

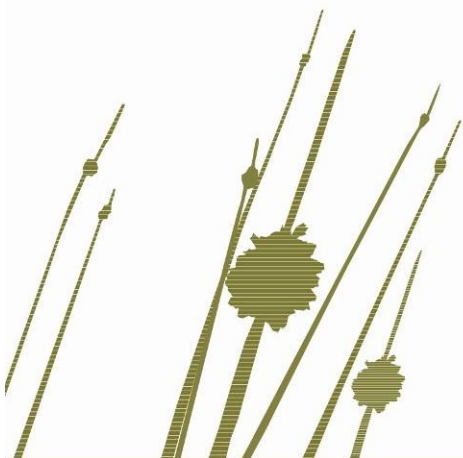
Threatened Species Action Statement

Mt Lofty Ranges Chestnut-rumped Heathwren

Hylacola pyrrhopygia parkeri

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Department
for Environment
and Heritage



Government
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Biological Information

Description and taxonomy

The Chestnut-rumped Heathwren (CRH) is a small terrestrial passerine endemic to coastal and sub-coastal areas of the south east of the Australian mainland (Higgins and Peter 2002). The Mt Lofty Ranges subspecies, hereafter referred to as the MLRCRH, is one of three recognised subspecies (Schodde & Mason 1999). This subspecies (*parkeri*) is confined to the Mt Lofty Ranges of South Australia, while the nominate subspecies *pyrrhopygia* occurs along the south-eastern coast of Australia, from south east Queensland to south east South Australia, and the *pedleri* subspecies occurs in the southern Flinders Ranges (Schodde & Mason 1999, Higgins & Peter 2002). Apart from slight differences in plumage, the biology of the three subspecies is thought to be similar.

The CRH is a small bird, weighing around 17g, with a wingspan of 16-19cm. Adults are brownish-grey above while their underbody is off-white with grey-brown streaking on the chin, throat and breast. They have a prominent off-white eyebrow and rich chestnut coloured rump. The species has a long tail which is typically held cocked like a wren. The sexes are similar in adult plumage with the female being slightly duller in appearance. Juveniles have an unstreaked buff coloured underbody and a buff eyebrow. CRH are similar in appearance to shy heathwrens *Hylacola cauta*, but the latter has a brighter white eyebrow and underbody, more conspicuous streaking on the breast, a more intensely rufous rump and a white mark on the wing.

Habitat

The critical characteristic of MLRCRH habitat appears to be the presence of a dense shrubby layer, however Pickett (2008a) developed a more specific habitat description based on a series of targeted surveys across the Mt Lofty Ranges:

Heathy eucalypt woodland, forest, mallee shrubland, mallee woodland and mallee forest structural formations, often with a low (3–10 m), relatively open (10–70% foliage cover) upper stratum typically dominated by various combinations of *Eucalyptus baxteri*, *E. fasciculosa* and *E. obliqua* (sometimes with *E. cosmophylla* or *E. goniocalyx* codominant or dominant) in highland areas, and by *E. diversifolia* ± *E. baxteri* in some southern coastal areas. Usually with multiple (often two) understorey layers of low-tall (< 0.5–2 m) mainly heath shrubs, such as *Hakea rostrata*, *H. carinata*, *Leptospermum myrsinoides*, *Phyllota pleurandroides*, *Calytrix* spp., *Banksia marginata*, *B. ornata*, *Allocasuarina muelleriana*, *Xanthorrhoea semiplana*, *Hibbertia crinita*, *H. riparia*, *Astroloma conostephioides*, *Platylobium obtusangulum* and *Micrantheum demissum*, and with low-mid (< 0.5–1 m) sedges such as *Lepidosperma semiteres*, *L. carphoides*, *Lomandra fibrata* and *Hypolaena fastigiata*. Generally at least one dense (> 70% foliage cover) layer of vegetation ≤ 2 m height, and sometimes with open areas, but usually only small areas of bare ground without a cover of low (< 0.5 m) foliage. Also in usually dense (70–90% foliage cover) mid-tall (1–2 m) heathland typically dominated by shrubs such as *Hakea rostrata*, *H. carinata*, *Allocasuarina muelleriana* and *Leptospermum myrsinoides*. Mostly in dry-heath, but occasionally in swampy areas or wet-heath. Coastal or inland hilly country, on ridges, hill-tops, slopes and sometimes gullies. Soils vary from sandy to rocky. Occasionally recorded using habitat regenerating after disturbance, such as fire (recorded 0.75–3.5 years post-fire at sites adjacent to occupied habitat) or clearance.

