

WIRRUWANA NEWS

UPDATES FROM DIRK HARTOG ISLAND

WINTER/SPRING 2018

It is a time of transition on Dirk Hartog Island. This second edition of the Wirruwana News describes exciting changes in the Dirk Hartog Island National Park Ecological Restoration Project as feral animal eradication gives way to native species translocations.

Eradicating goats and sheep

At 63,000 hectares Dirk Hartog Island is the largest island off the Western Australian coast. It has had a long pastoral history with sheep introduced in the mid-1800s. Goats were released on the island in the early 1900's, although not as a pastoral enterprise.

Major destocking efforts started in 2007 when the pastoral leaseholders removed about 4000 sheep and 750 goats from the island by barge. Ground shooting of goats with assistance from the Department of Environment and Conservation (now Department of Biodiversity, Conservation and Attractions, DBCA) was also conducted.

Most of Dirk Hartog Island was declared a national park on 29 October 2009, the first step in a grand plan to reclaim the island for native species that previously called it home. From 2010 to 2017 there was a concerted effort to remove the remaining sheep and goats through a regular and methodical shooting program.

In 2012 the Dirk Hartog Island National Park Ecological Restoration Project (*Return to 1616*) commenced, substantially funded through the Gorgon Barrow Island Net Conservation Benefits program and managed by DBCA.

Below and right - Butch Maher and Shane Heriot have flown 300 hours together over the Island since 2012.

Since then, DBCA Operations Officer Shane Heriot has implemented a number of strategies to monitor goat numbers and conduct the aerial shooting program.

Monitoring strategies included cameras at permanent watering points and deploying radio collars on adult female goats, termed 'Judas' goats.

By November 2017 a total of 5185 sheep and 11,133 goats had been removed by mustering and ground and aerial shooting, a combined total of 16,318 sheep and goats. Sheep were declared eradicated in June 2016 and the last goat, a 'Judas' goat, was removed in November 2017.

According to Island Conservation data, Dirk Hartog Island is the largest island in the world where both sheep (*Ovis aries*) and goats (*Capra hircus*) have been successfully eradicated.



Left - With goats eradicated this path of more than 3000km will no longer be flown three times a year.



Contributors and photos: Operations Officer Shane Heriot, Senior Project Officer Mike Johnston, Technical Officer Sean Garretson, Senior Ranger Robert Jordan, Global Gypsies, Neil Thomas, volunteers Claudia Buters and Kady Grosser. Editor: Susan Pedersen. Contributions to this biannual newsletter from outside the 'Return to 1616' project are welcome and appreciated.

The *Return to 1616* project is funded by the Gorgon Barrow Island Net Conservation Benefits Fund.

Cat eradication

Four years of work is approaching a close for the feral cat team with eradication success expected to be declared in late September this year.

A series of preliminary studies were undertaken on the island in the years prior to the actual eradication effort commencing. The knowledge gained in these earlier studies was used to develop the cat eradication and monitoring program on Dirk Hartog Island.

The size of the island imposed logistical difficulties for effectively reducing and monitoring the cat population in one operation. This was resolved by constructing a barrier fence that divided the island into two discrete management areas. Cats inhabiting the area south of the fence were removed in 2014 with work subsequently starting north of the fence in 2015.

The team used broad-scale poison baiting as the initial control technique with follow-up trapping then used to remove remaining cats. Alongside this, a suite of monitoring techniques, including motion-detection cameras, direct observations and detector dogs, were used to provide information on areas with cat activity. An extensive surveillance program was initiated in 2016.



These Australian shelducks were caught on one of the cat eradication program cameras. This is just one of many bird species expected to benefit from removal of feral cats.

Once declared cat-free, Dirk Hartog will be the largest island from which cats have been removed, a globally significant achievement! We have presented some of our results at scientific conferences and have a well-advanced manuscript detailing the project's procedures and outcomes that will be published in the future.

We look forward to handing over to the fauna reconstruction team and watching the next stage of the ecological restoration process.

Well, well, well...

The fauna reconstruction team has been involved with many tasks preparing for the impending arrival of a suite of native species to Dirk Hartog Island National Park.

As an ex-pastoral lease there are numerous open well and bore sites and associated infrastructure on the island. These abandoned holes dot the landscape and are a potential hazard to the survival of translocated animals by entrapment and/or drowning. There is also a visitor safety benefit to restricting access to these locations.

The department has assessed known wells and is implementing a program to install fencing around these sites with the invaluable help of volunteers.

So far nine wells have been fenced using interlocking and galvanised sheep-yard fencing surrounded by rabbit mesh. This fencing limits access and risk while allowing smaller birds to continue utilising the wells.

The team hopes to fence a further ten wells south of the cat fence over the coming months.



Above - Well fenced by the fauna translocation team.



Legend

- Accessible 4WD track
- Management track
- Floppy-top fence
- Automated camera

Left - Network of management tracks created and used by the cat team on quad bikes to monitor the island for cats. During the cat eradication program all tracks are routinely searched for evidence of cats and more than 160 automated cameras checked.

