# wildlife matters





# Saving Australia's threatened wildlife





Welcome to the Winter 2015 edition of Wildlife Matters.

A feature of this edition is the announcement that another 160,000 hectares of the north-west Kimberley has been added to our conservation estate. Through an innovative, long-term partnership with Sydney-based supporters (see pages 4-5), the entire Charnley River Station is now managed by Australian Wildlife Conservancy (AWC) including a large tract of high rainfall savanna woodlands and black soil plains adjacent to the Artesian Range.

This latest addition means that AWC owns and manages over 3.15 million hectares – the largest non-government conservation estate in Australia and one of the largest (perhaps *the* largest) in the world.

Of greater significance than the *number* of hectares is the *ecological return* generated by AWC across our portfolio of properties.

- AWC's portfolio of properties is home to a very high proportion of Australia's native wildlife including more threatened species than any other non-government estate. Over 83% of terrestrial bird species and 70% of terrestrial mammal species are represented on AWC sanctuaries. For example, Charnley River-Artesian Range is home to a suite of species, such as the Black Grasswren and the Monjon, which are found only in a small section of the Kimberley while Brooklyn (page 3) is home to a higher diversity of wildlife than any other parcel of private land in Australia.
- AWC is delivering effective conservation for the wildlife on our sanctuaries. In particular, AWC management is driving an increase in the population of many endangered species (eg, the Brush-tailed Bettong see page 9) as well as other species, such as small northern mammals (see page 6), which are in steep decline elsewhere. The secret to our success is a new model for conservation which integrates on-ground land management and world class science, allowing us to deliver fire management and feral animal control at large scale to deliver measurable benefits for wildlife.
- AWC spends less on administration and fundraising than any other comparable organisation. In our March 2014 February 2015 financial year, 85% of AWC's total operating expenditure (excluding capital) was incurred on conservation. Only 15% was allocated to fundraising and administration combined (see page 11). This is far less than comparable organisations in our sector, which generally allocate over 40% to fundraising and administration. AWC's unique business model allows us to deploy a high proportion of our resources (including around 80% of our staff) where it counts in the field.

Across Australia, even in our largest national parks, the recent trend for most threatened species has been continued decline. However, with your support, AWC is bucking this trend by demonstrating how the decline in Australia's wildlife can be reversed. Whether it is measured in terms of Gouldian Finches, Black-footed Tree-rats, Great Desert Skinks or Bilbies, your donations to AWC have generated an exceptional return.

Thank you for your continued support.



Atticus Fleming Chief Executive

PS. In the lead up to 30 June, I hope you are able to renew your investment in AWC by making a tax-deductible donation ... it will be used efficiently to generate a measurable return for Australia's wildlife.

#### The AWC mission

The mission of Australian Wildlife Conservancy (AWC) is the *effective* conservation of all Australian animal species and the habitats in which they live.

To achieve this mission, our actions are focused on:

- Establishing a network of sanctuaries which protect threatened wildlife and ecosystems: AWC now manages
   23 sanctuaries covering over 3.15 million hectares (7.75 million acres).
- Implementing practical, on-ground conservation programs to protect the wildlife at our sanctuaries: these programs include feral animal control, fire management and the translocation of endangered species.
- Conducting (either alone or in collaboration with other organisations) scientific research that will help address the key threats to our native wildlife.
- Hosting visitor programs at our sanctuaries for the purpose of education and promoting awareness of the plight of Australia's wildlife.

#### About AWC

- AWC is an independent, non-profit organisation based in Perth, Western Australia. Donations to AWC are tax deductible.
- Over the last ten years, around 88% of AWC's total expenditure was incurred on conservation programs, including land acquisition, while only 12% was allocated to development (fundraising) and administration.

#### Australian Wildlife Conservancy

PO Box 8070 Subiaco East WA 6008 Ph: +61 8 9380 9633 www.australianwildlife.org

#### Cover image:

Numbat at AWC's Scotia Wildlife Sanctuary Photo by W Lawler

# Brooklyn Wildlife Sanctuary: a biodiversity hotspot



A Spotted-tail Quoll caught on camera trap at Brooklyn

Northern Quolls and the invasive cane toad were captured together on camera trap at Brooklyn

Brooklyn Wildlife Sanctuary is home to a higher diversity of native wildlife than any other parcel of private land in Australia: 86 mammal species, almost 300 bird species, over 100 reptile species and at least 35 frog species. A recent camera trap survey, designed to measure feral cat density, has incidentally showcased the extraordinary biological riches of Brooklyn.