Diet and foraging

The diet of the MLRCRH is only poorly known, but appears to consist of invertebrates and a variety of seeds (Rix 1939, Higgins & Peter 2002). The bird typically forages singly or in pairs either in shrubs or on the ground beneath low dense vegetation (Rix 1939, Higgins & Peter 2002, Pickett 2007a, Moise & Paton 2009).

Movement

The movement patterns of the MLRCRH, and CRH generally, are essentially unknown. The MLRCRH is thought to be sedentary (Paton & Paton 1980), as has been reported for the CRH throughout much of the rest of its range (Higgins & Peter 2002). The species does not appear to undertake any long distance movement: of 11 banded birds recovered under the ABBBS all were recovered <10km from their banding site (Higgins and Peter 2002), and Eddy (1959) reported birds occupying the same area over a number of years.

No information is available on home range or territoriality in the MLRCRH, although McGill (1970) described *H. p. pyrrhopygia* as territorial during the breeding season. Similarly Eddy (1959) observed behaviour that he interpreted as territorial defence around Bendigo in NSW.

Breeding

Little is known of the breeding biology of the MLRCRH. There are anecdotal records of breeding activity in September, which is consistent with the breeding season of the species in NSW, which stretches from June to December (Higgins and Peter 2002).

CRH construct a well camouflaged dome-shaped nest of grass and bark that is placed on or near the ground. Nests may be located in low shrubs, at the base of trees or beneath fallen branches (Eddy 1959,

Higgins and Peter 2002, Beruldsen 2003). The female builds the nest while the male remains nearby, before laying a clutch of two or three eggs (Higgins and Peter 2002 and references therein, Gilbert 1919, Chaffer 1931, Eddy 1959, Ryan 1979, Beruldsen 2003). Females appear to lay at daily intervals (Eddy 1959). The incubation period has been estimated at about 14 to 16 days (Eddy 1959, Higgins and Peter 2002). The fledgling period is unknown, but estimated to be less than 18 days (Eddy 1959). Both parents feed nestlings. The fledglings remain with their parents for six to eight weeks before moving out of the natal territory (Eddy 1959).

Quantitative information is not available for breeding success for MLRCRH, and little is available for CRH in general. Eddy (1959) and Ryan (1979) report that pairs generally rear two broods per year, with the success of the first broods higher than the second. Nests of the CRH may be parasitised by either the fan-tailed cuckoo *Cacomantis falbelliformis* or Horsefield's bronze cuckoo *Chrysococcyx basalix* (Brooker & Brooker 1989, Higgins 1999), both of which occur across the range of the MLRCRH.

Population

In 2000 Garnett and Crowley estimated the MLRCRH population at <2500 individuals, spread across seven sub-populations. In 2006 Joseph et al. estimated total population size at 377 pairs, spread across 21 patches, with the largest sub-population supporting 500 individuals, and the largest patch supporting 70 pairs. Pickett (2007a) estimated the total population of mature individuals at approximately 1000, with the largest sub-population containing around 550.

Distribution

Historical distribution

The MLRCRH has been recorded across an area that extends from the south coast of the Fleurieu Peninsula, between Cape Jervis and Victor Harbor, north along the Mount Lofty Ranges to about Angaston (Figure 1). Records exist for sites from the Deep Creek area along the coast to Encounter Bay, with a gap of approximately 15 km in the Inman Valley region, then from sites extending north-east through the central Mount Lofty Ranges between Myponga, Spring Mount, Ashbourne and Kuitpo, and then mainly in western parts of the ranges between Clarendon and Williamstown, with a single disjunct (by approximately 20 km) northerly record from near Kaiserstuhl CP in the Angaston – Tanunda district (Pickett 2007a). Questionable records also exist for Aldinga CP and O'Halloran Hill RP in the west, and Mount Barker – Callington and Charleston CPs in the east (Pickett 2007a).