These tracks are for management access only and are not suitable for visitors' vehicles.

Wallaby update

When we left you last time, 18 of 23 hare-wallabies (eight rufous, ten banded) retained their VHF radio collars. With autumn coming to an end and collar batteries running lower, the reconstruction team and volunteers returned to Dirk Hartog Island in May 2018 to recapture these animals, remove collars and perform health and breeding checks.

The fate of two banded hare-wallabies remains unknown as their collars stopped transmitting prematurely in early autumn. Researchers expect these breakaway collars to deteriorate and detach over time and hope that these individuals are captured on camera or in traps during future monitoring. As such, researchers were only able to target the 16 animals with working collars in May 2018.

Researchers were delighted to find that of the 11 females captured, eight had pouch young or partially independent young at foot and two others had indications of being reproductively active.

The eight joeys were in addition to the eight that were recorded in spring and, assuming these all survive, the population of rufous hare-wallabies alone will have almost doubled since the trial release in August 2017. All animals were in very good condition.



In May 2018 five rufous and three banded hare-wallabies had joeys.



A banded hare-wallaby that didn't evade capture.

While the team fell a little short of catching all collared hare-wallabies, the 14 captures represent a fantastic effort and it was reassuring to find them in good condition and with so much evidence of breeding.

Thus far, the findings of the trial translocation bode well for the first large-scale wave of translocations the *Return to 1616* project is undertaking from 12 to 19 September 2018 - as this newsletter is coming out.

Find out more about the first full-scale release in the summer edition of Wirruwana News.



Claudia Buters, Sean Garretson and Dr Saul Cowen preparing to hand net hare-wallabies.

New techniques

Due to the cunning evasion skills of wallabies thwarting capture efforts in 2017, researchers decided to trial a new capture technique in May 2018.

Bird mesh secured vertically to the ground was used to partially encircle animals within their refuge sites at dusk.

The team then flushed the animals from their refuge towards the ground nets where they were more easily captured by strategically placed wallaby wranglers.

While some animals narrowly escaped, the technique proved fruitful, assisting with the capture of many of the 14 hare-wallabies (eight rufous, six banded) over a ten night period. The two banded hare-wallabies that eluded capture were exceptionally skittish, regularly fleeing the scene before netters were able to approach.



The wallaby wrangling team surrounding a hare-wallaby refuge site and eagerly waiting until dusk to flush a collared animal into the netting strung across the foreground.

Ranger report

Regular patrols of Dirk Hartog Island National Park have picked up a lot of visitor activity lately and highlighted the importance of visitors respecting the environment.

The Block is a northwestern site with a hut popular among rock fishers. To address safety issues rangers had installed life rings and brought the hut's electrics up to safe standard. Visitors have expressed their appreciation by modifying the electrics so they are no longer safe, and stealing the life rings! Rock fishing can be dangerous and a life ring could be the difference between life and death.

On the northeastern side, the 'no fires' sign at Withnell Point was shot at. The 'no fires' policy is there to protect the island and its inhabitants. With Dirk Hartog Island becoming increasingly important as a wildlife refuge, a fire sweeping across the island would be devastating. Firearms are also prohibited, and for obvious reasons other than preserving signs.

On a positive note, signage is constantly being upgraded. An interpretive sign has been installed at the airstrip and animal warning signs will soon be erected south of Tetradon Loop to help reduce the risk of the animals being hit by vehicles.

What's a hare-wallaby?

Names can be misleading and our two hare-wallaby species demonstrate just how misleading. As you would expect, both belong to the largest family in the Diprotodontia order, Macropodidae. But that's as far as the relationship goes because they belong to different sub families.

The habitat preferences of the two species are also different but both are nocturnal. They shelter during the day, hiding from predators like wedge-tailed eagles and avoiding the heat, then emerge in the evening to feed.

Science safari

Global Gypsies tour operators are bringing another group of volunteers to Dirk Hartog Island this spring.

The escorted, catered, self-drive, 4WD 'voluntour' combines wildlife, history, fun and philanthropy and will donate part of proceeds to the DBCA's important ongoing research and conservation work on the island.

Volunteers assist a team of DBCA scientists on a range of projects monitoring native animals and the island ecosystem, as well as helping to restore Dirk Hartog Island to its former glory.

Their activities include trapping, recording and monitoring. They also find time for a little fun on group outings, fishing, swimming, exploring and beach-combing.

Self-drivers travel in a small 4WD tag-along convoy led by tour guide Jeremy Perks and numbers are strictly limited.

Find out more at globalgypsies.com.au/tours/Australian/dirk-hartog-science-safari.



Richo baits an Elliot trap as part of a native fauna monitoring program.



Take care

Please slow down and watch out for hare-wallabies.

They tend to use vehicle tracks to get around and are most active between dusk and dawn.





The banded hare-wallaby, *Lagostrophus fasciatus*, is most commonly associated with dense thickets of Acacia scrub.

The rufous hare-wallaby, *Lagorchestes hirsutus*, is found in spinifex hummock grasslands and more open sandplains with low shrub.



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