Earlier this year, AWC ecologists established a camera trap transect which extended from rainforest ecosystems near the summit of Mt Lewis (at an altitude of more than 1,000 m) and adjacent tall wet sclerophyll forests, before descending through a diversity of drier habitats to the lower slopes overlooking the Mitchell River. Over a period of a couple of months, not a single feral cat was detected. However thousands of photographs of native animals were taken across the 20 camera trap sites.

- The nationally threatened Spotted-tailed Quoll was photographed at 1,010 m altitude in rainforest. This subspecies of the Spotted-tailed Quoll is endangered and declining, with an estimated population of 540 animals. Its presence on Brooklyn is highly significant.
- Musky Rat-kangaroos and Red-legged Pademelons were abundant in rainforest and wet sclerophyll, respectively, from 870 - 1,020 m. The Musky Rat-kangaroo is a rainforest specialist and Australia's smallest macropod.
- Long-nosed Bandicoots were found at eight sites in wet sclerophyll and rainforest from 890 - 1,020 m altitude. Brown Bandicoots (both the Northern Brown Bandicoot and the Southern Brown Bandicoot occur on Brooklyn) were common, occurring at 11 of the 20 sites (420 -890 m altitude). Long-nosed Bandicoots and Brown Bandicoots overlapped at only the one site.
- The Swamp Wallaby was recorded at four sites between 490 - 940 m in both wet sclerophyll and more open woodlands. The Whiptail Wallaby was recorded at two sites between 630 - 670 m.
- Unidentified species of Dunnarts were recorded at two sites between 630 - 780 m.

- The nationally endangered Northern Quoll was detected at six sites (from 420 - 750 m). AWC will identify individual animals (using distinctive spot patterns) to produce a density estimate. Brooklyn appears to support an important population of the Northern Quoll, which is in steep decline elsewhere as a result of altered fire regimes, feral cats and the impact of cane toads. Quolls have disappeared from many locations after the arrival of cane toads (quolls eat the toad and die from its poison). At Brooklyn, the Northern Quoll appears to survive in high densities despite the co-existence of cane toads. This is illustrated vividly in the camera trap image on this page, which captures a Northern Quoll and cane toads in the same photograph.
- Two Echidnas were recorded at mid-altitudes.
- The irrepressible White-tailed Rat occurred across the entire altitudinal range (420 - 1,020 m) in all habitat types (11 sites).



Australia's smallest macropod, the Musky Rat-kangaroo, at Brooklyn

# Charnley River - Artesian Range Wildlife Sanctuary: new partnership protects an additional 160,000 hectares



Monjon, the world's smallest rock-wallaby W Lawler

AWC ecologists have carried out the first detailed research on fire patterns and ranging behaviour of the endemic Black Grasswren E Mulder

AWC has entered into an exciting new partnership to protect an additional 160,000 hectares of the remote north-west Kimberley, protecting a suite of high rainfall savanna habitats adjacent to AWC's existing Artesian Range Wildlife Sanctuary. The combined 300,000 hectare area - to be known as the Charnley River-Artesian Range Wildlife Sanctuary - is set to play a vital role in protecting and restoring the endangered wildlife of northern Australia.

#### Innovative partnership enables Kimberley expansion

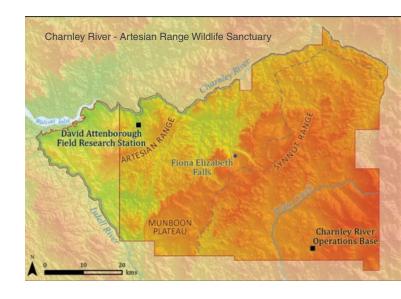
The expansion of AWC's Kimberley conservation estate to incorporate the entire Charnley River Station (see map) has been made possible by the generous support of a Sydney-based family. Under a long-term partnership agreement, AWC will manage the area covered by Charnley River Station while our Sydney-based partners hold title to the property. This innovative model – similar to the model under which AWC and TLLF-WildlifeLink work together at Piccaninny Plains - provides a secure framework for AWC's long-term management of the property for conservation. Importantly, the generous investment by our partners means that AWC does not need to raise additional donation revenue to cover the cost of purchasing the land.

#### From rugged sandstone to tropical savanna

The 160,000 hectares added to the existing Artesian Range Wildlife Sanctuary protects a diversity of habitats which, in combination, provide an intricate transition from rugged sandstone to vast savanna woodlands.