Current distribution

Targeted surveys undertaken during 2007-08 detected the species at 25 of 83 sites that were considered to contain potentially suitable habitat (Pickett 2007a, 2008a, Figure 1). As a result the northern extent of the species range is now considered to be well defined, although additional work is required on the Fleurieu Peninsula to better understand the species' distribution there. Current knowledge indicates the area from Black Hill Conservation Park through to Cleland Conservation Park contained the largest regional population but the importance of sites such as Mt. Bold – Scott Creek, Newland Head CP and Cox Scrub CP to this species should not be underestimated.

The most significant conclusions from the 2007-08 surveys were that:

- Large areas of what appears to be potential habitat north of Black Hill CP are unoccupied.
- Despite the presence of nearby connected areas of apparently suitable habitat, it appears that the MLRCRH population in Mount Gawler NFR and environs (the most northerly known population) is isolated, has a very restricted distribution and is relatively small.
- It appears that the MLRCRH no longer occurs in Scott CP.
- Despite relatively large areas of apparently suitable habitat, it appears that the MLRCRH population in Deep Creek CP is isolated, has a very restricted distribution and is very small.

Based on records from targeted surveys in 2007 and records for 2000-2007 with an accuracy of five or less kilometres, Pickett (2007a) estimated MLRCRH had an extent of occurrence of between 791 and 2336 km² and an area of occupancy of 62 km².

Status

The MLRCRH is listed as Endangered under both the Commonwealth *Environment Protection and Biodiversity Act 1999* and the South Australian *National Parks and Wildlife Act 1972*.

Pickett (2007a) provisionally assessed the MLRCRH as meeting the IUCN criteria for Endangered (B1ab(i,ii,iii,iv,v) +2ab(i,ii,iii,iv,v)) due to: restricted geographic range (extent of occurrence < 5000 km² (791 - 2336 km²) and

