

Flora & Fauna Guarantee Action Statement

#49

This Action Statement was first published in 1993 and remains current. This version has been prepared for web publication. It retains the original text of the action statement, although contact information, the distribution map and the illustration may have been updated.

© The State of Victoria,
Department of
Sustainability and
Environment, 2003

Published by the
Department
of Sustainability and
Environment, Victoria.
8 Nicholson Street,
East Melbourne,
Victoria 3002 Australia

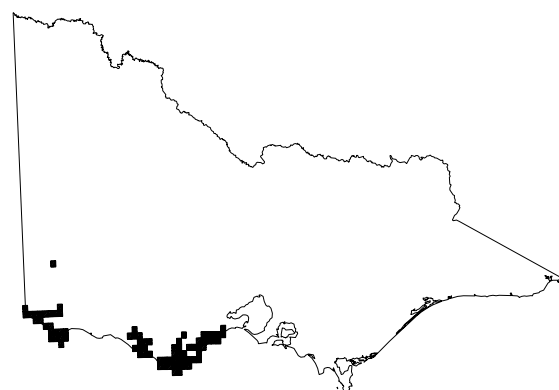
This publication may be of assistance to you but the State of Victoria and its employees do not guarantee that the publication is without flaw of any kind or is wholly appropriate for your particular purposes and therefore disclaims all liability for any error, loss or other consequence which may arise from you relying on any information in this publication.

ISSN 1448-9902

Rufous Bristlebird *Dasyornis broadbenti*



Rufous Bristlebird (*Dasyornis broadbenti*)
(Illustration by John Las Gourgues)



Distribution in Victoria (DSE 2002)

Description and Distribution

The Rufous Bristlebird (*Dasyornis broadbenti*, McCoy 1867) is a medium-size primarily ground-dwelling songbird (23-27 cm long). It is predominantly dark grey-brown above, with a long tail, rich rufous nape and ear coverts, scalloped grey breast, a pale patch before and around the eyes and a cinnamon centre on the wing and rump. It has a loud, distinctive call. Nests are built close to the ground, in tussocks or low shrubs. The Rufous Bristlebird feeds primarily on ground-dwelling invertebrates, although details of its diet are not well known.

There are three subspecies of the Rufous Bristlebird. The nominate subspecies *D. b. broadbenti* is found in a narrow coastal strip from Anglesea west to about the Glenelg River, with a substantial gap in distribution near Warrnambool. This gap effectively creates two distinct populations of Rufous Bristlebirds in Victoria. The bird is a weak flyer and its ability to disperse is

not well understood.

Rufous Bristlebirds are often found in coastal thickets, and in the Otways they occur in forested valleys generally a short distance inland (Emison et al. 1987).

There are some inland records, including resident populations at Kawarren approximately 40 kms from the coast, and in heavily vegetated gullies near Timboon. The bird may have occurred a similar distance inland at Jancourt, west of the Otways, prior to widespread vegetation clearance in the Heytesbury area in the 1960s. Rufous Bristlebirds may frequent gardens near thick natural vegetation.

Conservation Status

Current status

Garnett (1992)	Rare
DCE (1991)	Rare
SAC (1991)	Threatened

The Rufous Bristlebird has been listed as a threatened taxon on Schedule 2 of the Flora and Fauna Guarantee Act 1988.

Reasons for Conservation Status

All species and subspecies of bristlebirds are threatened nationwide (Garnett 1992). Outside Victoria, *D. b. whitei* is found from about the Glenelg River west along the coast of South Australia to the Coorong and it is classified as insufficiently known. The Eastern Bristlebird *Dasyornis brachypterus* is vulnerable and the Western Bristlebird *D. longirostris* is endangered. *D. b. litoralis* from coastal south-western Western Australia is extinct.

The Rufous Bristlebird's range in Victoria has decreased because of loss of habitat through clearing for agriculture and coastal urban development causing fragmentation of habitat and extinctions of local populations. Continued coastal development is likely to result in further habitat fragmentation. Because of its ground feeding and nesting behaviour, the Rufous Bristlebird is vulnerable to introduced predators such as Red Foxes (*Vulpes vulpes*) and Cats (*Felis catus*).

Wildfire or inappropriate burning regimes are a threat throughout the Rufous Bristlebird's range, and may further reduce habitat availability and/or cause local extinctions. Frequent burning of its habitat in south-west Western Australia probably led to its extinction in that state (Garnett 1992).