- The eastern side of Charnley River Station is dominated by a *complex sandstone range* similar to the Artesian Range sandstone. The range is dissected by several creeks that have carved out gorges and soaks where lush vegetation thrives. The endangered Northern Quoll, Short-eared Rock-wallabies and four species of goanna have already been confirmed in this range.
- Large areas of high rainfall savanna woodland occur across Charnley River Station. Northern Brown Bandicoots inhabit these tall woodlands, particularly along the creeks and the edge of ranges where soils are deep and stay wet for much of the year. The majestic Antilopine Wallaroo is common in Charnley's woodlands, despite being in decline in many other parts of its northern Australian range.

- Pockets of black soil plains decorate the landscape, with heavy cracking clays supporting rich, productive grasslands. Such productive areas are rarely included in national parks, highlighting the importance of Charnley River-Artesian Range. The Long-tailed Planigale, the world's smallest marsupial, is a specialist of these black soil plains: it has a flattened head perfectly adapted to moving through narrow cracks in the clay.
- Three *major river systems* traverse the property. The Sprigg River drains the Synnot Plateau in the south before joining the Isdell River, flowing through a spectacular gorge into the Walcott Inlet. Plain Creek wends its way through the centre of the property, while Maurice Creek flows north through remote country into the Charnley River. Lake Gilbert, a perched wetland on the Synnot Plateau, is important for a variety of birdlife, often supporting large numbers of Magpie Geese and Jabiru (Black-necked Storks).





AWC is undertaking ground-breaking research on the Golden-backed Tree-rat and the Scaly-tailed Possum at Charnley River-Artesian Range W Lawler

#### Turning back the extinction tide: restoring the savannas of northern Australia

"Here, in the Artesian Range, Australian Wildlife Conservancy is helping protect a range of species, including several threatened mammals, which are making their last stand in this small section of the north-west Kimberley."

Sir David Attenborough

The Artesian Range, managed by AWC since 2011, is of exceptional conservation significance: it lies at the centre of the only area of mainland Australia to have suffered no extinctions since European settlement. This is the last mainland refuge for threatened and endemic mammals such as the Golden Bandicoot, the Monjon (the world's smallest rock-wallaby) and the Golden-backed Tree-rat. Many of these animals were formerly widespread across northern Australia but have now contracted to the Artesian Range and surrounds.

AWC's science program has been unlocking the secret of why the Artesian Range is such a special refuge for threatened wildlife. A key factor appears to be its rugged topography, featuring broken and heavily dissected sandstone which is a barrier to extensive wildfires, protects gullies of thick vegetation, has impeded invasion by feral herbivores and hampers the ability of feral cats to hunt. However, the Artesian Range stands as an isolated rocky fortress at the edge of vast open savannas which - across most of northern Australia have suffered catastrophic declines in their mammal fauna.

The management of a large area adjacent to the Artesian Range provides AWC with an opportunity to turn back the tide of extinctions in northern Australia by helping species like the Golden-backed Tree-rat and the Golden Bandicoot leave their sandstone refuge and resettle the nearby savanna woodlands. To date, this has not been achieved anywhere in northern Australia: the key to success will likely involve translocations supported by an intensive program of integrated fire management and feral animal control. It is an exciting challenge. Success at Charnley River-Artesian Range Wildlife Sanctuary could unlock the key to restoring wildlife across much of northern Australia, paving the way for species like the Tree-rat and the Bandicoot to reclaim habitats from which they have long since disappeared.



In April 2015, WA Environment Minister, the Hon Albert Jacob MLA, along with senior traditional owner, Penny Bidd, launched one of Australia's most important scientific outposts with the opening of the David Attenborough Field Research Station in the Artesian Range.

### Effective conservation in northern Australia



Mustering feral buffalo at Wongalara C Devonport

The Hooded Parrot occurs on Wongalara

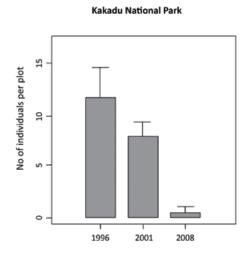
The wildlife of northern Australia has been in severe decline for decades. AWC is implementing an ambitious plan across our portfolio of northern Australian properties to halt and reverse this decline, protecting and restoring a range of vulnerable species from Golden-backed Tree-rats and Gouldian Finches to Black-footed Tree-rats and Hooded Parrots.

