



## Tasmanian Land Conservancy

### Research Volunteers: structure and project areas of interest

#### Background

The Tasmanian Land Conservancy TLC is a not-for-profit, private organization established in 2001 to help conserve Tasmania's threatened species, communities and irreplaceable habitats. The TLC's vision is for Tasmania to be a global leader in nature conservation and sustainability and its strategic plan 2011 – 2015 identifies a number of areas where research and collaborative effort can help achieve this. The TLC currently owns 12 permanent reserves covering over 3,500 ha and manages a further 28,000 ha across the State as part of its New Leaf program (Oct 2013). These lands contain a multitude of threatened plant and animal species and threatened vegetation communities and span a spectrum of ecosystems ranging from coastal wetlands, temperate rainforests to high altitude grasslands. The TLC is dedicated to achieving excellence in biodiversity conservation through its on-ground management of threats, long term ecological monitoring and by ensuring that science and scientific rigour underpins every aspect of its conservation business. The organisation participates in a range of multidisciplinary forums addressing statewide, national and international conservation priorities and actively encourages its reserved lands to be used as benchmark sites for ecological monitoring and research. It encourages minimal impact visitation and innovative business enterprises to help sustain the organisation into the future.

Volunteers play a key role in helping the TLC deliver its conservation programs and are fundamental to its success. During 2012 – 2013 the TLC trialled an intern program which provided a small number of volunteers with an opportunity to work with the TLC on various applied conservation projects and to gain relevant professional experience to benefit their own career. These projects involved a combination of office and field based work and collected data of immediate interest to the TLC. The success of this trial has led to the formalisation of this program and the framework and scope within which it will operate.

#### Volunteer Program Structure

TLC's Research Volunteer Program will operate in accord with the TLC Volunteer Policy which includes adherence to the definition and principles of volunteering in Australia (Appendix A). It is aimed at attracting academic or technically qualified volunteers or institutional partners with a desire to undertake projects of immediate benefit to the TLC [see [www.tasland.org.au](http://www.tasland.org.au)] but meet the interests of the volunteer or institution. The program has three tiers: Internship, Graduate Research Associate, Partner Organisation. It is anticipated

that Interns and Graduate Research Associates will spend a portion of their time in the TLC office and space will be made available for this.

**Internship** – Aimed at volunteers with a technical qualification from a recognised institution or graduates with a higher degree but limited practical experience. Interns must be able to work relatively independently but will receive regular TLC staff input and guidance.

Expected project duration [minimum of 80 hours] 3 to 6 months.

Benefit to the Intern

- gain experience in the field of applied conservation
- operates within an OH&S compliant and work safe environment
- opportunity to work with and learn from experienced conservation professionals
- develop new skills such as vegetation mapping, GIS, report writing, fauna surveys etc.
- opportunity to be acknowledged on papers including papers in peer reviewed journals
- contribute to biodiversity conservation in Tasmania by undertaking applied research with direct use
- gain work experience and a reference from TLC for future job applications

**Graduate Research Associate** – Volunteers with post-graduate experience or qualified technical expertise with practical experience and able to undertake focused projects that are either ecologically, theoretical, applied, or conceptual in nature. Projects can be delivered independently or through an affiliated institution. Volunteers must be experienced in working independently but will receive regular interaction with TLC staff.

Expected duration [minimum of 80 hours] 6 months or longer.

Benefits to the Research Associate

- furthers a specialised area in the field of applied conservation
- operates within an OH&S compliant and work safe environment
- works with public indemnity insurance cover
- expanded opportunity to apply for grants, seed funding, etc that may lead to ongoing projects
- update existing or develop new skills with application in a contemporary setting.
- opportunity to author or co-author peer reviewed papers and other publications
- contribute to biodiversity conservation in Tasmania by undertaking applied research with direct use

**Institutional Partnership** - Partnerships with state, national and international organisations undertaking projects with direct conservation benefits. Ideally these relationships will be longer term and secured under a MOU or Letter of Agreement to ensure all parties understand the terms of the engagement, deliverables, and issues such as intellectual property, use of data and endorsement on publications etc clearly defined and agreed. May involve one or more staff and include a group of volunteers or students in project delivery.