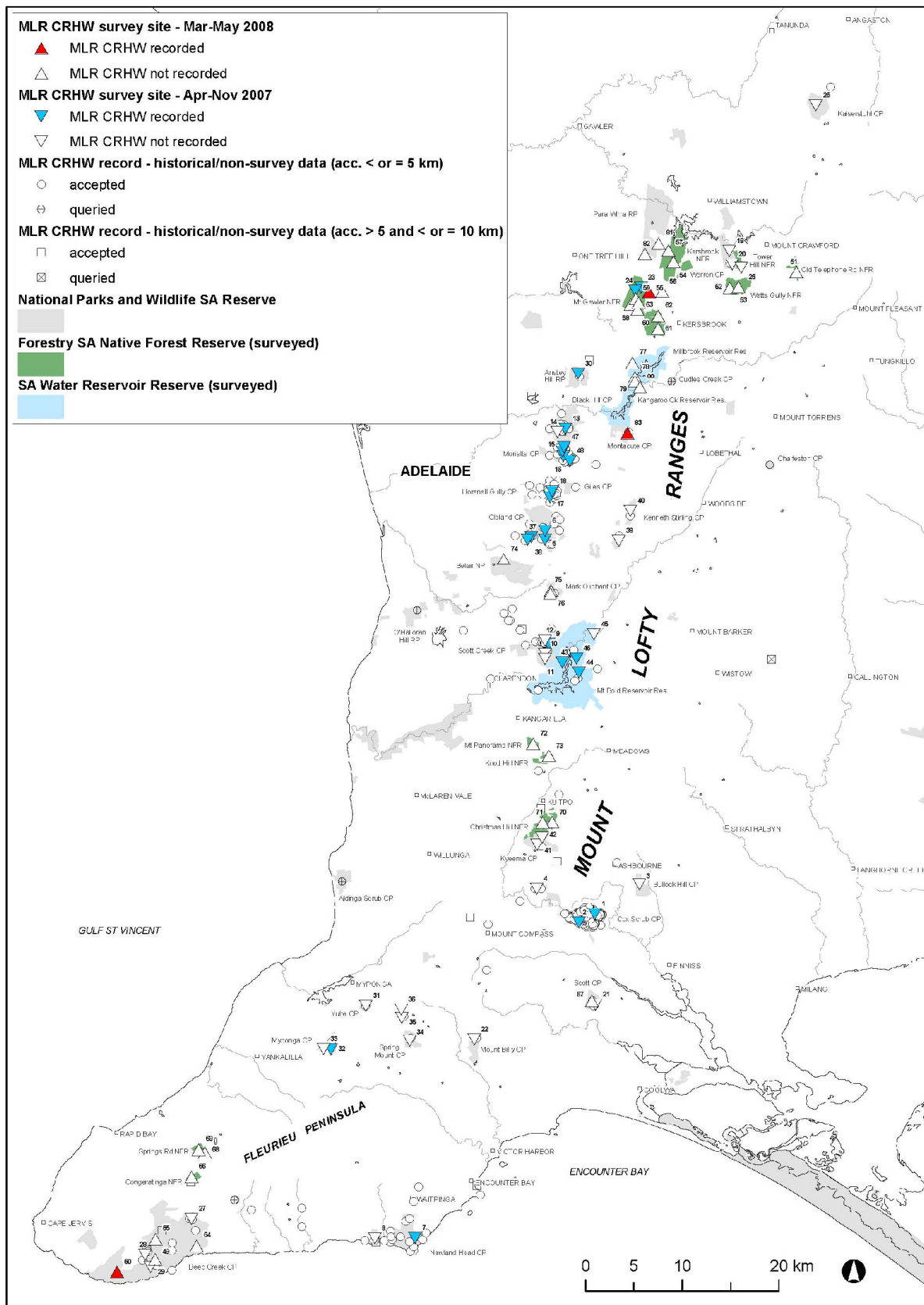


Figure 1 Historical and recent survey records for Mt Lofty Ranges Chestnut-rumped Heathwren.

area of occupancy < 500 km² (62 km²); severely fragmented population; and continuing decline observed, inferred or projected in extent of occurrence, area of occupancy, area, extent and/or quality of habitat, number of locations or sub-populations and number of individuals.

Reasons for decline and current threats

Habitat loss and fragmentation

Habitat loss and fragmentation has been the primary cause of the MLRCRH's decline. Vegetation clearance has been extensive throughout the Mt Lofty Ranges and Fleurieu Peninsula over the past 170 years, with only 12% of the original native vegetation of the region remaining. Approximately 90% of vegetation remnants are less than 31ha in size and nearly half of those are less than six hectares (Willson and Bignall 2009).

Continued habitat loss and fragmentation remain a threat to the persistence of the MLRCRH. Vegetation clearance for residential development, particularly in the Adelaide Hills, one of the strongholds of this species, remains a threat.

Little is known of the dispersal behaviour or capabilities of the MLRCRH, however given its habitat preferences and records of only limited movement at the species level, it seems reasonable to assume that the MLRCRH has limited dispersal capacity, and is unlikely to readily disperse across the urban or agricultural matrix. Small MLRCRH populations occurring in isolated habitat patches are therefore at increased risk of local population extinction in the event of wildfire or other catastrophic events, in addition to increased risk of inbreeding depression.

Habitat degradation

The presence of a dense shrub layer appears to be an essential component of MLRCRH habitat, therefore the loss or degradation of this layer is likely to be a threat to this species. Reductions in the shrub layer have been found to reduce productivity and survival in other shrub-dependent species (Brooker & Rowley 1991, Brooker 1998). Within the Adelaide and Mt Lofty Ranges region many remnants are degraded, in only fair or poor condition, and exhibit a trend of ongoing or active decline. This trend includes the larger remnants of heathy open forest or woodland which have remained in relatively good condition until this time. Major causes of shrub layer degradation in the Mt Lofty Ranges are grazing, weed invasion, understorey dieback due to *P. cinnamomi*, and inappropriate fire regimes.

Grazing

Grazing can reduce shrub cover and species diversity, degrade the litter layer through trampling and soil compaction, facilitate weed invasion and change nutrient status (Recher et al 1987, Scougall 1991, Hobbs 2001). On areas of private land grazing may continue to threaten MLRCRH habitat.

Inappropriate fire regimes

The term 'fire regime' refers to the interaction of fire intensity, interval, season and extent, and is considered to be inappropriate when it results in the degradation of habitat by altering its natural floristic or structural integrity. Much of the MLRCRH's habitat occurs within the peri-urban area, and is being subjected to an increasing frequency of prescribed burns in an effort to reduce fuel loads and protect human life and property. The impact of these changes in fire regime are yet to be determined, however any reduction in the density or diversity of the shrub and understorey layers is likely to be particularly detrimental to the MLRCRH.