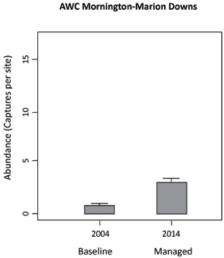
The extent of the decline in northern Australian wildlife is best illustrated by a key statistic from Kakadu National Park - between 1996 and 2008, the population of small mammals declined by 90% despite an annual budget of around \$20 million (\$10/hectare per year). There has been no evidence of small mammal recovery at Kakadu since 2008 despite expenditure of over \$100 million.

In contrast, AWC has delivered an increase of more than 300% in small mammal populations at Mornington-Marion Downs since 2004, for an investment of around \$2.50/hectare per year.

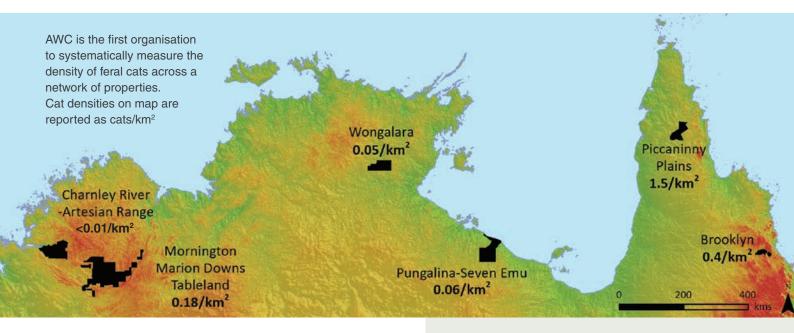
The exceptional ecological return delivered by AWC in the Kimberley is built on a unique model for conservation being pioneered by AWC. We are the only conservation organisation with around 80% of our staff based in the field, enabling us to deliver fire management and feral animal control at a scale that is unmatched in the non-government sector. Our practical land management is integrated with world class science: AWC's science program has generated over 100 peer-reviewed publications in the last six years, with ground-breaking discoveries in relation to feral cats, fire and the impact of feral herbivores.

In northern Australia, the challenge for AWC is to replicate the recovery in small mammal species achieved in the Kimberley at our other properties. However, each property is in a different bioregion with a contrasting history of land use, meaning the major threats to wildlife – altered fire regimes, feral herbivores and feral cats – may operate and interact in different ways. Here is a brief update on our progress implementing an effective, integrated land management strategy across northern Australia.





Small mammal abundance at Kakadu has declined by 90%. At Mornington-Marion Downs, small mammal abundance has increased by over 300%. Note the absolute number of mammals should be much higher at Kakadu, given higher rainfall.



#### Feral herbivore control

Feral herbivores have direct impacts including the removal of ground cover and increased erosion. In addition, AWC scientists have demonstrated that the presence of feral herbivores will substantially reduce the effectiveness of fire management in restoring mammal fauna and will exacerbate the impact of feral cats. Effective landscape-scale control, including the establishment of feral herbivore-free areas, is essential.

- At Wongalara, AWC has created the largest single feral herbivore-free area on mainland Australia (100,000 hectares).
- At Pungalina-Seven Emu, we have established an 80,000 hectare area that is now the only section of coastline in the Gulf of Carpentaria that is free of large feral herbivores.
- At Mornington-Marion Downs-Tableland, an area of 145,000 hectares is functionally feral herbivore-free. An additional 90,000 hectares will be feral herbivore-free by the end of 2015.

#### Fire management

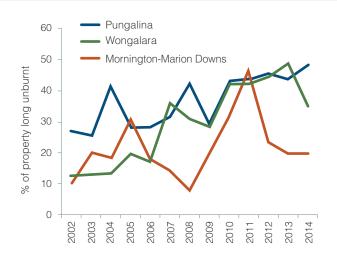
AWC is the only organisation to deliver large scale fire management in all major regions across northern Australia. In each region, our objective is to deliver a prescribed burning program in the early dry which is intended to break up country, creating a patchwork of fuel loads of different ages. This limits the spread of any wildfires later in the year (they go out when they reach country which was burnt in prescribed operations) and, importantly, ensures that the landscape contains patches of old growth vegetation.