Expected duration 12 months or longer.

Benefits to the partner institution

- increased applied field-based science in protected area management
- access to protected areas with high conservation value
- partnering with an OH&S compliant and work safe organisation
- expanded opportunities to published papers in peer reviewed journals and other forums
- contribute to conservation in Tasmania by undertaking applied research with direct application

### **TLC Staff Commitment**

All volunteers require a level of supervision from TLC staff and deserve quality time and feedback on a regular basis. This is essential to properly evaluate progress towards mutually agreed goals, enable regular exchange on the volunteer's experience, and to ensure the volunteer's contribution is being valued.

TLC staff time has to be factored into works programs and this may include multiple staff including the TLCs volunteer coordinator. An estimate of the time required per volunteer is provided in the table below.

### **Estimated Time Requirements**

<b>TLC staff time</b>	<b>No Staff</b>	<b>Intern</b>	<b>Graduate Research Associate</b>	<b>Institution Partner</b>
Initial Discussion	1	1 hour	1 hour	3 hours
Develop Project Brief	2	2 hours	2 hours	3 days for MOU
Induction to TLC	2	3 hours	3 hours	3 days per organisation
Project Supervision	1	1 hour per week	1 hour per fortnight	1 hour per fortnight
Regular review	1	1 hour per fortnight	1 hour per month	As per MOU
Completion Interview	2	1 hour inc feedback form	2 hour inc feedback form	5 days final report

### **Induction and Review**

An induction should be delivered by the TLC supervisor with all relevant documentation signed and lodged with TLC administration and on the server. This must include aspects such as medical disclaimers, current drivers licence and any other relevant certificates, including if TLC equipment or vehicles are to be used as part of delivering the project. Any delegations above those identified by the general volunteer registration form (e.g. the issuing of keys or computers etc.), will need to be authorised by the team manager or CEO. All TLC staff should be notified of the volunteer's commencement and the project being undertaken.

The first review should be conducted after 3 to 5 volunteer visits and address (1) project progress to date, (2) volunteer experience and expectations, (3) any concerns or difficulties, (4) future tasks and (5) timetable for

the next review periods over the life of the project. A log of volunteer hours must be maintained by the TLC staff for the TLC Annual report.

#### **Termination and or Project Completion**

Termination of the project should be recorded by notifying admin and all TLC staff that the project has been completed. Within a reasonable length of time, the volunteer should be provided with a letter of endorsement and appreciation stating the project title and project duration, and signed by the CEO. To endorse the volunteer's involvement a TLC blog, newsletter article or other promotion is encouraged.

#### **Intellection property and publications**

Any data produced from TLC research projects remains the intellectual and sole property of the TLC. Shared use or distribution of primary or secondary data for educational purposes must be agreed prior to release of the data. Any publications resulting from the volunteer project should, as a minimum, acknowledge the volunteer's contribution and if this contribution has been significant then a co-authorship should be discussed.

#### **Accommodation and Resources**

Volunteers will be treated equitably in terms of accommodation requirements and access to computers. A work space will be clearly identified for the volunteer immediately they are confirmed and arrangements made for their linkage to the TLC server and email contacts, etc.

#### **TLC priority projects**

The TLC will maintain an outline of this volunteer program in its policy documents and promote this volunteer program through regular newsletter adverts and circulars, etc. Any prospective volunteer should be directed to the TLC web site document: priority research projects – as this contains a current list of conservation project areas intended to stimulate interest.

#### **How to Apply**

Volunteers should make contact with TLCs Volunteer Coordinator Phil Roach [proach@tasland.org.au](mailto:proach@tasland.org.au) or individual TLC staff and supply a CV and information about their potential interests and time availability.

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## **Priority Research Themes**

The TLC actively undertakes on-ground management and applied conservation research and seeks to better understand the interaction of ecological, cultural, social and economic factors in achieving conservation gains. The organisation operates across four strategic areas.

