



BUTTONGRASS

JUNE 2012

A living interpretive experience at Melaleuca

The Needwonnee Walk at Melaleuca has been enthusiastically received by visitors to the remote Southwest site since its completion late last year.

The Aboriginal heritage walk shares the stories of the Needwonnee people of the Southwest with innovative interpretive installations along a new 1.2 kilometre boardwalk that weaves its way through the forest and buttongrass plains beside Melaleuca lagoon.

The walk is the result of a partnership between the Tasmanian Aboriginal Land and Sea Council (TASLC) and the Parks and Wildlife Service (PWS). Among those involved were about 20 Aboriginal community members including elders and artists, Working on Country rangers, PWS rangers and track workers and Aboriginal trainee rangers and field officers.

PWS interpretation and education officer Fiona Rice, who coordinated the interpretation element of the project, described it as an experience unlike any other.

“Unlike most interpretive installations, the installations on the Needwonnee Walk are largely ephemeral – made of natural materials that will, over time, return to the landscape. Visitors can expect to see a traditional campsite, including huts, tools, hearth fire and paperbark canoe – all created from materials found in the surrounding forest,” Fiona said.

“The temporary nature of the installations provides ongoing opportunities for participants to practise and celebrate their traditions by refurbishing huts or creating new installations. It’s a fitting tribute to the Needwonnee people who lived a transient lifestyle with homes and tools that were mobile, not permanent.”



Aboriginal community members Leonie Dickson and Verna Nichols at work on the Needwonnee interpretive walk at Melaleuca.

The walk is named after the Needwonnee tribe whose homelands extended from Port Davey to New River Lagoon, including the Melaleuca area.

PWS senior ranger and Needwonnee Walk project manager Michael Garner says the walk has been warmly welcomed by visitors to Melaleuca.

“The walk is very accessible for Par Avion’s clients who fly in for half or full-day tours. The walk is flat, has no steps and from the lagoon edge, offers stunning views of the rugged Western Arthur range and Mt Rugby, with Mt Legge and Mt King behind. It’s achievable for those visitors who are less able or have limited mobility and they really appreciate the experience and the Aboriginal interpretation.”

An interpretive booklet and a DVD were produced as part of the Needwonnee

walk project. The booklet tells the story of the Tasmanian Aboriginal people and the Needwonnee and features historic and contemporary photographs. The DVD is the story of today’s Tasmanian Aborigines who journeyed into the Needwonnee’s former homeland to connect with their Old People, tell some of their story and practice their traditions. The booklet and DVD package are available through the Parks online shop at <http://www.parks.tas.gov.au/index.aspx?base=5686>

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Partnership with local Raptor and Wildlife Refuge

In the wooded hills near Kettering overlooking the D'Entrecasteaux Channel, sea eagles, wedge-tailed eagles, owls and goshawks are getting a second chance at life as they recuperate at Craig Webb's Raptor and Wildlife Refuge.

Many of the birds and other animals are there as the result of man-made misadventures including barbed wire, traps, dog attacks, motor vehicle accidents and firearms.

The facility is a testament to Craig's passion for wildlife. It has two flight aviaries said to be the largest in the southern hemisphere, along with a variety of purpose-built buildings including a hospital room for treatment of acute injuries and quarantine aviaries.

"You need big aviaries for big birds," Craig explained. The aviaries for the wedge-tailed and sea eagles are impressive. The two large, circular aviaries with soft-netted walls and a height of 26-28 metres provide spaces of 5000 and 7500 cubic metres in which the birds can recuperate in a natural bush setting.

Given space, peace and time, the raptors recuperate mostly on their own.

"They will tell you when they're ready to go," Craig said. "I had a sea eagle that was here for more than two years and one day it just started doing laps of the aviary.



Craig Webb with a grey goshawk recovering at the refuge.

I worked out he was flying about seven kilometres a day as he developed his flight muscles."

The refuge, originally established as a rehabilitation facility, will soon have a much greater focus on education with a partnership with the Parks and Wildlife Service helping to expand its education role.

The nearly complete education centre has an attached purpose-built aviary and photographic room. Additional insulation in the walls and one-way viewing windows will provide a close encounter for school children with minimal disturbance to the birds.

The partnership with the Parks and

Wildlife Service will see wildlife education services by Discovery Rangers offered to schools at the centre.

PWS general manager Peter Mooney is a strong supporter of Craig's efforts at the refuge and believes the partnership is a natural fit with the role of PWS in environmental education.

"The partnership provides us with an opportunity for wildlife, and in particular birds of prey environmental education that doesn't exist elsewhere in the State," Mr Mooney said.

Discovery Rangers will be available at the Raptor and Wildlife Refuge on a user-pays basis for schools to explore the themes of birds of prey threats and rehabilitation, adaptations and a range of other environmental education topics and themes.

PWS is also working with Wildcare Inc to create a donation fund to support raptor rehabilitation and possibly a Friends of Raptors group.