- From our base at Mornington, AWC field staff deliver prescribed burning (aerial incendiary operations) across 3 million hectares of the central Kimberley each year. This program - EcoFire - is the largest non-government fire management program in Australia.
- At Wongalara, AWC has increased the proportion of the property that is old-growth vegetation (unburnt for three years) from 17% to 35%. Such old growth vegetation is valuable habitat for a range of species from Gouldian Finches to small mammals.
- At Piccaninny Plains, the higher rainfall on Cape York requires a subtly different approach to fire management, with a higher proportion of the landscape typically burning each year. Nevertheless, our fire management (prescribed burning and fire suppression) limited the percentage of the property burnt in wildfire to 22% in 2015 compared to 54%, on average, in the decade prior to AWC management.

#### Reducing the impact of feral cats

Across Australia, feral cats kill tens of millions of native animals every night. Reducing the impact of feral cats is our greatest challenge and the most pressing conservation issue for Australia's threatened mammals. AWC is leading the way in tackling the feral cat crisis.

- At Mornington-Marion Downs-Tableland, AWC has carried out the most detailed research in Australia on the ranging and hunting behaviour of feral cats. As previously reported in Wildlife Matters, this research has led to ground-breaking discoveries about how land management strategies (especially protecting ground cover from wildfire and feral herbivores) can reduce the impact of feral cats.
- AWC has also developed a methodology for measuring the density of feral cats in a landscape using an array of camera traps and spatially-explicit mark-recapture analysis. AWC is the only organisation measuring feral cat density at a network of sites across northern Australia. Our results to date (see map) indicate high densities of feral cats at Piccaninny Plains, with very low densities in the Artesian Range.
- In 2015, AWC will expand our feral cat research at Piccaninny Plains, with approximately 15 feral cats to be radio-collared to analyse their behaviour in wetter savannas (compared to the drier Kimberley savannas).



AWC has increased the proportion of each property that is unburnt for three years (long unburnt habitat is important for wildlife).

# Counting Bettongs, Bilbies and Bridled Nailtail Wallabies:

the fine line between ecology and accountancy



The Brush-tailed Bettong population at Scotia is estimated using mark-recapture WLawler

Unique physical markings, such as facial scarring, are used to identify individuals caught on camera trap

"If you can't measure it, you can't manage it" is a well-worn phrase with origins in both business and science. It has direct application to conservation organisations – whether government or non-government – in that a failure to identify and track appropriate measures of performance is highly likely to result in poor (or suboptimal) ecological outcomes. It explains why AWC ecologists, like accountants, need to be very good at counting.

Identifying the appropriate indicators of on-ground ecological performance, and the best way to measure those indicators, often raises a series of complex issues (which will be addressed in a future *Wildlife Matters* article). This article provides a snapshot of how we measure some key indicators at Scotia Wildlife Sanctuary including populations of endangered mammals such as the Brush-tailed Bettong (Woylie), the Bilby and the Bridled Nailtail Wallaby.

The best measure of abundance is a census where we count every animal in the population. In the wild, this is rarely possible. Accordingly, instead of counting every animal, we typically use an index of abundance or a population estimate.

An index of abundance involves counting animals, or counting a sign associated with the animal, in a particular place or time period and in a standardised way. Properly designed, this gives us a measure of abundance that is related to the actual number of animals in the population. In other words, each time we count the animals or animal signs using the standardised method, we are recording the same proportion of the population. This allows us to detect changes in population size over time. However, it is a measure of relative abundance only – we do not know what percentage of the population we are recording (although it is the same percentage each time), and so we do not know the actual size of the population.

We use an index of abundance as one way of tracking the population of Numbats at Scotia. AWC ecologists are positioned on the back of a Landcruiser and count Numbats as the Landcruiser is driven steadily along set transects through Scotia's mallee woodlands. This generates an index - the number of Numbats seen per survey kilometre.

An index of abundance can be generated by counting tracks or scats rather than counting individual animals. This may be appropriate for animals that are difficult to catch or observe such as goannas or small rodents. Track indices are cost effective and commonly used wherever the soils are suitable, such as the red sand at Scotia or the vast sand dunes at Kalamurina and Newhaven.

To generate an estimate of the total population of a species such as the Brush-tailed Bettong, we need to trap or observe an animal one or multiple times and then apply a rigorous statistical formula to our raw data. The gold standard of population estimation is mark-recapture. We catch animals in a trap or on camera, mark or identify them in some way, release the animal and continue trapping. The frequency that marked animals are re-trapped (or re-photographed) compared to new animals can be used to generate a population estimate. For some species that are physically trapped we insert a PIT tag with a unique number, as many people do with domestic cats and dogs. For other species - including species caught on camera, such as dingoes - we might use unique physical markings to identify individuals when they are recaptured.

