

special edition

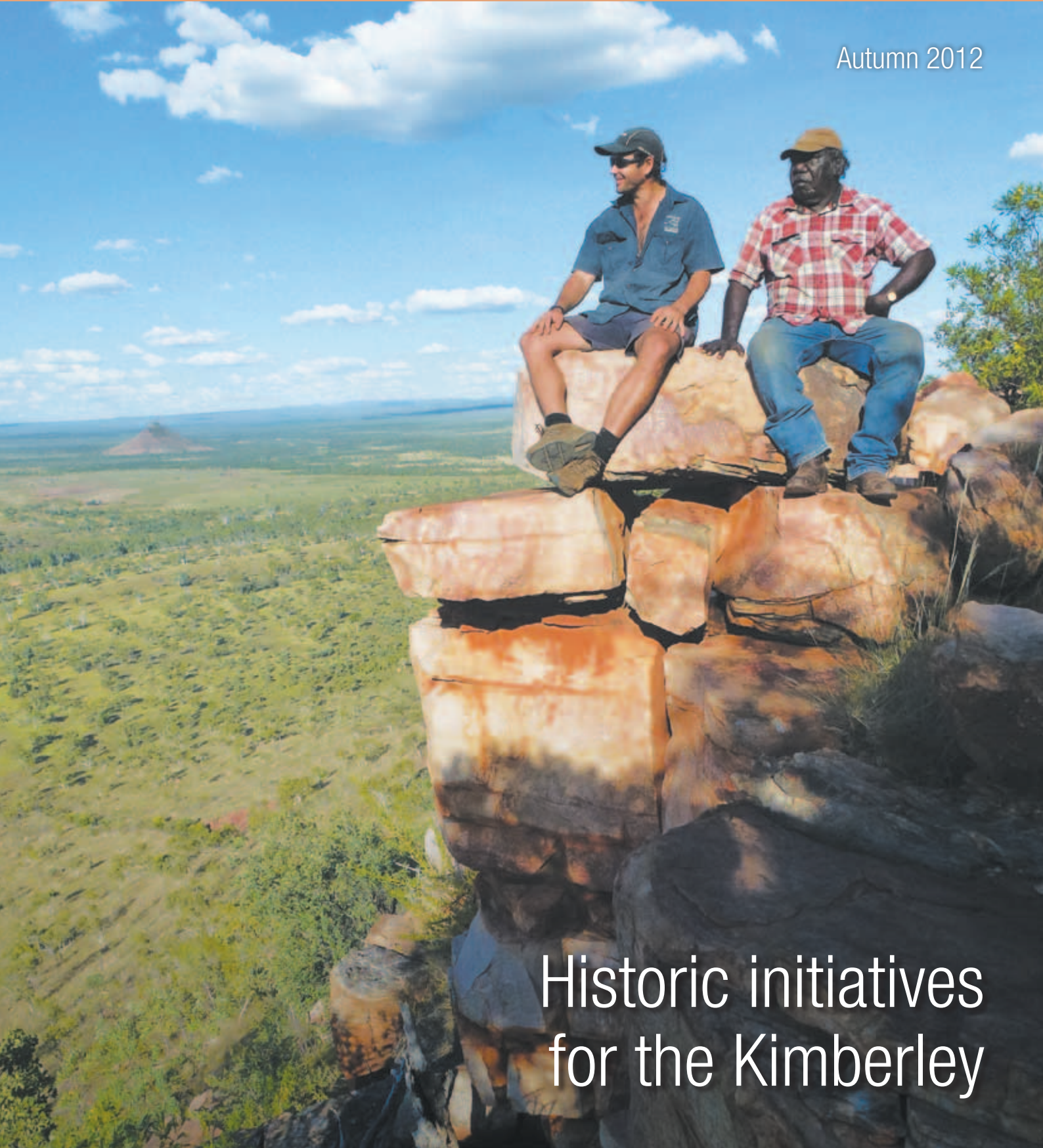
wildlife matters

australian



wildlife
conservancy

Autumn 2012



Historic initiatives
for the Kimberley

Saving Australia's threatened wildlife



Welcome to our special Kimberley edition of *Wildlife Matters*. The focus of this edition is on two groundbreaking new initiatives in the Kimberley: the Yulmbu project and our historic partnership with the Western Australian Government to protect the full length of the Artesian Range.

These two initiatives represent exciting developments for AWC and the wildlife of the Kimberley. Most importantly, however, we believe they establish new models with potentially far-reaching consequences for the way on-ground conservation is delivered, particularly in remote areas of northern and central Australia.