The Raptor and Wildlife Refuge Inc is an incorporated association. People interested in becoming involved can join the association for \$15 per year, which entitles members to attend an annual open day at the refuge and receive newsletters. Calendar sales also help to fund the operation. More information is available at the website; www.raptorrefuge.com.au

Azorella battles for survival on Macquarie Island

Horticulturists are maintaining a collection of potted Macquarie Island cushion plants to ensure the species survives a catastrophic decline in the wild.

Lorraine Perrins, curator of Conservation Collections and Subantarctic Flora at the Royal Tasmanian Botanic Gardens, says the mini nursery of *Azorella macquariensis* being nurtured on Macquarie Island is one of many strategies to save the species since the *Azorella* dieback was first observed in December 2008.

"*Azorella macquariensis* is one of only four plants endemic to Macquarie Island and is considered to be the keystone species of the fieldmark, a plant community on the sparse plateau uplands, which covers 45 per cent of the island," Lorraine said.

Dieback is now evident across the plant's entire range and at the current rate of spread it is anticipated that the species could become extinct in the wild within a few short years. Although there is still



Michelle Lang from the Royal Tasmanian Botanical Gardens with Azorella plants being cultivated on Macquarie Island.

much research to be done, it appears that the cause of the dieback may be related to a number of factors and will not be resolved in the short term.

Lorraine said that to prevent the extinction of the plant, it was imperative that a viable *ex-situ* collection was maintained. Maintaining individual plants as an *ex-situ* collection at the RTBG has not been

possible. In a different approach, two years ago the RTBG collected specimens from the island plateau, potting them and placing them in an *ex-situ* conservation collection at the research station on the island.

"Nearly two years later the plants are growing well and the trial has been considered a successful way of maintaining a protected collection of this species," Lorraine said.

"There are plans to increase the collection to 54 individual plants. This will serve as a seed orchard where individual plants may be cross-pollinated to hopefully enhance seed-set and broaden the genetic make-up of the seed collected."

The RTBG has been awarded a partial grant from the prestigious Mohamed bin Zayed Species Conservation Fund to assist the expansion project. For further information, go to www.rtbg.tas.gov.au/conservation and follow the link to the *Azorella macquariensis* page.

Modern technology helps volunteers map Exit Cave

The Parks and Wildlife Service (PWS) is benefiting from volunteer efforts by karstcare groups, specialist Wildcare Inc groups dedicated to looking after caves.

CARes (Community Action Research) Southern Caves, drawn from the Southern Tasmanian Caverneers (STC) caving club has begun a project to map the entirety of Exit Cave, the longest cave known in Tasmania. The cave is in the Southwest National Park, not far from the popular Mystery Creek Cave and part of the Tasmanian Wilderness World Heritage Area.

Tasmania contains more cave systems than any other Australian state, with the majority of the deepest and some of the longest caves in the country. With an estimated length in excess of 20 km, Exit Cave is noted for its immense chambers, meandering rivers and impressive glow-worm display. Because of Exit Cave's sensitivity and the technical challenges involved in exploring it, access is restricted to authorised speleological parties with relevant skills and expertise.

Karst officer at the Department of Primary Industries, Parks, Water and Environment (DPIPWE), Rolan Eberhard is enthusiastic about the project.

"Exit Cave is an icon in speleological circles and it's surprising we still lack a reliable map of it, given that cavers first started exploring there in the 1940s," Mr Eberhard said.

"The current project benefits from new technology but even so it's a major undertaking that depends totally on the

commitment and dedication of the cavers. Without them this project wouldn't happen."

Tony Veness, Exit Cave project coordinator and CARes Southern Caves member says that exploration of the Exit Cave system has had a colourful history over the past 50 years.

"Our members and cavers from other Australian Speleological Federation affiliated clubs very much enjoy the challenges that a multi-year cave survey poses. Cavers are passionate about the current project which applies modern cave surveying techniques to an old problem," Mr Veness said.

"Mapping a cave is harder than it sounds: no GPS, no natural light, nine-degree air and water temperatures and plenty of mud. We are fortunate to have access to many tools that cave surveyors of the past lacked. Laser range finders, powerful LED helmet lamps, waterproof caving suits and paper, and dedicated cave survey software make life easier for the modern cave surveyor."

Mr Veness estimated that about 60 per cent of the known cave has now been mapped to a reasonable standard. Once complete, the map will provide a much-needed basic resource for both cavers and PWS. The project highlights the potential benefits of recreational cavers working with land managers to better understand Tasmania's caves.

The volunteers acknowledge the financial support of the Australian Speleological Federation and Wildcare Inc.

Three Capes project on track

The Cape Hauy track upgrade has provided an opportunity for the Three Capes Track team to test its logistical and organisational skills.

Three Capes Track project manager Colin Shepherd says the Cape Hauy upgrade, a separate project to the Three Capes Track, has created approximately 40 jobs over the past nine months.