Not all species are easily trapped. For species that are difficult to trap, or which are excluded from traps by another species which is easily trapped, another method is needed. At Scotia, AWC uses *transect counts* to estimate the population size of Bilbies, Bridled Nailtail Wallabies and Numbats. These counts are done from the tray of a Landcruiser, with two observers recording the distance and angle to all animals seen while driving on set transects. For nocturnal animals - Bilbies and Bridled Nailtail Wallabies - these counts are done at night (when the back of a Landcruiser at Scotia can be cold!).



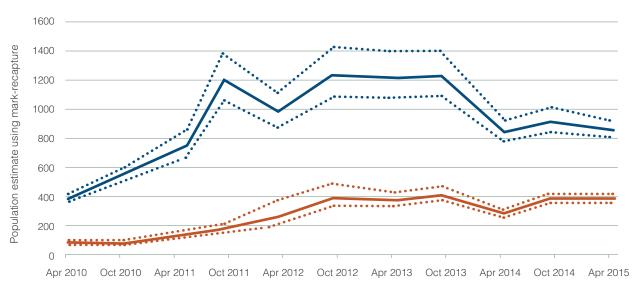
AWC field staff conducting spotlight sampling along a transect at Scotia W Lawler

For Numbats – one of the very few marsupials which are exclusively diurnal - transect counts are conducted during the day. Transect counts if designed carefully provide an accurate estimate of population size. Depending on how many observations are recorded on transect, we use a simple 'strip transect' method to generate a population estimate or a more sophisticated 'distance sampling' method.

As can be seen from the graph on this page, the estimated population of the Burrowing Bettong and the Brush-tailed Bettong has steadily increased at Scotia over the last five years. Both population estimates were derived using the gold standard

mark-recapture method. Tracking the population of these and other species at Scotia - in a scientifically rigorous manner provides valuable information to AWC about the effectiveness of our management, helping us adjust land management strategies as required ("managing what we measure"). It also provides valuable feedback to you - our supporters demonstrating that your investment (donation) is generating a positive ecological return and helping increase populations of endangered species such as the Brush-tailed Bettong and the Numbat.

#### Population estimates at Scotia of Burrowing Bettong (blue) and Brush-tailed Bettong (orange)



## Mt Gibson Endangered Wildlife Restoration Project



A feral cat captured within the fenced area at Mt Gibson A Lockey

AWC field staff checking dusted transects for feral animal tracks W Lawler

As reported in the previous edition of Wildlife Matters, AWC successfully completed the construction of 43 kilometres of feral-proof fencing at Mt Gibson in 2014. Since completion of the specially designed conservation fence, our focus has been on removing feral animals from within the 7,800 hectare area surrounded by the fence. The next phase of the project, scheduled to begin before the end of 2015, is the reintroduction of nationally threatened mammal species.

#### Removing the last feral cat

Since the completion of the 1.8 metre high conservation fence, AWC field staff have implemented an intensive program of feral animal control. Emphasising the scale of this challenge, the 7,800 hectare area of woodlands and shrublands surrounded by the fence will be the largest feral-free area on mainland Western Australia and one of the two largest in Australia (along with Scotia). The feral animal control program has included trapping, baiting and shooting. Our field staff have now undertaken approximately 13,000 trap nights and over 5,000 kilometres of spotlighting (shooting).

The area was declared fox-free soon after the fence was completed. Rabbit numbers are now very low. However, our over-riding priority is to remove all feral cats. In May 2015, we captured what may be the last feral cat. AWC field staff had been targeting this cat after its tracks were initially revealed on a dusted transect. As we focused our efforts on the cat's likely territory, its presence was confirmed on camera trap. It was eventually captured in a cage trap (see picture).

The next couple of months will be focused on meticulously confirming that the area is now cat-free and, if any cats are located, removing them quickly. To this end, AWC will deploy Eradicat, which is a bait developed by the WA Government to target feral cats. The colder conditions mean that any remaining cat will have fewer reptiles to eat and, accordingly, will be more likely to take bait. 60 camera traps are set out across the property: if a cat remains inside the fenced area, we will find it!