The **Yulmbu project** was initiated by the indigenous community at Yulmbu, who we have been working with for several years. As part of the project, Yulmbu are subleasing their land (Tableland Station) to AWC for more than 45 years. It will be managed in accordance with an agreed strategy which encompasses specific targets for feral animal control and fire management. The benefits to Yulmbu are significant: they receive annual income (the sublease payments), training and employment in the delivery of land management programs, infrastructure improvements and a modest, sustainable cattle operation.

This is the first partnership of its kind between an indigenous community and a non-government conservation organisation. Structured as a private sector project, with measurable performance targets, this innovative partnership will improve ecological health across 3,000 square kilometres of the Kimberley and deliver jobs, education, income and other benefits for the Yulmbu community. We hope it provides a model that other indigenous communities can choose to replicate.

Our **Artesian Range partnership** is also a "first" for conservation in Australia. The Artesian Range – an extraordinary landscape which is a last refuge for many threatened species – straddles two parcels of land: 139,000 hectares managed by AWC and 37,000 hectares managed by the WA Department of Conservation and Environment (DEC). AWC and DEC have now joined forces to manage the Artesian Range in an integrated manner, with AWC contracted to deliver land management and science programs across the entire length of the Range. Specific targets related to fire management and feral animal control are embedded in the partnership. *This is the first time that a non-government organisation has been engaged by Government to deliver land management on the public conservation estate.* Combining the strengths of AWC and DEC, the partnership revises the traditional roles of government/non-government entities by establishing a strong collaborative structure which is designed to improve the quality and cost-effectiveness of on-ground conservation.

The Yulmbu and Artesian Range projects are possible only because of the strong support of the Western Australian Government under its Kimberley Science and Conservation Strategy. AWC must now mobilise philanthropic support for both projects to match the investment of the WA Government. **Your support is vitally important if we are to successfully implement these historic Kimberley initiatives.** Please help AWC and our partners by making a tax deductible donation that will change the way on-ground conservation is delivered and provide a more secure future for the threatened wildlife of the Kimberley.

Thank you for your support.



Atticus Fleming
Chief Executive

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 million hectares (7.4 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 five years, around 90% of AWC's total expenditure was incurred on conservation programs, including land acquisition, while around 10% was allocated to development (fundraising) and administration.

Cover Photo: Wallace Midmee (Yulmbu community) and Dan Swan (AWC) at Tableland Wildlife Sanctuary (photo: S. Legge)

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Historic initiatives for the Kimberley

“Old people been telling me to look after country, look after family. Been looking, waiting, for long time - got no jobs, no way to pay up bills, can't look after country. Now, get him done.”

Wallace Midmee, on the AWC-Yulmbu partnership at Tableland



B. Maher

Investing in the future of the Kimberley



In 2011, the Western Australian Government adopted a Kimberley Science and Conservation Strategy and committed an additional \$63 million over five years toward its implementation. Central to our strategy is a desire to work with a range of stakeholders to deliver effective landscape-scale conservation across the region – on pastoral land, indigenous land and public land.

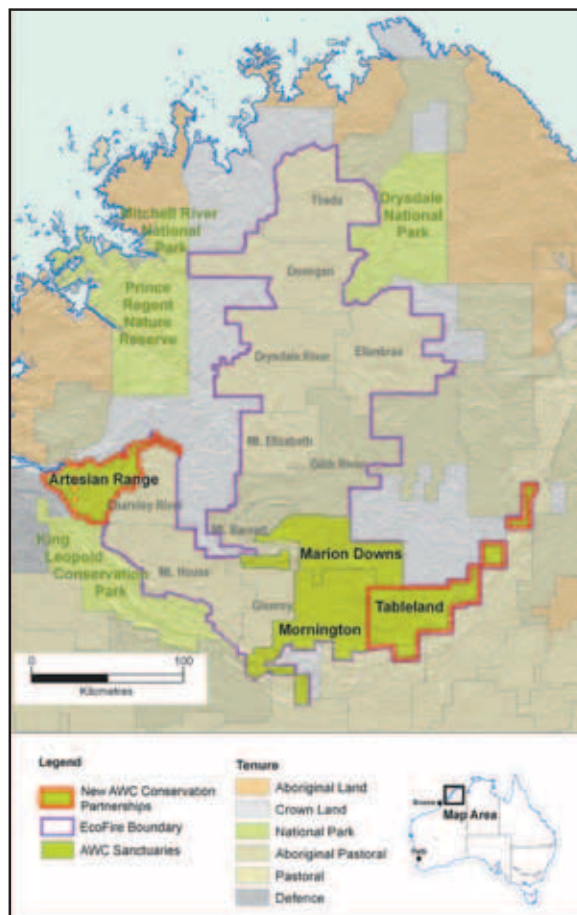
Australian Wildlife Conservancy is an important partner for the WA Government in delivering landscape scale conservation in the Kimberley. Through EcoFire, AWC has already worked for several years with the Department of Environment and Conservation and a range of landholders to successfully implement fire management across more than 4 million hectares. In addition to supporting the continuation of EcoFire, the Government is now pleased to partner with AWC on two exciting new initiatives: the Yulmbu partnership and the conservation of the Artesian Range.

