduces feeding opportunities, particularly the access to resources such as termite galleries. The impact of this threat is considered to be high.
Habitat damage or loss.	Invasion by environmental weeds.	Displacement of low-growing perennial tussock grasses with tall tussock (<i>Phalaris</i> spp.) or sward grasses (Wild Oats, Ryegrass) may limit ground foraging opportunities. This is particularly a problem in areas where there is no herbivore management such as roadsides. The impact of this threat is considered to be high.
Competition.	Animals - other species.	Noisy Miners dominate much of the preferred Grey-crowned Babbler habitat in the state (Grey <i>et al.</i> 1997) and exert competitive pressure, particularly on smaller groups, which leads to each bird spending more time defending instead of foraging (Grey <i>et al.</i> 1997; Grey <i>et al.</i> 1998); thereby impacting on group viability. This is considered a high level threat.
Habitat fragmentation.	Road traffic.	Increasing traffic volumes on roads have been shown to have a negative impact on the use of sites by Grey-crowned Babblers (van der Ree <i>et al.</i> 2008). This is considered a medium level threat.
Habitat fragmentation.	Vegetation clearance.	Habitat fragmentation and loss increases the geographic isolation of Grey-crowned Babbler groups from one another. This has been shown to reduce the likelihood of group persistence (Robinson <i>et al.</i> , 2001; van der Ree <i>et al.</i> , 2007 and Wilson <i>et al.</i> 2009). This is a medium level threat as most clearance has now been done.

Carnivory.	Animals – cats.	The exact level of impact of this threat is unknown but is considered to be low.
Carnivory.	Animals – foxes.	The exact level of impact of this threat is unknown but is considered to be low.

Important populations

<i>Location name</i>	<i>Land manager</i>	<i>Catchment</i>	<i>Bioregion</i>
Violet Town - Baddaginnie District (private land).	Landholder	Goulburn Broken	Victorian Riverina
Euroa - Avenel District (private land).	Landholder	Goulburn Broken	Victorian Riverina
Lurg District (private land).	Landholder	Goulburn Broken	Central Victorian Uplands
Chiltern - Norong - Boorhaman District (private land).	Landholder	North East	Victorian Riverina
Killawarra District (private land).	Landholder	North East Goulburn Broken	Northern Inland Slopes
Yelima - Tocumwal District (private land).	Landholders	Goulburn Broken	Murray Fans
Lower Goulburn - Barmah District (private land).	Landholder	Goulburn Broken	Murray Fans
Murrabit District (private land).	Landholder	North Central	Murray Fans
Boort - Yando - Appin District (private land).	Landholder	North Central	Victorian Riverina
Kerang - Pentil Island District (private land).	Landholder	North Central	Murray Fans
Rushworth - Murchison - Bailieston District (private land).	Landholder	North Central	Goldfields
Eppalock – Axedale District (private land).	Goulburn-Murray Water	North Central	Goldfields

Past management actions

<i>Action</i>	<i>Explanation</i>
Liaise with government agencies.	All Shires have developed roadside management plans that have identified valuable Babbler habitats. Whilst protection is enhanced for occupied sites, there is little strategic planning or management to improve the quantity or quality of the habitat.
Liaise with private landholders.	The combined efforts of Trust for Nature, the Department of Sustainability and Environment, the Department of Primary Industries, Catchment Management Authorities, Birds Australia, Bird Observation and Conservation Australia (BOCA) and Friends of the Grey-Crowned Babbler have raised the profile of this woodland bird as a well-recognised focal species across the State.
Control introduced animals.	Fox control has been undertaken across the State. However, this has almost always been for sheep protection and has not been targeted at Babbler sites.
Develop or amend planning scheme overlays and schedules.	Overlays have been developed for the Rural City of Benalla only. Overlays have been proposed but not implemented as an action in other Shires with significant populations of Grey-crowned Babblers. As Grey-crowned Babblers occupy Ecological Vegetation