#### The return of endangered mammals

The first scheduled reintroduction will be an initial release of Brush-tailed Bettongs (Woylies) before the end of 2015. The Woylie is listed as critically endangered: its total population has declined in the last 15 years from over 200,000 animals to an estimated population of around 15,000 – 18,000, largely as a result of feral cats. Mt Gibson is set to play a vital role in preventing the extinction of the Woylie and reversing its decline. AWC estimates that Mt Gibson will support a population of around 1,500 Woylies, delivering a 10% increase in the existing population. Within three years, AWC expects to reintroduce at least nine threatened mammals to Mt Gibson, with Numbat, Greater Stick-nest Rat and Red-tailed Phascogale translocations likely to occur within 12 months of the initial Woylie release.

Thank you to Lotterywest for its significant support of the Mt Gibson Endangered Wildlife Restoration Project



# Biological survey showcases Newhaven reptiles



Honeymoon Lake, an ephemeral wetland filled by summer rain on Newhaven

The Newhaven landscape is always spectacular. In 2015, massive summer rainfall made it even more impressive, with rugged red desert mountains overlooking verdant green sandplains decorated by a network of brilliant blue ephemeral lakes.

Newhaven is located at the intersection of the Tanami and Great Sandy Deserts and the MacDonnell Ranges bioregion. Its climate typically comprises long dry periods broken by unpredictable high rainfall events. Such an event occurred in early 2015, when over 300 mm - almost the entire annual average rainfall - fell on Newhaven in less than a week.

In April, three months after the rainfall, a team of AWC ecologists (including interns and specialist volunteers) conducted our annual ecological health survey across more than 50 sites in all major habitat types. In total, 1,792 reptiles (55 species) and 280 mammals (8 species) were captured during the survey. The reptile fauna at Newhaven is very diverse: the survey team recorded 23 species of skink, 4 species of legless lizard, 10 species of gecko, 3 species of blind snake, 4 species of agamid, 5 species of goanna and 6 species of snake. Highlights included the nationally threatened Great Desert Skink, as well as several species of small goanna and Thorny Devils. Mammal records included the Fat-tailed False Antechinus, which is restricted to rocky ranges in central Australia, and the Brush-tailed Mulgara.

Important research projects are also being carried out at Newhaven including an assessment of the impact of feral predators (cats and foxes) on the threatened Great Desert Skink. An analysis of scats found skink remains in almost half of all cat scats. In turn, cat remains were found in dingo scats, highlighting the need for feral control measures to target cats and foxes in a way that does not remove dingoes. This work is carried out in partnership with traditional owners from Nyirripi, who are highly skilled at hunting and tracking feral cats, and Desert Wildlife Services (Rachel Paltridge).

A Thorny Devil photographed at Newhaven N Walters

### AWC leads the way in operational efficiency

For our most recent financial year (March 2014 – February 2015), the breakdown of AWC's total operating expenditure is as follows:

- 85% of AWC's total operating expenditure was incurred on conservation;
- 15% of our operating expenditure was on administration and fundraising combined.

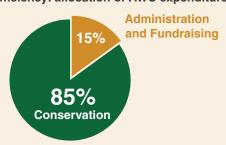
(AWC's financial statements are audited by KPMG).

AWC is proud to be leading the way in operational efficiency. Other comparable organisations in our sector generally allocate more than 40% to administration and fundraising.

AWC's ability to avoid high levels of expenditure on fundraising and administration is reflected in our unique staff structure: around 80% of our staff are based in the field. This explains why we are delivering land management (fire management and feral animal control) and world class science at a level that is unmatched in the non-government sector.

Your donation to AWC will be used efficiently where it counts in the field – to deliver a great ecological return for Australia's wildlife. Thank you for your support.

#### Operational efficiency: allocation of AWC expenditure



	Wong	Piccanin galara	ny Plains	
Charnley - Artesian		Seven Emu Pungalina	Brooklyn Mount Zer	0
	Newhaven		Taravale	Mu.
Faure Island Mt Gibson		Kalamurina	Bowra	Curramore
P <b>aruna</b> Kara <b>kamia</b>	Dak	Buckaringa alanta Scotia		North Head
*	Tableland is a partnership with the Yulmbu communit Piccaninny Plains is a joint with TLLF-WildlifeLink North Head is a collaborati Sydney Harbour Federatio Newhaven is a joint project	project ion with the n Trust	tralia	

Feral cats
<ul> <li>Please direct my donation to AWC's program to reduce the impact of feral cats</li> </ul>
Establishing feral-free areas
<ul> <li>Please direct my donation to the establishment of fox and cat-free areas</li> </ul>