### **1. Protected Area Management**

The TLC undertakes a range of actions to manage and protect its reserved lands. Management plans use the Open Standards Practice for Conservation to identify strategies and actions to maintain or improve conservation values and monitoring is undertaken to ensure management is being effective.

Key priority areas are:

- Restoring and maintaining healthy ecosystems and species [e.g. fire, grazing, revegetation]
- Pests, weeds and disease management [e.g. eradication, control, biosecurity]
- Visitor and access management

### **2. Conservation Science and Planning**

Conservation science and planning helps to support good land management practice and also address key knowledge gaps. It also drives new practices and technologies which can lead to more efficient conservation practice on-ground. Key research priorities are:

- Improve knowledge on natural, indigenous and cultural values
- Ecological and management effectiveness monitoring
- Landscape planning and building resilience to climate change
- Identifying and investigating key threats and threatening processes

### **3. Community Engagement & Fundraising**

Volunteers and community involvement underpin the TLC and are critical to its success. The TLC strives to maintain, expand and improve ways of engaging volunteers and the community to help deliver conservation priorities and to build healthy, connected communities across the landscape. Key research priorities are:

- Improving community engagement and visitor experiences
- Understanding the behaviour of giving
- Community knowledge of past practices and site connection

### **4. Conservation Business**

The TLC relies on the financial support of donors to help achieve its conservation goals and is underpinned by a robust business model to ensure its longevity into the future. Sound ethical business structures coupled with innovative, entrepreneurial programs enable the organisation to be successful in the commercial market place.

Key research areas are:

- Generating revenue and social benefit from the range of ecosystem services
- Governance frameworks for sustainability
- Develop innovative financial mechanisms in conservation business

## TLC Project Areas

The following list of priority projects is intended to stimulate interest in four strategic areas but is not prescriptive. We welcome other ideas and expanded areas of interest. This list will be updated on a regular basis. The TLC will provide assistance towards project delivery in the form of staff time, operational and logistic support. Depending on the priority and duration of the project there is potential to cover costs through existing grant funds, source new grant funding or find other forms of financial support to assist project delivery. Some projects are suitable for Honours, Masters or PhD research projects where a small stipend could be sourced.

1. Protected Area Management			
No	Areas of Interest	TLC Sites	Status
<b>Restoring and Maintaining Healthy Ecosystems and Species</b>			
	Restoration and revegetation [planning, techniques, efficacy and effectiveness]		
	Cost benefit analysis of methods		
	Climate change suitability of local provenance species		
	Identifying / undertaking seed collection and propagation		2015-16
	Identifying restoration methods and planning		
	Determine the life history attributes of species or communities impacted or benefitted by fire [TWWHA priority]		2015-16
	Determine and review optimal fire regimes to better manage natural values based on present knowledge of soils, flora, fauna communities and the physical environment [TWWHA priority]		
	Review the potential impact of fire on soil types including organic soils of rainforests and eucalypt forest, Aeolian soils including sand dunes, fjaeldmark and mineral soils [TWWHA priority]		
	Determine impact of fire on regeneration at Flat Rock	FR	2015-16
	Compile a complete long term history of TLC reserves utilising a range of data sources		
	Prepare a restoration plan for Long Point [flora and fauna]	LP	
	Carnivore pattern recognition from images	FRR	2014-16 ongoing
	Frog inventory of TLC reserves	All	
<b>Pests, Weeds and Disease</b>			
	Determine status and potential control options for lyrebirds	Brown Mountain	Commenced 2015
	Determine the impact of Fallow Deer on natural values in the Bronte region [? baseline work of Locke] and extend to other relevant reserves, we need data on impact!	5RR, Silver Plains, TBPB	Commenced 2014
	Evaluate economic rationale of feral species management eg financial revenue vs economic cost of fallow deer in Tasmania	5RR, TBP, New Leaf	Commenced 2015
	Determine the abundance / impact of European Rabbit on natural values in the Bronte region, biomass, distribution, population in the face of climate change	5RR, Silver Plains	2015-16
	Identify and prioritise disease threats on TLC reserves e.g. chytrid, toxoplasmosis, myrtle rust etc	All	2015-16
	Develop a biosecurity plan for TLC reserves	All	Review 2015-16
	Investigate and develop bio-secure zones across the TLC reserves to enhance protection of natural values from incursion or spread of	All	

