

Establishment Report

Skullbone Plains montane conifer monitoring

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Species targeted for monitoring

Drooping pine (*Pherosphaera hookeriana*)

Dwarf pine (*Diselma archeri*)

Aim of monitoring program

Detect trends in the extent, condition and recruitment of conifers at the Nive River.

Background

Pherosphaera is a listed threatened species in Tasmania which is considered to be vulnerable to climate change (TSS 2009). This is an atypical habitat for this species and as such complements the monitoring sites established for core populations of the species at Mt Field and Mt Anne. This monitoring site is part of the RMC Montane Conifer Monitoring Program (Fitzgerald 2011). The land is managed for conservation by the Tasmanian Land Conservancy.

What parameters are monitored?

Condition, extent and recruitment of conifer plants as observed from a time series of photographs and plot-based survey.

Year monitoring started

2012

Frequency of survey

Ideally every 3-5 years.

Key stakeholders

Tasmanian Land Conservancy (land manager)

Monitoring site

A single monitoring plot has been established at the northern boundary of the Skullbone Plains property. The plot is approximately 50 metres long by 2 m wide, with the northern edge of the plot defined by the waterline of the Nive River. An aluminium stake approx. 0.7 m tall (numbered 109) marks the SE corner of the plot at 447397 E 5349114 N (GDA94).

Vegetation at the site is riparian scrub dominated by *Banksia marginata*, *Hakea epiglottis*, *Leptospermum lanigerum* and *Ptherosphaera hookeriana*, with occasional emergent *Euclayptus coccifera*.

Methods

Three photo-points have been established, each marked with a pair of 10mm tubular aluminium stakes driven into the ground with around 20 cm visible. For each photo-point, one stake designates the camera post location and the other the sighter post. Prior to photographing, a 1.5 metre length of plastic tubing is used as a temporary camera post, placed on the permanent aluminium camera post marker, and a 1.5 m plastic tube with sighting disc attached at top is positioned on top of the permanent sighter post marker.

For each photo-point, the camera is positioned on top of the sighter post and aligned so that the sighting disc is in the centre of the viewfinder, then 3 bracketed exposures are made (typically an auto-exposure bracketed 2/3 stop either side, but the correct exposure and bracketing range will depend on conditions as determined in the field). While it is not essential to use the same lens, it is preferable for consistency to use a lens with a field of view equivalent to 20 mm focal length on a typical digital SLR (Focal Length Modifier of 1.6, i.e. equivalent to a 32 mm lens on a 35mm film camera).

Site descriptions, conifer health assessment and recruitment are recorded following the methods outlined in Fitzgerald (2011).

Table 1. Location of photo-points.

Photo-point	Photo-point location (GDA94)	Direction to sighting post	Distance to sighting post	Establishment Date
NRCH01.1	447358 E 5349114 N	273°	2.4 m	17/01/2012
NRCH01.2	447350 E 5349104 N	257°	2.4 m	17/01/2012
NRCH01.3	447350 E 5349104 N	352°	2.5 m	17/01/2012

Where is the data stored?

Digital photographs and plot data will be archived on the DPIPWE server.

Recommendations

A survey of *Pherosphaera* along the upper Nive River and tributaries, and including Lake Ina, would provide useful data on the population and distribution of the species in this area.

Additional monitoring plots and photo-points on the Skullbone Plains property and/or neighbouring public land would be desirable.

References

Fitzgerald, N. (2011) *Establishment Report for Tasmanian Wilderness World Heritage Area Climate Change Monitoring Program: Montane Conifers*. Resource Management and Conservation Division, DPIPWE, Hobart, Nature Conservation Report Series 11/06.

TSS 2009. Listing Statement for *Pherosphaera hookeriana* (drooping pine). Threatened Species Section, DPIPWE, Hobart.