Weeds

Extensive infestations of weeds such as gorse *Ulex europaeus* and broom *Genista monspessulana* and *Cystisus scoparius* occur throughout the Mt Lofty Ranges including areas of habitat suitable for MLRCRH. Such infestations change the structure and reduce the diversity of both the shrub and understorey layers, and are likely to change the availability of resources for MLRCRH. Due to their flammability, weeds such as gorse may also increase the risk and severity of wildfire.

Phytophthora cinnamomi induced dieback

P. cinnamomi is a soil and water borne watermould (a fungus-like organism) that causes disease and death in a variety of native plants. Consequently it has the capacity to alter both the structural and floristic characteristics of vegetation communities. Of the plant species which dominate MLRCRH habitat, many are known to be susceptible to *P. cinnamomi* (R. Velzeboer pers com). *P. cinnamomi* is known or suspected to occur across most of the MLRCRH's range.

Fire

Knowledge of the MLRCRH response to fire remains limited. Moise and Paton (2008, 2009) reported the loss of MLRCRH from the burn area post-fire after a prescribed burn in Scott Creek CP, but noted that two years post-fire the species had recolonised the site, which had regenerated well. Pickett (2008a) reported MLRCRH in vegetation with post-fire ages ranging from 0.75 to 3.5 years, although he was unable to ascertain whether the birds were resident or transitory. In a study of post-fire habitat occupancy at Morialta and Cox Scrub CPs Pickett (2008b) found that MLRCRH utilised particularly dense patches of regenerating habitat that was a little less than two years old post-fire, but did not find any evidence of breeding activity until four years post-fire in

Morialta. He suggested that a similar period of regeneration time would be required before the habitat in Cox Scrub would be suitable for MLRCRH residency.

Pickett (2008b) and Moise and Paton (2009) both documented the importance of nearby, connected, occupied, unburnt habitat as a source of MLRCRHs to recolonise post-fire regenerating habitat. The presence of an appropriately scaled mosaic of habitat of different post-fire ages appears to be critical to the persistence of this species.

Predation

The effect of predation on the longevity and recruitment of the MLRCRH is unknown. Living and or nesting on or near the ground is considered to put species at increased risk of predation by cats and foxes (Dickman 1996, DEWHA 2008), although dense vegetation may ameliorate this risk (Dickman 1996). Currently there is no effective means of broad scale cat removal or reduction, and while fox numbers may be effectively controlled through baiting, such programs need to be undertaken at a scale and frequency that is likely to be prohibitive in the landscapes of the Mt Lofty Ranges. Furthermore, the reduction of fox numbers may allow increases in cat numbers or some prey species which may have a negative impact on MLRCRH (Risbey et al 2000, Robley et al 2004). Any pest control programs will therefore need careful consideration and monitoring to determine their effect on MLRCRH.

Priority Recovery Actions 2010 – 2015

Recovery Action 1: Clarify the distribution of MLRCRH

1.1 Clarify the distribution of the MLRCRH on the Fleurieu Peninsula

Recent surveys have successfully defined the extent of the species' range in the Adelaide Hills, but additional surveys are required on the Fleurieu Peninsula. This information will help prioritise habitat protection and management activities.

Recovery Action 2. Protect and enhance MLRCRH habitat

2.1 Protect, enhance and expand MLRCRH habitat not already under conservation management

Private lands that are not managed for conservation are likely to be the primary source of habitat loss and fragmentation, primarily due to residential development. Habitat degradation is also more likely on private lands where grazing and weed infestation of remnant vegetation may occur. Areas of known or potentially suitable MLRCRH habitat that occurs on private or public lands not dedicated for conservation should be identified as priorities for habitat protection and management investment.

2.2 Enhance and expand MLRCRH habitat under conservation management

Management of land within the conservation estate should seek to increase the quality and extent of MLRCRH habitat by managing fire and fire regimes, weeds and the spread of *Phytophthora*.

Recovery Action 3: Determine the response of MLRCRH to fire

3.1 Examine existing MLRCRH distribution records in relation to fire history.

Patterns of habitat occupancy in relation to fire history should be examined using existing MLRCRH records and known fire history. Care will need to be taken to ensure that the spatial and temporal accuracy of MLRCRH records, patterns of search effort and limitations in the available fire history data are adequately accounted for.