	existing pests, weeds and pathogens [TWWHA priority]		
	Determine the impact of cattle grazing on the Vale of Belvoir investigating scientific and cultural issues	VB	Commenced 2015
	Prepare a Feral Fauna Pest Strategic Plan for TLC Reserves to better identify and rank fauna pests and feasibility of pest management methodologies.	All	
	Prepare a Weed Strategic Plan for TLC Reserves to better identify and rank weeds and feasibility of management methodologies and eradication.	All	Completed 2014
	Prepare weed plans for specific TLC reserves	All	
	Identify pathways for spread of weeds, pests and disease and develop strategies to prevent spread [TWWHA priority]	All	
	Determine the population structure of feral cat populations on TLC reserves and identify appropriate management strategies	All	
	Develop a monitoring trial for European Wasps around key target species and assets	VB, 5RR	Commenced at Vale
<b>Visitor and Access Management</b>			
	Identify a list of sensitive sites and key threats arising from potential or inappropriate visitation	All	
	Investigate methods and options for managing illegal access	5RR, FR, SP	
	How to do away with locks and gates – alternative ways of controlling / regulating access		2015-16
	Develop a visitor management strategy for TLC reserves following minimal impact guidelines		
	Develop a visitor feedback and reporting process		Commenced 2015
	Produce information for self-guided trips to TLC reserves	All	Commenced June 2015

2. Conservation Science and Planning			
No	Areas of Interest	TLC Sites	Status
<b>Improve knowledge on natural, indigenous and cultural values</b>			
	Improve ecological data on conservation significant species and ecosystems on TLC reserved lands	All other reserves	Bushblitz 2013-14 Five Rivers
	Determine the status of Miena jewel beetle on Five Rivers Reserve	5RR	JKW 2015-16
	Determine the status of Ptunarra brown butterfly on Five Rivers Reserve	5RR, NL	JKW 2015-16
	Determine the status of dwarf conifers on Five Rivers Reserve especially along the Nive River	5RR	2015-16
	Survey for invertebrates at Five Rivers, consolidate existing works	5RR	2015-16
	Improve detectability of the Australasian Bittern and identify potential survey sites across TLC reserves	Egg Islands Big Punchb	Commenced 2015
	Identify mitigation and habitat expansion strategies for the Clarence galaxiid around Skullbone Plains	SKP	Commenced 2014, Completed 2015
	Undertake extension surveys for threatened flora and fauna on little known reserves esp New Holland mouse at TBP	TBP	Commenced NHM 2014
	Identify management requirements for sites of geo significance		
	Monitor the distribution and disease status of Tasmanian Devils on Five Rivers Reserve and identify potential pathways for disease spread [TWWHA priority]	5RR	Commenced 2014
	Identify mammalian predator interactions on Five Rivers Reserve	5RR	Commenced in part 2014

	Identify innovative monitoring methods for flora and fauna including bioacoustics	All	
	Undertake extension surveys for moth species <i>Fraus latistria</i> and <i>Dirce aesiadora</i> in the Bronte Region		
	Investigate the application of the Simpson's Diversity Index to environmental accounting	5RR	
	Conduct carbon accounting on areas of unlogged land across the New Leaf Estate		
	Identify distribution and habitat requirements for the skink <i>Pseudemoia pagenstacheri</i> at the Vale of Belvoir	VB	Completed 2013
<b>Long term ecological and management effectiveness monitoring</b>			
	Compile a reference library on the robustness of citizen science		Completed 2014
	Compile a reference list of acoustic recording as a multi-species monitoring technique		Commenced 2015
	Integrating photo and acoustic monitoring techniques – one stop shop		
	Develop the structure for adopting the Econd method of conservation accounting	All	Commenced 2015
	Trial the suitability and efficacy of the RePhoto methodology		Completed 2014
	Investigate statistical rigour in monitoring and species detectability		Ongoing
<b>Landscape Planning and Building Resilience to Climate Change</b>			
	Identify adaption strategies for species and ecosystems on TLC lands at risk from climate change		Commenced 2013
	cider gum recovery		2015-16
	Increase understanding of geo-diversity elements, taxa, taxonomic groups and ecosystems that are under immediate threat from climate change [TWWHA priority]		
	Undertake climate and or mechanistic modelling to predict the future distribution of taxa most at risk from climate change and coordinate into TLCs long-term ecological monitoring program [TWWHA priority]		
	Develop connectivity modelling at a range of scales for all connectivity dependant species		
	Identify refugia at a range of scales and purposes		