	Classes that are “endangered” their habitat is usually classed as of “very high conservation significance”, so clearing is generally not permitted. There are few examples where there would have been improved outcomes for Grey-crowned Babblers had a Vegetation Protection Overlay or Environmental Protection Overlay been in place.
Fence to allow natural regeneration.	This action has been undertaken extensively, especially in Goulburn Broken catchment.
Develop guidelines, systems procedures or design manuals.	The mapping of roadside sites has now been completed by most Shires. However, there is still more work required to implement these guidelines.
Develop/revise management prescriptions and/or zoning for State forest.	Specific management prescriptions were identified within a Special Management Zone for the Grey-crowned Babbler for the Mid-Murray Forest Management Area. Timber harvesting was suspended from within 100 m of active colonies in 2002 (DNRE 2003).
Prevent habitat loss.	This action has been partially completed by identifying Babbler sites and through the statutory planning process. Works have been undertaken on private land and disused roadsides to protect and enhance core Babbler habitat. Woody debris continues to disappear from roadsides by unauthorised removal, presumably firewood collection.
Undertake detailed population monitoring and collect demographic information.	Demographic monitoring has been undertaken at most core Babbler sites across the State at intervals of 2–3 years for the last 10 years. As a result there is good information about the state of populations across most locations. Information collated and published by Trust for Nature shows that near Barmah, Grey-crowned Babbler numbers have risen over the past ten years from five groups and 26 birds in 1998 to eight groups and 42 birds in 2006. At Koonda there has been an overall increase in numbers and groups. Violet Town District numbers of individuals have risen by 28% from 117 birds in 1992 to 150 in 2007 (Robinson 2007).
Restore habitat.	The major habitat restoration works being carried out to specifically target Grey-crowned Babblers occurs in the Goulburn Broken catchment under the direction of 'Friends of the Grey-crowned Babbler'. Elsewhere in the State revegetation works are being carried out to assist the recovery of other species and these will have potential benefits to Grey-crowned Babblers as well. Revegetation and remnant protection (using a Section 173 Agreement under the <i>Planning and Environment Act 1987</i>) may also improve landscape connectivity and improve Babbler dispersal if it occurs near existing populations.
Assess threats.	Much research has been carried out into the threatening processes that affect the Grey-crowned Babbler. The following is a list of research projects by year: <ul style="list-style-type: none"> ▪ 1991-1994 - Studies were made of the ecology and demography in the Violet Town district, leading to models on the major causes of the species' decline (Robinson <i>et al.</i> in prep.). ▪ 1998 - Studies identified habitat preferences in <i>Callitris</i> woodland in Victoria and southern NSW (Robinson 1998). ▪ 2001 - A preliminary population viability analysis was carried out which predicted that most populations in Victoria are likely to be extinct over the next 20 years (Robinson 2001b). ▪ 2001 - A comparison of habitat and landscape attributes was made between two landscapes with different population attributes (Simondson 2001). ▪ 2008 - The distance to other Grey-crowned Babbler groups and habitat complexity were both identified as factors that contributed significantly to the occurrence of Grey-crowned Babblers within the Mid Goulburn Broken Catchment (van der Ree <i>et al.</i> 2008). ▪ Major roads were also shown to have a negative impact on the persistence of Grey-crowned Babblers. However, further study is required to establish threshold distances at which road effects extend (van der Ree <i>et al.</i> 2008). ▪ 2008 - Radford (2008) showed that between 22-23% total woodland cover in the

	landscape is required to support between 8-10 Grey-crowned Babbler groups. Landscapes are able to support greater populations if the habitat contains a higher proportion of Black Box woodland (Radford 2008).
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Conservation objectives

Long term objective

To ensure that the Grey-crowned Babbler can survive, flourish and retain its potential for evolutionary development in the wild.

Objectives of this Action Statement

- To maintain or increase the extent of habitat.
- To secure populations or habitat from potentially incompatible land use or catastrophic loss.
- To increase community awareness and support.
- To increase knowledge of biology, ecology or management requirements.
- Establish and maintain a reintroduced / translocated population.

Intended management actions

The intended management actions listed below are further elaborated in DSE's Actions for Biodiversity Conservation (ABC) system. Detailed information about the actions and locations, including priorities, is held in this system and will be provided annually to land managers and other authorities.

<i>Standard objective</i>	<i>Targets</i>	
To maintain or increase the extent of habitat.	<ul style="list-style-type: none"> • Maintain or increase by at least 10% the current population size in the Violet Town, Lurg, Barmah-Lower Goulburn, Brimin-Norong, Boort-Appin, Kerang and Murrabit populations by 2020. • Reverse the decline and increase population size by at least 25% from current levels for the Euroa-Avenel, Murchison-Rushworth and Eppalock populations by 2020. • Increase average group size in each of the populations listed above to four or more. Increase the number of populations or individuals. 	
<i>Action</i>	<i>Details</i>	<i>Responsible agents</i>
Prevent habitat loss.	Achieve a net gain in Grey-crowned Babbler habitat by strictly applying the Victorian Native Vegetation Framework. Liaise with the public and local fire authorities, particularly in the area of roadside management with the implementation of DSE/Shire agreements.	DSE Statewide Services – North East region (DSE SwS – NE), Local Government
Restore habitat.	In every important location, undertake strategic habitat protection and improvement works within 2 km of existing groups and targeted at sites within 0-1000 m of the existing groups.	DSE SwS – NE, Department of Primary Industries, Catchment Management Authorities, Trust for Nature
Restore habitat.	<p>Plant understorey in existing remnants to complement the introduction of appropriate rotational grazing regimes.</p> <p>Revegetate areas either to create buffers around existing Grey-crowned Babbler sites or to connect isolated remnants to existing sites. This will also help to increase the success of this species by allowing for an increase in group sizes within populations.</p> <p>Identify currently unoccupied (by Grey-crowned Babblers) grassy box woodland blocks greater than 10 ha on private land within 2 km of existing Grey-crown Babbler groups and liaise with the landholders. Where possible, restore</p>	Landholders, Greater Bendigo City, Indigo Shire, Strathbogie Shire Council, Goulburn Broken CMA, Loddon Shire, Moira Shire Council, DSE SwS – NE