In its final recommendation the Scientific Advisory Committee (1991) determined that the Rufous Bristlebird is:

- in a demonstrable state of decline which is likely to result in extinction; and
- significantly prone to future threats which are likely to result in extinction.

Major Conservation Objective

The first objective is to confirm that there are at least 1000 Rufous Bristlebirds in each of the populations either side of the Warnambool gap in distribution. While there is no such thing as a fixed minimum viable population for a species (Shaffer 1990), a total of 2000 birds should provide an acceptably low extinction risk (Franklin 1980, Shaffer 1981). The major conservation objective then is to prevent further decline in population density and further fragmentation of Rufous Bristlebird habitat and populations.

This will be accomplished by:

- identifying the ecological requirements of the species;
- identifying gaps in suitable habitat and establishing habitat corridors between populations to allow dispersal to occur, particularly between coastal and inland populations; and
- minimising the impact of threatening processes such as introduced predators, inappropriate fire

regimes, and excessive removal of habitat around human habitation.

Management Issues

Ecological Issues Specific to the Taxon

The essential components of suitable habitat are unclear. Rufous Bristlebirds occur in floristically dissimilar habitats, such as coastal heaths and wet forest gullies, though all habitats occupied contain patches of very dense vegetation. Surveys and research are necessary to define the critical habitat of the Rufous Bristlebird, including the optimal post-fire successional stage.

Wildfires probably pose a direct threat. Following the 1983 bushfires, recolonisation in the Aireys Inlet area has been slow (Reilly 1991a & b). Despite roughly 250 km of coastal habitat being contained in parks and reserves of different status, it is not known if these areas are being managed appropriately for the taxon.

Possible threatening processes in the coastal Otway area include the reduction and fragmentation of suitable habitat by:

- clearing for residential development; the fire protection measure of clearing large areas around houses;
- slashing all unoccupied heathland each spring; and
- controlled burning to remove undergrowth and ground litter, both of which are essential for the birds.

All species of bristlebird are weak fliers and probably have poor dispersal capabilities (Smith 1977, Brouwer & Garnett 1990). They are slow to recolonise areas from which they have been previously eliminated (Smith 1977, Reilly 1991a & b, Garnett 1992). Knowledge of the Rufous Bristlebird's ability to disperse through modified habitats is needed to implement projects involving habitat creation and corridor development. Rufous Bristlebirds are known to sometimes utilise modified environments, including feeding in well-vegetated gardens adjacent to natural habitat and nesting in introduced Pampas Grass.

Cats and Red Foxes may be important predators because Rufous Bristlebirds are ground-dwelling. In areas where housing density within the Rufous Bristlebird's range is high, the numbers of these potential predators of Rufous Bristlebird eggs and young are also likely to be high as are those of Black Rats (*Rattus rattus*), another possible predator.

The effects of weed invasion and rabbit grazing on the habitat requirements of the Rufous Bristlebird are unknown, although they may be significant in some areas.

Wider Conservation Issues

The requirements of threatened sympatric, or partially sympatric, taxa such as the rare Ground Parrot (*Pezoporus wallicus*), endangered New Holland Mouse (*Pseudomys novaehollandiae*), rare Smoky Mouse (*Pseudomys fumeus*), rare Swamp Antechinus (*Antechinus minimus*) and endangered Metallic Sun-orchid (*Thelymitra epipactoides*) will need to be considered in the development of appropriate fire regimes.

Restoring and retaining vegetation along valleys extending inland from the coast, and providing habitat links along the

foreshore of coastal towns such as Warrnambool, Portland and Port Fairy, will provide habitat for a number of other species of flora and fauna.

Social and Economic Issues

The social and economic impacts of conserving the Rufous Bristlebird's habitat are moderate and small respectively. The main social issue concerns the fire protection measure of clearing large areas around houses, slashing all unoccupied heath and burning to remove undergrowth and litter.

Approximately 250 km of coastal habitat of the Rufous Bristlebird lies within existing parks or reserves, where social and economic impacts will be minimal. At Loch Ard Gorge in the Port Campbell National Park, car park development was planned to minimise loss of Rufous Bristlebird habitat. There may be social and economic values to consider in the future as demand for access and parking increases.

As appropriate fire regimes are established, the impact of any changes in burning practices on nearby residential areas will need to be taken into account. Any changes must also be discussed with fire fighting authorities, local residents, and local government. Vegetation clearance is mandatory in many shires and owners who do not comply are liable to significant penalties. Such issues will need to be examined and agreement reached between relevant authorities.