3.2 Map known and potential MLRCRH habitat to allow habitat management considerations to be incorporated into fire management planning.

Prescribed burning is frequently undertaken in the Adelaide region to protect human life and property from wildfire through the reduction of fuel loads. In order to ensure that prescribed burning undertaken in the region a) does not significantly impact MLRCRH populations and b) can be used to protect populations and potentially enhance habitat, maps of known and potential MLRCRH habitat are required. This mapping should be undertaken in the first instance by using existing expert knowledge. In the future, habitat modelling should be employed so that changes in habitat quality can be dynamically mapped to take into account factors such as fire history. This is not currently feasible given the resolution and accuracy of current vegetation GIS layers.

3.3 Undertake research to examine the effect of fire on MLRCRH biology.

The effect of fire on most aspects of MLRCRH biology remain largely unknown. Research into the impact of fire events and fire regime on population and spatial dynamics, behaviour and dispersal are urgently needed.

Recovery Action 4: Improve knowledge of impact of feral predators on MLRCRH and appropriate management responses

4.1 Investigate impact of feral predators on MLRCRH, and potential effectiveness of pest control programs

The current impact of feral predators on MLRCRH remains unknown, and while some aspects of the species behaviour are likely to render it vulnerable to predation, this may be ameliorated by its choice of habitat.

Furthermore, the likely impact of any predator control programs also remains unclear. Investigation of these issues should therefore be supported.

Recovery Action 5: Improve knowledge of the ecology and behaviour of MLRCRH.

5.1 Support autecology studies of the MLRCRH

There is currently little information about the ecology, life history and behaviour of the MLRCRH on which to base management actions. Priority knowledge gaps that need to be addressed include dispersal, spatial and population dynamics and breeding biology.

Recovery Action 6. Enhance MLRCRH habitat through targeted habitat reconstruction

6.1 Undertake habitat restoration trials adjacent to areas of known MLRCRH habitat to expand available habitat.

While habitat restoration efforts should first focus on protecting and enhancing existing habitat, opportunities to improve knowledge about habitat reconstruction through revegetation should also be sought. Revegetation should be undertaken in an adaptive management framework to enable comparison, evaluation and refinement of techniques. Current revegetation methods rarely create habitat that provides for the needs of understorey dependent fauna species. This knowledge gap needs to be addressed if we are to increase the extent of habitat for these species, including the MLRCRH.