#### AWC operations generally

Please direct my donation to AWC operations generally

To donate online our website at www.australianwildlife.org

Name: Dr/Mr/Mrs/Ms	Credit Card Details			
Address:	MasterCard Visa AMEX Diners			
Suburb: State: Postcode:	Card Number Expiry Date			
Telephone: W) H)	Cardholder name:			
Email:				
	Signature:			
MONTHLY PLEDGE				
I wish to become a regular supporter and give a tax deductible donation	Direct Debit Request			
each month of: \$25 \$50 \$100 \$	I / We request that you draw by way of the Direct Debit System,  per month, for the payment of a monthly donation to Australian Wildlife Conservancy Fund.			
Other (minimum \$10)  I wish to pay by: Direct debit from my bank account				
Please fill in Direct Debit Request (see opposite).	My / Our Account details are:			
Credit card - Please fill in details or call (08) 9380 9633	Institution:			
DONATION	Account Name:			
I would like to make a single tax deductible donation of:	Account Number: BSB: BSB:			
\$100  \$300  \$1000  \$5000 \$ Other (minimum \$10)  I wish to pay by:  Credit card - Please fill in details or call (08) 9380 9633	I / We acknowledge that this Direct Debit Request is governed by the terms of the "Direct Debit Client Service Agreement" (set out below).			
Cheque/Money Order - (enclosed)	Signature: Date:			
Payable to the <u>Australian Wildlife Conservancy Fund</u> .	Print Name:			
Bequests Information				
I am interested in making a bequest in my will.  Please tick this box if you do NOT wish to receive news and information on our latest initiatives and progress.  Please send any news or and information on our latest initiatives and progress.				

- Our Commitment to You, Drawing Arrangements:

  1. We will advise you, in writing, the details of your monthly donation to
  Australian Wildlife Conservancy (amount, frequency, commencement date)
  at least 3 calendar days prior to the first drawing. Thereafter each drawing
  will be made on the 15th day of each month (or part thereof as specified). Where the due date falls on a non-business day, the drawing will be made

- Where the due date rais on a non-business day, the drawing will be made on the next working day.

  We will not change the amount or frequency of drawings arrangements without your prior approval.

  We reserve the right to cancel your monthly donation to Australian Wildlife Conservancy if three or more drawings are returned unpaid by your nominated Financial Institution and to arrange with you an alternative nominated Financial institution and to arrange with you an alternative payment method. We will keep all information pertaining to your nominated account at the Financial Institution, private and confidential. We will promptly respond to any concerns you may have about amounts debited to your account. We will send a receipt within 45 days of the conclusion of the financial year summarising your entire year's gifts for tax purposes.

- ur nigms:
  You may terminate your monthly donation to Australian Wildlife Conservancy
  at any time by giving written notice directly to us (PO Box 8070 Subiaco
  East WA 6008), or through your nominated Financial Institution. Notice given
  to us should be received by us at least 5 business days prior to the due
- You may stop payment of a monthly donation by giving written notice directly to us (PO Box 8070 Subiaco East WA 6008), or through your norminated Financial Institution. Notice given to us should be received by us at least 5 business days prior to the due date.
- at least 5 business days prior to the due date.

  3. You may request a change to the donation amount and/or frequency of the monthly donations by contacting us on (08) 9380-9633 and advising your requirements no less than 5 business days prior to the due date.

  4. Where you consider that a drawing has been initiated incorrectly (outside the monthly donation to Australian Wildlife Conservancy arrangements) you may take the matter up directly with so n (08) 9380-9633, or lodge a Direct Debit Claim through your nominated Financial Institution.

- Your commitment to us, Your responsibilities:

  1. It is your responsibility to ensure that sufficient funds are available in the nominated account to meet a drawing on its due date. (You may be charged a fee by your Financial Institution if the account details are incorrect or there are insufficient funds in the nominated account when we attempt to

- deduct donations.)

  2. It is your responsibility to ensure that the authorisation given to draw on the nominated account, is identical to the account signing instruction held by the Financial Institution where your account is based.

  3. It is your responsibility to advise us if the account nominated for transactions with the Australian Wildlife Conservancy Fund is transferred or closed.

  4. It is your responsibility to arrange a suitable alternative payment method with us if the Australian Wildlife Conservancy Fund drawing arrangements are cancelled either by yourselves or by your nominated Financial Institution.

  5. Please enquire with your Financial Institution if you are uncertain whether direct debit functions are available on your account. (You may be charged a fee by your Financial Institution if the direct debit facility is not available on your

facility is not available on your wildlife conservancy