Land acquisition is not likely to be necessary since much of the Rufous Bristlebird's distribution is within parks and reserves. Any Crown Land within the taxon's distribution should be carefully and appropriately surveyed and monitored to ensure that areas of suitable habitat are not made available for sale or inappropriately managed. Preventing future subdivisions and resort development of coastal land that constitutes Rufous Bristlebird habitat could result in loss of economic potential. Consultation between relevant authorities should ensure that damage to habitat is avoided if possible, or at least minimised.

The protection of habitat should not be restricted to existing parks and reserves, as populations of Rufous Bristlebirds could become isolated and therefore more difficult to conserve. Habitat retention and enhancement works on private land are likely to be viewed as socially and economically beneficial. Works will mostly be in gullies which generally require remedial or preventative measures for erosion control and water quality protection. Works are likely to be instigated through a voluntary scheme such as Land for Wildlife. There is generally aesthetic appeal in, and community approval for, maintaining or establishing gully vegetation.

Pet owners need to become more aware of their responsibilities. Predation of native wildlife is a threatening process recognised under the Commonwealth Endangered Species Act 1992.

Management Action

Previous Management Action

During 1991 proposed development plans at Loch Ard Gorge in the Port Campbell National Park were modified to take into account the value of the area for Rufous Bristlebirds, identified after surveys. The proposed car park has been re-sited and reduced in size, and has been installed with minimum loss of habitat.

An interpretative sign, outlining the biology and ecology of the Rufous Bristlebird, has been designed and will be placed near the Loch Ard Gorge car park. This is one of only a few locations where Park visitors can easily see a threatened animal in Victoria.

Intended Management Action

The following actions are proposed for CNR staff in South West Division in conjunction with Flora and Fauna Branch.

- Survey the Rufous Bristlebird's range to establish population densities and distribution.
- In conjunction with the survey, determine the bird's critical habitat requirements. Identify any common features within heathland and inland gully habitats. Factors to be assessed include ground litter, floristics, vegetation structure and successional stages after fire.
- Determine an appropriate fire regime for reserves if the species is found to be fire dependent.
- Determine what constitutes a viable habitat link for the Rufous Bristlebird in terms of width, continuity and habitat quality.
- Develop and enhance a system of corridors along gullies where the Rufous Bristlebird lives or which link known populations. This action is most appropriate for the Heytesbury and Timboon areas and would be best implemented by extension officers such as those in Land for Wildlife or Land Protection.
- Develop education and information material incorporating the results of research, survey and monitoring. Information should be supplied to park managers, local government bodies, community groups, the CFA and landholders concerning the status of the Rufous Bristlebird; the deleterious effects on the bird's habitat from too frequent burning, regular slashing, housing developments and wildfires; the need for corridors of suitable habitat between isolated populations of Rufous Bristlebirds; and the need for responsible Cat ownership.
- Monitor about 10 sites throughout the Rufous Bristlebird's Victorian range. Sites should be chosen so that both disturbed and undisturbed areas where the taxon occurs are represented. Monitoring should involve writing down the procedures to be followed, setting up permanent grids, and then conducting annual counts and mapping the density and distribution of singing birds. The continuing need for and frequency of counts should be included in the Action Statement Review. Local ornithologists should be involved in the monitoring program. Potential

monitoring sites include Aireys Inlet, Kawarren, Loch Ard Gorge, Curdievale, Port Campbell, Point Danger, Cape Nelson, Deans Heath, Mt Richmond and Nelson. Revegetated corridors and the system of retained habitat within the Otway Forest Management Area should also be monitored.

- Inform and involve groups with an interest in ornithology, such as Field Naturalists Club, Royal Australian Ornithologists Union, Victorian Ornithological Research Group and Bird Observers Club of Australia in monitoring and research programs.
- Liaise with local government and VicRoads to erect slow down signs as appropriate where foraging areas of established pairs are dissected by minor roads.
- Encourage reporting of Rufous Bristlebird sightings to CNR Atlas of Victorian Wildlife data base.

Other Desirable Management Actions

- Gather information on natality, mortality, recruitment and dispersal from colour-banded birds.
- Initiate research to determine the degree of inbreeding in isolated populations because of the lack of gene flow.