"We estimate there will be more than 50 similar positions made available for the Three Capes Track over the next few years," Mr Shepherd said.

"The project will provide much-needed employment for the Tasman Peninsula. As well as employment in track and hut construction, there are off-site positions such as architects and consultants, so 50 new positions is a conservative estimate.

"Two of three major planning approvals are already in place," Mr Shepherd said. "We received final approval from the Commonwealth and State governments for the project early this year. In June we'll submit a Development Application to the Tasman Council for a planning permit.

"The timeframe for tenders for construction of the track and huts is likely to be towards the end of this year and we're hoping that contractors will start construction soon after."

JAWS Architects was selected as the successful architect for the Three Capes Track public hut design in January 2012 after a competitive tender process that attracted 19 submissions.

Hut designs are at sketch design stage. Each of the five huts is subtly different to adjust to unique site characteristics such as topography, views, microclimate and flora. The huts feature design elements such as a modular construction system, passive bushfire protection, windows at a 20 degree slant to prevent bird strike by swift parrots, large verandas, and vents for airflow.

Each hut node will provide separate buildings for communal and sleeping areas, with capacity for 48 walkers and up to four Parks and Wildlife Service staff, a helicopter pad and external toilets.



Exit Cave is known for its immense chambers. Photo courtesy Rolan Eberhard.

Fact file: Mole Creek Karst National Park

What

Some of the finest cave systems in Tasmania were recognised and protected on 13 November 1996 when the Mole Creek Karst National Park was declared to conserve the fragile and ancient karst landscape. The national park is also part of the Tasmanian Wilderness World Heritage Area.

Although the area of Tasmania is less than one per cent of the total area of Australia, it contains more cave systems than any other state, with the deepest and some of the longest caves in the country.

Marakoopa - from the Aboriginal word meaning 'handsome' - is a cave of large caverns and extensive flowstone formations. This cave offers the best glow-worm display of any tourist cave in Australia, and features a large underground stream fed from a series of sinkholes in the Western Tiers.

Marakoopa Cave was rediscovered by brothers Harold and James Byard in 1906. After acquiring a land grant to secure the cave in 1910, the Byards returned to establish it as a tourist attraction. It was opened and presented to the first public group on 1 January 1912.

King Solomons Cave was probably named for its profusion of light-reflecting calcite crystals, conjuring up images of the legendary King Solomon's mines.

Where

Mole Creek Karst National Park is in the central north of Tasmania, about 85 kms west of Launceston. It's a 40 minute drive west of Deloraine, near the small township of Mole Creek.



Pseudotyranochthonius typhlus, pseudo-scorpion. Photo courtesy Paul Flood.

Highlights

The area contains more than 300 known caves and sinkholes, as well as gorges and large underground streams and springs, features characteristic of a karst landscape.

Karst is a Slovene/German word which is used to describe landscapes that are developed principally by chemical processes rather than physical processes, such as the erosion of limestone rock by acidic water. While caves and caverns are characteristic features of karst areas, not all karst areas have caves.

Life in the caves

The streams that run into Marakoopa Cave carry many insects and large amounts of plant material which forms the food web for cave-dwelling animals. Many of these animals show fascinating adaptations for life in an environment where there is no light. Species which never leave their black homes are known as troglobites. As there is no light, troglobites have no need for eyes. Their long appendages, or feelers, help them find their way around.

The glow-worms in Marakoopa Cave are not worms at all, but rather the larval form of a mosquito-like fly. The light is produced by burning waste products in the larvae's excretory organs. Other species which occur in Marakoopa Cave include harvestmen, the Tasmanian cave spider and the ancient mountain shrimp (*Anaspides*).

Activities

The Mole Creek Karst National Park offers a range of activities including guided tours of the caves, and walks through the surrounding forests.

Marakoopa and King Solomons Cave are both open to the public. Both caves have toilets, water, wood and electric barbecues and picnic shelters nearby.

Cultural heritage experience for the Arthur-Pieman

Local north-west school children will participate in a cultural workshop as part of the development of an Aboriginal cultural heritage experience for the Arthur-Pieman Conservation Area.

The Tasmanian Aboriginal Land and Sea Council is partnering with the Parks and Wildlife Service and others to develop a range of interpretive media that will provide an intimate, visual Aboriginal cultural interpretive experience in the Arthur-Pieman as part of the wider Arthur-Pieman Sustainable Access Project.

Project manager Gary Cole says two key aims of the project are to effect a change in behaviour and attitude toward Aboriginal culture and to provide an opportunity for Aboriginal cultural traditions to be practised by the Aboriginal community and shared with local and visitor communities as appropriate.

"The Arthur-Pieman region contains the highest density of Aboriginal heritage sites in Australia. It is globally significant and irreplaceable and this project is ultimately about changing attitudes and behaviours that will encourage understanding and respect to help preserve this heritage," Mr Cole said.



Stunning formations in Marakoopa Cave. Photo courtesy Paul Flood.