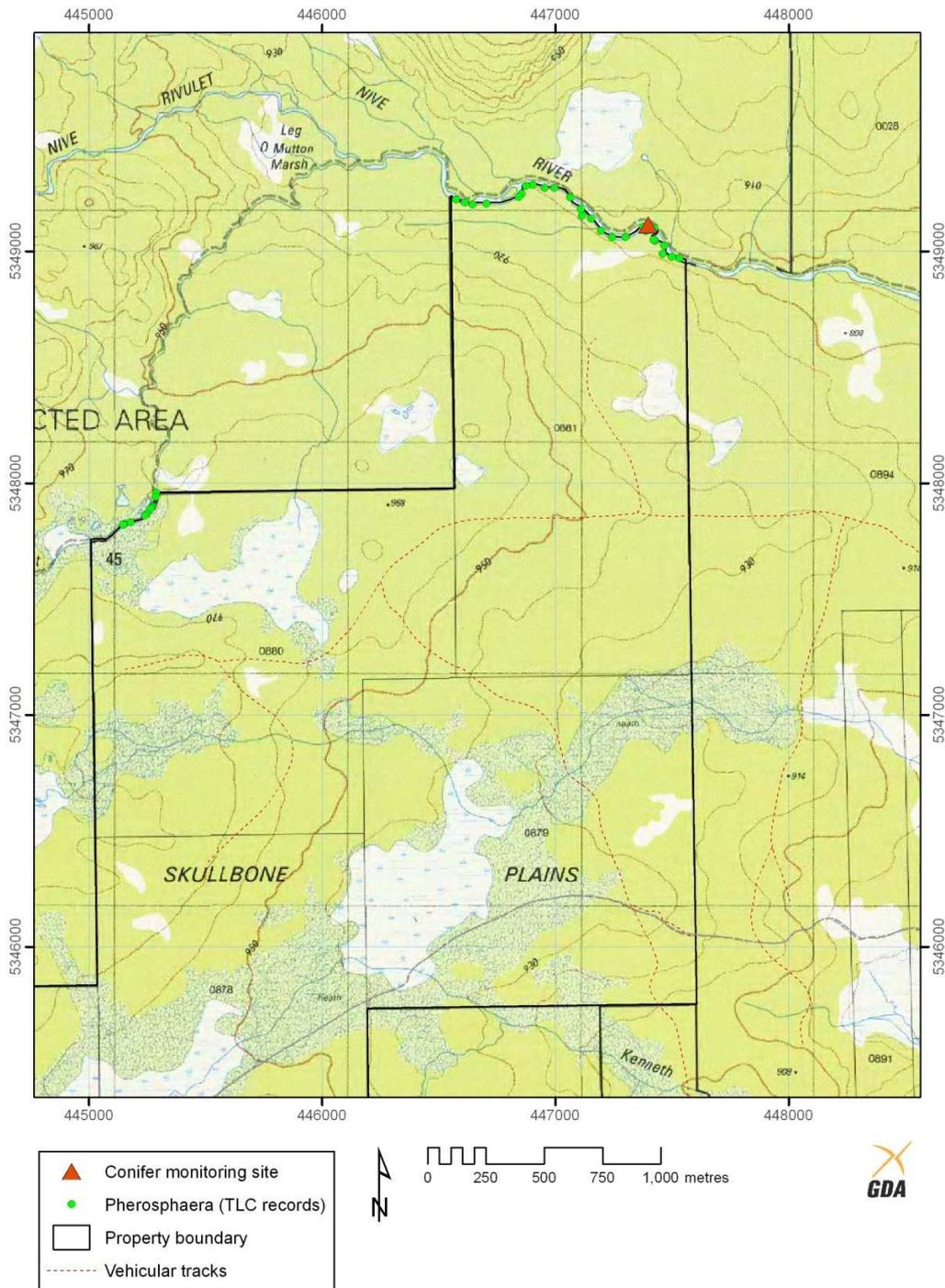


Figure 1. Location of monitoring site at Skullbone Plains.