The Yulmbu partnership is a ground-breaking model for conservation on indigenous land. It is important because it brings together practical land management, good science and employment and income for a remote indigenous community. Our work with AWC in the Artesian Range also involves establishing an innovative new model – a private-public partnership under which AWC is engaged by Government to deliver fire management, feral animal control and biological surveys on the public land section of the Artesian Range. This work is vital in protecting the suite of species for which the Artesian Range and surrounds are a last refuge ... species like the Golden Bandicoot and the Monjon.

The Yulmbu and Artesian Range projects will strongly complement the other landscape conservation initiatives the Western Australian Government is also undertaking as part of the Kimberley Strategy. These include establishing four new marine parks as well as major additions to the terrestrial conservation estate, which will be jointly managed with traditional owners, and partnerships with pastoralists and others to actively manage the threats posed to the region's unique environment by fire, feral animals and weeds.

The Western Australian Government is making a substantial investment in projects like the Yulmbu Partnership and the Artesian Range because we understand how important it is to take decisive on-ground action to protect the Kimberley. However, the challenges are too great for government alone, which is why we work closely with landholders and other stakeholders. Philanthropy also has a vitally important role to play. Your support for AWC is helping to provide a more secure future for the Kimberley, protecting species like the Gouldian Finch and creating new opportunities for communities like Yulmbu. We are pleased to be working with AWC and its partners under our Kimberley Science and Conservation Strategy. I urge you to “match” our investment by continuing to support AWC and its work in the Kimberley.

*Hon Colin Barnett MLA
Premier of Western Australia*



The Yulmbu Partnership

Establishing the Tableland Wildlife Sanctuary



Wallace, Dianne and Louise (Yulmbu) with Sarah and Dan (AWC)

W.Lawler



Gouldian Finch

S.Murphy

Australian Wildlife Conservancy (AWC) and the Yulmbu Aboriginal Corporation (Yulmbu) have entered into an historic agreement, supported by the Western Australian Government, which will establish an exciting new model for conservation on indigenous land and help protect the threatened wildlife and habitats of the central Kimberley.

Under the Yulmbu agreement, the Tableland Pastoral Station, covering 310,000 hectares (760,000 acres) of the central Kimberley, will be subleased to AWC for more than 45 years. During this time, the property will be managed collaboratively by AWC and Yulmbu to meet specific performance targets (see page 7) relating to the conservation of the Kimberley's priceless natural assets.

The Yulmbu Aboriginal Corporation comprises indigenous families that live in the twin communities of Yulmbu (Tableland) and Tirralintji (Mornington). These families are the traditional owners of the area covered by the Tableland Pastoral Lease and have remained on the land throughout the pastoral era. Many of the older people were renowned stockmen in their day and worked for a variety of pastoralists as leases changed hands and property boundaries were re-aligned over time. Through the Yulmbu Aboriginal Corporation, they eventually acquired the Tableland Pastoral Lease in 1994.

However, ownership of the pastoral lease has, to date, failed to generate substantial benefits for the community. Today, Yulmbu faces many of the challenges which typically affect remote communities. There has been virtually no employment or income for the community, services are poor and education and health indicators are well below average.

The Yulmbu partnership will help the community address many of these issues, while at the same time delivering effective conservation for a large area of the Kimberley. A key feature of the project is that it will deliver economic benefits for Yulmbu including income from annual sublease payments and employment

and training for community members. It will also deliver an improvement in infrastructure, such as roads and fences, and the establishment of a contained, sustainable cattle operation.

The importance of the Yulmbu Project

- A ground-breaking model for indigenous land:** Extending the model AWC initially developed at Seven Emu in the Gulf of Carpentaria, the Yulmbu project is the first time in Australia that an indigenous community has subleased its land to a non-government conservation organisation. The model has potentially broad application to indigenous land across central and northern Australia.
- A financial return for protecting and enhancing natural capital - integrating conservation and development outcomes:** The model is innovative. Yulmbu is receiving a financial return for agreeing to protect and enhance the natural capital of their land. This return on natural capital – lease payments combined with employment and training opportunities - will underpin the realisation of measurable socio-economic benefits for Yulmbu.
- Private sector delivery:** While the WA Government is an important investor and stakeholder in the Yulmbu Project, the design and execution of the project will be driven by private sector principles and disciplines, tied to measurable conservation and development targets. As a project conceived and delivered by the private sector, it represents an alternative to the model traditionally used for the delivery of many indigenous programs.



