

Technical Bulletin # 3

Population monitoring of the White-browed Treecreeper in north-west Victoria



Above: White-browed Treecreeper, Yarrara Flora and Fauna Reserve. Photo: Alex Holmes, GHD.

This technical bulletin summarises the findings of field research undertaken in November 2009 to identify changes in population abundance and extent of the White-browed Treecreeper (*Climacteris affinis*) within the Mallee Catchment Management Authority (CMA) region.

The project aimed to determine the current abundance and extent of White-browed Treecreepers within the Pink Lakes, Murray Sunset National Park, Wemen Flora and Fauna Reserve and associated remnant reserves to attempt to identify any sub-population trends.

Background

The White-browed Treecreeper is listed as threatened under the Flora and Fauna Guarantee Act 1988. In Victoria, it is restricted to populations in the mallee region in regenerating native pine (*Callitris* spp.), Buloke (*Allocasuarina luehmannii*) and Belah (*Casuarina pauper*) woodlands, or in dense thickets of smaller shrubs. Previous studies had been conducted within north-west Victoria, extensively in 1997, and again partially in 2006. This project aimed to survey some of the remaining sites from the 1997 study that were not surveyed in 2006, and to include additional sites of suitable habitat.

At a glance

- The White-browed Treecreeper is listed as Threatened under the Flora and Fauna Guarantee Act 1988.
- A research survey was conducted to investigate the current occurrence of the White-browed Treecreeper within north-west Victoria and to attempt to identify any sub-population trends.
- Two observations of the White-browed Treecreeper were detected during this study; however this did not provide enough comparative data to identify population trends.

Method

The method used for surveys repeated a method that had been developed by Radford and used in both the 1997 and 2006 surveys. A total of 24 transects were completed within the Murray-Sunset National Park and Wemen Flora and Fauna Reserve, each of 500m in length (i.e. 12km of transects). Of the 24 survey sites, 10 were previously surveyed only in 1997, five were surveyed in 1997 and 2006, and nine were previously unsurveyed.

Transects were completed between 6am and 12pm on each of the three days of surveying, with details such as location, time, date, weather conditions etc recorded on a datasheet.

At the 0m mark of the transect, the alarm call of the White-browed Treecreeper was played for 30 seconds through an amplified speaker system with the volume set at levels typical for the species. A minimum of two minutes was then spent watching and listening for any response from White-browed Treecreepers or other bird species. All bird species seen or heard were documented. For each observation of a White-browed Treecreeper, information recorded included the AMG coordinates, number of individuals present, sex and age. The process was repeated every 50m for the length of the 500m transect. At the 500m mark a brief habitat assessment was undertaken within a 20m x 20m quadrat.

Information collected from the quadrat included:

- % Bare ground;
- % Shrub cover;
- % Coarse woody debris;
- The dominant overstorey species.

Results

The 2009 surveys for White-browed Treecreepers resulted in:

- Eight confirmed observations within two adjacent survey sites (including an incidental record outside of a transect survey);
- Detection at one site with a previous record;
- A new record at a site previously not surveyed;

- Two unconfirmed observations at sites that had historical confirmed observations;
- Absence of records of White-browed Treecreepers at two sites with previous records;
- The overstorey cover at sites with confirmed observations averaged 30%, almost twice the average cover at sites where it was not detected (15.3%);
- A total of 38 records of threatened species, across 24 transects, including five species of threatened birds. These were: Regent Parrot (*Polytelis anthopeplus monarchoides*), Major Mitchell's Cockatoo (*Lophocroa leadbeateri*), Crested Bellbird (*Oreoica gutturalis*), Hooded Robin (*Melanodryas cucullata*) and Gilbert's Whistler (*Pachycephala inornata*).

Specific population trends and habitat preferences were not determined due to the lack of comparative data from previous studies.

Recommendations

Management and research recommendations from this project include:

- Additional desktop and field survey:
 - Investigate the presence of other large stands of suitable habitat, including areas of private property;
 - Conduct a comprehensive survey of the broader Mopoke Hut area of the Murray Sunset National Park; or
 - Alternatively, conduct a broad survey involving a similar survey effort to that of 1997 with 97 sites assessed over 90 days.

- Research and community extension:
 - Support research projects to investigate possible reasons for the decline of the species;
 - Encourage community interest and involvement in ongoing monitoring of this species; and
 - Encourage landholders to fence and protect larger tracts of Belah/Pine/Buloke woodlands.
- Methodology enhancements:
 - Increase the distance between call playback points to at least 150-200m;
 - Conduct additional habitat assessments along transects;
 - Possibly increase the size of habitat quadrats to 20m x 50m to obtain a better representation of habitat characteristics.

Acknowledgements

The Mallee Catchment Management Authority engaged GHD Pty. Ltd. to undertake this study, with funding provided by the Victorian Government.

Further Information

The information for this bulletin has been taken from "Survey of White-browed Treecreeper at Pink Lakes and Wemen Flora and Fauna Reserve", a report for the Mallee CMA by GHD Pty. Ltd.

For further information about the White-browed Treecreeper survey please contact the Mallee CMA on (03) 5051 4377.

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