Legislative Powers Operating

Legislation

Flora and Fauna Guarantee Act 1988: provides mechanisms for the protection and management of threatened species and their habitats.

Wildlife Act 1975: The Rufous Bristlebird is protected under this Act, and a permit is required for taking, including for research or management purposes.

Planning and Environment Act 1987: Amendment S17 to all planning schemes currently requires a permit to remove native vegetation in most circumstances. Guidelines for permit issue include consideration of the importance of vegetation to rare fauna.

Country Fire Authority Act 1958: objectives of this Act in relation to the removal of fire hazards may be perceived at times to be in conflict with objectives of the Flora and Fauna Guarantee Act 1988.

Licence/Permit Conditions

Taking will be permitted only for research of benefit to the species. The birds must be maintained in a viable condition and released at the point of capture at the end of the research.

Research involving handling birds will only be permitted where researchers are appropriately qualified, for example bird banders with relevant experience and appropriate endorsements.

Consultation and Community Participation

Ornithologists with first-hand knowledge of the Rufous Bristlebird should be consulted when planning and implementing research activities. Local members of groups with an interest in ornithology are likely to be interested in helping with various aspects of this action statement. Land For Wildlife members in south-western Victoria should be informed of this action statement through their newsletter and encouraged to assist or participate by protecting and enhancing habitat, and to report sightings of the bird. Local governments should be informed when management actions involve areas in which they may have an interest.

Implementation, Evaluation and Review

This action statement will be implemented by Colac, Portland and Geelong regional offices of CNR. Key staff involved will be Land For Wildlife Officers, Wildlife Planners, Flora and Fauna Guarantee Officers, Land Protection Officers, National Parks and Reserves staff and participants in the Land for Wildlife Scheme.

The effectiveness of this action statement will be evaluated and reviewed via the monitoring program and the 1996 review. Progress towards the target of 2000 birds and implementation of the intended management actions will be the main performance indicators.

Contacts

Management

Flora and Fauna Guarantee Officer, CNR Colac
Flora and Fauna Guarantee Officer, CNR Portland
Flora and Fauna Guarantee Officer, CNR Geelong

Biology

Wildlife Branch, CNR
Mrs Pauline Reilly, Aireys Inlet

Compilers

Steve Smith and David Baker-Gabb

Further information

Further information can be obtained from Department of Sustainability and Environment Customer Service Centre on 136 186.

Flora and Fauna Guarantee Action Statements are available from the Department of Sustainability and Environment website: <http://www.dse.vic.gov.au>

References

- Blakers, M. Davies, S.J.J.F. & Reilly, P.N. (1984) *The Atlas of Australian Birds*. MUP, Melbourne.
- Brouwer, J. A. & Garnett, S. (1989) *An Annotated List of the Rare, Endangered and Extinct Birds of Australia and its Territories*. RAOU, Melbourne.
- DCE (1991) Procedural Document 02-20-0543-1
- DSE (2002) *Atlas of Victorian Wildlife (Electronic Fauna Database)*. Parks, Flora & Fauna, Department of Sustainability & Environment, East Melbourne.
- Emison, W.B. Beardsell, C.M. Norman, F.I. & Loyn, R.H. (1987) *The Atlas of Victorian Birds*. CFL & RAOU, Melbourne.
- Franklin, I.R. (1980) Evolutionary change in small populations. pp 135-50, in M.E. Soule & B.A. Wilcox (eds) *Conservation Biology: an Evolutionary-Ecological Perspective*. Sinauer, Sunderland, MA.
- Garnett, S. (1992) *Threatened and extinct birds of Australia*. RAOU Rep. No. 82.
- Reilly, P. (1991a) The effect of wildfire on bird populations in a Victorian coastal habitat. *Emu* 91: 100-6.
- Reilly, P. (1991b) The effect of wildfire on bush bird populations in six Victorian coastal habitats. *Corella* 15: 134-42.
- SAC (1991) *Final Recommendation on a nomination for listing: Dasyornis broadbenti (Nomination No.5)*. Scientific Advisory Committee, Flora and Fauna Guarantee. Dept of Conservation and Environment, Melbourne.
- Shaffer, M.L. (1981) Minimum population sizes for species conservation. *BioScience* 31: 131-34.
- Shaffer, M.L. (1990) Population viability analysis. *Conservation Biology* 4: 39-40.
- Smith, G.T. (1977) The effect of environmental change on six rare birds. *Emu* 77: 173-79.