References

- Anon (1923) Monthly proceedings July 1923. South Australian Ornithologist 7, 91.
- Anon 2003 A review of the status of threatened species in South Australia. Unpublished report for Department of Environment and Heritage, SA
- Attwood, R. (1970) A list of the birds of Tea Tree Gully. Report to the National Trust of South Australia (Tea Tree Gully Branch).
- Bell, H.L. and Ford, H.A. (1990) The influence of food shortage on interspecific niche overlap and foraging behavior of three species of Australian warblers (Acanthizidae). *Studies in Avian Biology* 13, 381-388.
- Beruldsen, G. (2003) Australian birds their nests and eggs. G. Beruldsen, Kenmore Hills, Qld.
- Brooker, M.G. (1998) Fire and birds in a Western Australian heathland. *Emu* 98, 276-287.
- Brooker, M.G. and Brooker, L.C. (1989) Cuckoo hosts in Australia. *Australian Zoological Review* 2, 1-67.
- Brooker, M.G. and Rowley, I. (1991) Impact of wildfire on the nesting behaviour of birds in heathland. *Wildlife Research* 18, 249-263.
- Chaffer, N. (1931) A singer of the heath country. *Emu* 30, 212-213.
- Department of the Environment, Water, Heritage and the Arts (DEWHA) (2008). Threat abatement plan for predation by the European red fox, DEWHA, Canberra.
- Dickman, C. R. (1996). Overview of the impacts of feral cats on Australian native fauna. Australian Nature Conservation Agency, Canberra
- Eddy, R.J. (1959) Heathwrens in Central Victoria. *Australian Bird Watcher* 1, 36-44.
- Garnett, S.T. and Crowley, G.M. (2000) The Action Plan for Australian Birds, Environment Australia, Canberra.
- Gilbert, P.A. (1919) Notes on Chestnut-rumped Ground-wren (*Hylacola pyrrhopygia*, Vig. and Hors.) *Emu* 28, 292-295.
- Higgins, P.J. and Peter, J.M. (2002) Handbook of Australian, New Zealand and Antarctic Birds. Volume 6: Pardalotes to Shrike-thrushes. Oxford University Press, Melbourne.
- Hobbs, R.J. (2001). Synergisms among habitat fragmentation, livestock grazing, and biotic invasions in southwestern Australia. *Conservation Biology* 15, 1522-1528.
- McGill, A.R. (1970) Australian Warblers. Bird Observers Club, Melbourne.
- Milne, H.V. (1936) Overlapping of certain Victorian birds. *Emu* 36, 130-132.
- Moise, D., and Paton, D. (2008) Avian responses to a prescribed burn in Scott Creek Conservation Park: Kangaroo Gully fire April 2007. A report to the Department for Environment and Heritage.
- Moise, D., and Paton, D. (2009) Avian responses to the 2007 prescribed burn in Kangaroo Gully, Scott Creek Conservation Park: two years after fire. A report to the Department for Environment and Heritage.
- Paton, D.C. and Paton, J.B. (1980) The birds of Scott Conservation Park. *South Australian Ornithologist* 28, 120-126.
- Paton, D., Carpenter, G. and Sinclair, R. (1994) A second Bird Atlas of the Adelaide region. Part 1: changes in the distribution of birds: 1974-75 vs 1984-85. *South Australian Ornithologist* 31, 151-193.
- Pickett, M. (2007a) Assessment of the distribution, habitat and conservation status of the chestnut-rumped heathwren *Hylacola Pyrrhopygia parkeri* in the Mount Lofty ranges. A report to the Department for Environment and Heritage.
- Pickett, M. (2007b) Mount Lofty Ranges chestnut-rumped heathwren survey – spring 2007. A report for the Department for Environment and Heritage.
- Pickett, M. (2008a) Ongoing assessment of the distribution and habitat of the chestnut-rumped heathwren survey in the Mount Lofty Ranges – autumn 2008. A report for the Department for Environment and Heritage.
- Pickett, M. (2008b) Mount Lofty Ranges chestnut-rumped heathwren occupancy in (post-fire) regenerating habitat - spring 2008 survey. A report for the Department of Environment and Heritage.
- Pyke, G.H., Recher, H.F. and O'Connor, P.J. (1989) Patterns of residency and movement among honeyeaters in heathland near Sydney. *Emu* 89, 30-39.
- Recher, H.F., Davis, W.E. and Holmes, R.T. (1987) Ecology of brown and striated Thornbills in forests of south-eastern New South Wales, with comments on forest management. *Emu* 87, 1-13.
- Risbey, D., Calver, M.C., Short, J., Bradley, J.S. and Wright, I.W. (2000) The impacts of cats and foxes on the small vertebrate fauna of Heirisson Prong, Western Australia. II A field experiment. *Wildlife Research* 27: 223-235.
- Rix, C.E. (1939) The chestnut-tailed ground-wren (*Hylacola pyrrhopygia*) in the Mt. Lofty Ranges, South Australia. *South Australian Ornithologist* 15, 35-38.
- Rix, C.E. (1942) Additions to the birds of the Happy Valley District with a further record of *Hylacola pyrrhopygia*. *South Australian Ornithologist* 16, 40-41.

- Robley, A., Reddiex, B., Arthur, T., Pech, R., and Forsyth, D. M. (2004). Interactions between feral cats, foxes, native carnivores, and rabbits in Australia. Arthur Rylah Institute for Environmental Research, Department of Sustainability and Environment, Melbourne
- Ryan, J.V. (1979) Nearly forty years with *Hylacola* spp. Australian Bird Watcher 8, 42-47.
- Schodde, R. and Mason, I.J. (1999) The Directory of Australian Birds: Passerines. CSIRO Publishing, Collingwood.
- Scougall, S.A. (1991) Edge effects in fenced and non-fenced remnants of jam/york gum woodlands in the Western Australian wheatbelt. Honours Thesis, Curtin University of Technology.
- Willson, A., and Bignall, J. (2009) Regional Recovery Plan for Threatened Species and Ecological Communities of Adelaide and the Mount Lofty Ranges, South Australia. Department for Environment and Heritage, South Australia.