	these blocks for Grey-crowned Babblers in order to increase group numbers or size of groups.	
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<i>Standard objective</i>	<i>Targets</i>	
To secure populations or habitat from potentially incompatible land use or catastrophic loss.	<ul style="list-style-type: none"> No avoidable loss of key Grey-crowned Babbler habitat. 	
<i>Action</i>	<i>Details</i>	<i>Responsible agents</i>
Erect/maintain structures to restrict or control access.	The complete exclusion of stock from sites may result in an influx of exotic grasses and herbs such as Canary Grass (<i>Phalaris</i> spp.) and Paspalum (<i>Paspalum</i> spp.). Implement grazing regimes at sites where heavy grazing has occurred in the past and are now being fenced off to improve habitat for Grey-crowned Babblers.	DSE SwS – NE
Develop, provide input to or implement park, reserve or land management plan.	Identify special protection areas where firewood harvesting can not be undertaken.	DSE SwS – NE, Local Government
Conduct enforcement activities.	Ensure that firewood harvesting is not undertaken in special protection areas.	DSE SwS – NE, Local Government
Develop and/or implement guidelines, systems procedures or design manuals.	Ensure that the guidelines developed by VicRoads in the past will be implemented at all levels.	VicRoads
Develop or amend planning scheme overlays and schedules.	Protect planted vegetation that has not been supported by public funding using Vegetation Protection Overlays. A planning permit is required to remove native vegetation where planting or management was assisted by public funding and the terms of the funding did not anticipate removal or harvesting.	Indigo Shire, Wangaratta Rural City , Moirra Shire, Campaspe Shire, Loddon Shire, Gannawarra Shire, Strathbogie Shire, Greater Shepparton City, Swan Hill Rural City
Liaise with government agencies.	Encourage local governments to complete or update their roadside management plans and ensure that implementation of these plans is carried out by all staff and contractors as part of their obligations under the <i>Flora and Fauna Guarantee Act 1988</i> . Give appropriate training to roadside maintenance staff on the habitat requirements for Grey-crowned Babblers.	DSE SwS – NE Local Government
Liaise with private landholders	Encourage landowners to protect/enhance or revegetate grassy woodland communities, especially in areas that adjoin existing Babbler habitat.	VicRoads , DSE SwS – NE, Trust for Nature, Department of Primary Industries, CMAs, Landcare, Local Government

<i>Standard objective</i>	<i>Targets</i>	
To increase community awareness and support.	<ul style="list-style-type: none"> Measurable increase in community awareness of the Grey-crowned Babbler and the threat posed by firewood collection, based on periodic sampling. 	
<i>Action</i>	<i>Details</i>	<i>Responsible agents</i>
Promote awareness of item through communication	Raise community awareness of the importance of woody debris and their responsibilities as required by law when	DSE SwS – NE

with local community.	harvesting firewood.	
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<i>Standard objective</i>	<i>Targets</i>	
To increase knowledge of biology, ecology or management requirements.	<ul style="list-style-type: none"> Demonstrable increase in knowledge of Grey-crowned Babbler biology, ecology or management requirements. 	
<i>Action</i>	<i>Details</i>	<i>Responsible agents</i>
Assess threats.	<p>Assess the impact of Noisy Miners (<i>Manorina melanocephala</i>) on Grey-crowned Babbler persistence. Other aggressive bird interactions should also be assessed (including White-winged Choughs and Ravens).</p> <p>Assess the impact of cats and foxes on Grey-crowned Babbler persistence to confirm the perceived importance of this threatening process. This may be most important in the Eppalock and Murchison populations where human density is high.</p> <p>Determine the threshold for disturbance relating to road traffic on Grey-crowned Babbler site use.</p> <p>Assess habitat viability to determine the limiting resource, particularly abundance of important invertebrate groups (such as termites).</p>	Trust For Nature, Birds Australia, DSE BES Universities, Department of Primary Industries
Undertake detailed population monitoring and collect demographic information.	Maintain ongoing population monitoring at sites across Victoria to determine population viability and gauge the success of protection efforts.	DSE SwS – NE
Ensure records of species, communities and locations are documented on the relevant databases.	Enter population data for each site into the Victorian Biodiversity Atlas so that estimates of the population of Grey-crowned Babblers across Victoria may be made.	Birds Australia, DSE-BES

<i>Standard objective</i>	<i>Target</i>	
To increase the number of populations or individuals.	<ul style="list-style-type: none"> Trial completed resulting in a demonstrable increase in knowledge regarding the use of population supplementation as a means of improving the survival of colonies. 	
<i>Action</i>	<i>Details</i>	<i>Responsible agents</i>
Establish and maintain a reintroduced / translocated population.	Undertake translocation trials of groups into an existing population to test whether or not supplementing population size can reduce extinction risk. This trial will test the effectiveness of re-establishing more groups into landscapes where there is suitable, vacant habitat. Research to date has shown that Grey-crowned Babbler population decline is due, in part to isolation of groups and lack of suitable habitat.	Universities, DSE -Statewide Services

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