<b>3. Fundraising &amp; Community Engagement</b>			
No	Areas of Interest	TLC Sites	Status
<b>Improving community engagement and visitor experience</b>			
	Determine the metrics for measuring community engagement		
	Social surveys for wildlife?		
	Demographic analysis of TLC supporters		
	Self-guided tours and events		
	Interpretation notes for events and brochures etc.		
<b>Community knowledge of past practices and site connection</b>			
	Oral history of the Bronte Region		
	Help build a story of landscape occupancy		
	Document the history of Mannys and Coopers Marsh at Mt Field	BM	
<b>Understanding the behaviour of giving and volunteering</b>			
	Increasing understanding of donor motivation to give to the TLC		
	Survey of TLCs supporters regarding bequests to the TLC		
	Survey of TLCs supporters regarding regular giving to the TLC		Completed 2014
	Survey of TLCs supporters regarding major gifts to the TLC		Completed 2014
	What leads donors to move up the donor period from engagement to giving to a bequest		

<b>4. Conservation Business</b>			
No	Areas of Interest	TLC Sites	Priority
<b>Generating revenue and social benefit from the range of ecosystem services</b>			
	Can firewood and timber harvesting be sustainable and minimal impact		
	Bottling water: markets, styles, regulation etc	5RR	
	Camping: what types of camping, where, regulation etc	5RR, NL	
	Cost benefit analysis of a carbon project including return on investment	New Leaf	
<b>Governance frameworks for sustainability</b>			
	Offsets framework for Tasmania: which levers control which part of the bureaucracy?		
	Implementing an ecosystem services framework in Tasmania		
	Help improve TLCs internal business effectiveness, efficiencies and governance structures eg GST accounting, account codes etc		
	Help develop a cash-flow policy including processes and procedures		
<b>Develop innovative financial / legal mechanisms in conservation business</b>			
	Investigate the options of replacing or maintaining conservation covenants as secure protection methods.		
	Stewardship services for conservation: developing revenue streams for distribution		
	Private management of public reserves: creating PWS Inc.		

## Appendix A

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### Definition of Volunteering

By definition, volunteering is an activity which is:

- Of benefit to the community and the volunteer,
- Undertaken of the volunteer's own free will and without coercion,
- For no financial payment,
- In a position not designated as paid,
- Without expectation that it will lead to a paid position, and is
- Underpinned by the Volunteer Australia 'Principles of Volunteering'

### Volunteer Australia's 'Principles of Volunteering'

These relate to:

- Acknowledging that the relationship between volunteers and TLC is a reciprocal one,
- Acknowledging that volunteers exercise free choice in committing to TLC,
- Acknowledging that volunteers are covered by the same safe work place procedures, OH&S and duty of care responsibilities as paid TLC staff,

- Acknowledging that volunteers are not used to replace paid staff and only carry out work that is agreed to,
- Stating and acknowledging the contribution of volunteers in TLC documentation and recording hours worked for the TLCs Annual Report,
- Providing an opportunity for development of skills and experience,
- Providing support in the form of clear policy guidelines, training, recognition and support, and the provision of references if required.

These principles and guidelines will be streamlined within the TLCs broader Volunteer Policy.