Boab Creek and the Baulkface Range (Bangurr)

W.Lawler

Located adjacent to Mornington and Marion Downs, both owned by AWC, the establishment of the Tableland Wildlife Sanctuary will create a contiguous protected area covering 888,000 hectares (nearly 2.2 million acres) of the central Kimberley. It will increase protection for threatened species – such as the Gouldian Finch and the Northern Quoll – as well as protecting the upper catchment of several iconic Kimberley rivers.

The landscapes of Tableland are highly distinctive. The Durack Ranges form the spine of the property: raised longitudinal folds of ancient marine sandstone interleaved with narrow valleys of alluvial and basaltic soils. The Chamberlain Valley is the longest example and a dominating physical feature, running over 120 kilometres in an elegant shallow curve, from its headwaters in the middle part of the property, downstream to the north-eastern boundary. These long and narrow valleys are linked by short and spectacular gorges that cut perpendicularly through the sandstone in deep incisions; notable examples include Crocodile Gorge and Teronis Gorge.

As well as the Chamberlain River, the middle part of Tableland also gives rise to headwaters of two other major Kimberley rivers – the Durack and the Fitzroy – which run off in northerly and westerly directions respectively, past unique topographical features such as Tullewa Hill and the Baulkface Range, a massive sandstone mesa that extends into the western part of Tableland from Mornington. These waterways pulse in seasonal cycles, from massive flooding events in the wet season (December to April), to chains of contracted pools during the dry season.

The habitats on Tableland are varied – they include extensive blacksoil plains, raked by the regular expansion and contraction of clay into extremely long, parallel gilgais (the Spirit Tracks). Narrow ribbons of riparian vegetation fringe parts of the waterways – tall river red gums shade thick patches of Pandanus and Freshwater Mangroves. The sandstone and quartzite ranges are cloaked in thick spinifex with sparse eucalypts and occasional Livistona palms and Cycads; small patches of fire-sensitive vegetation crowd in the gorges. The woodlands in the narrow valleys and broader, open plains are highly varied, ranging from Kimberley

Yellowjacket woodlands with a thick heathy understorey, to open Silver Box woodlands, and a number of bloodwood communities, often peppered with idiosyncratic Boabs.

These habitats protect a suite of characteristic Kimberley species, including threatened species such as Gouldian Finches, Rock Ringtail Possums, Freshwater Crocodiles, *Acacia manipularis*, and *Grevillea miniata*. Survey work is likely to identify additional significant species, including the endangered Northern Quoll (which occurs on Mornington and Marion Downs) and possibly the Wyulda, or Scaly-tailed Possum, which is known to occur just 60 kilometres away from Tableland's north-eastern boundary.



Ningbing *Pseudantechinus*

Marie Lochman/Lochman Transparencies

The Yulmbu Partnership Delivering effective conservation



The Little Fitzroy River approaching Tullewa Hill

W.Lawler

The Yulmbu Partnership is unique – the only partnership of its kind in Australia between an indigenous community and a non-government conservation organisation. We believe it is a ground-breaking initiative, providing a new model for integrating conservation and community development on indigenous land.

The Yulmbu community includes a number of Andijn and Gija families who are the traditional owners of the land covered by the Tableland Pastoral Lease. There is a small infrastructure base at Yulmbu, including several houses, where up to 25 people live. The community has worked closely with AWC for several years on issues such as regional fire management (*EcoFire*) and weed control. This close working relationship – built on practical, on-ground collaboration – led to Yulmbu elders initiating discussions with AWC in 2011 about a formal partnership for the management of Tableland.

Key elements of the partnership

- Yulmbu is subleasing the land to AWC for 45 years, comprising an initial period of three years and then a renewal period of 42 years.
- Yulmbu will receive an annual rental payment – ie, for the first time in many years, they will be earning an income from their land. (No cattle income has been received for several years.)
- AWC is given overall responsibility for land management including fire management, feral animal control and weed control.
- However, the delivery of land management will be a collaborative effort involving AWC staff based at Mornington and Yulmbu community members and their families (who remain living on Tableland). An AWC indigenous team has been established for this purpose – the Ngowija Guardians.
- The broad land management objectives for Tableland have been agreed up-front including:
 - Establishment of a sustainable cattle herd within a dedicated fenced area.
 - Effective exclusion of feral herbivores from the Chamberlain River valley.
 - Fire management and feral herbivore control across the property.

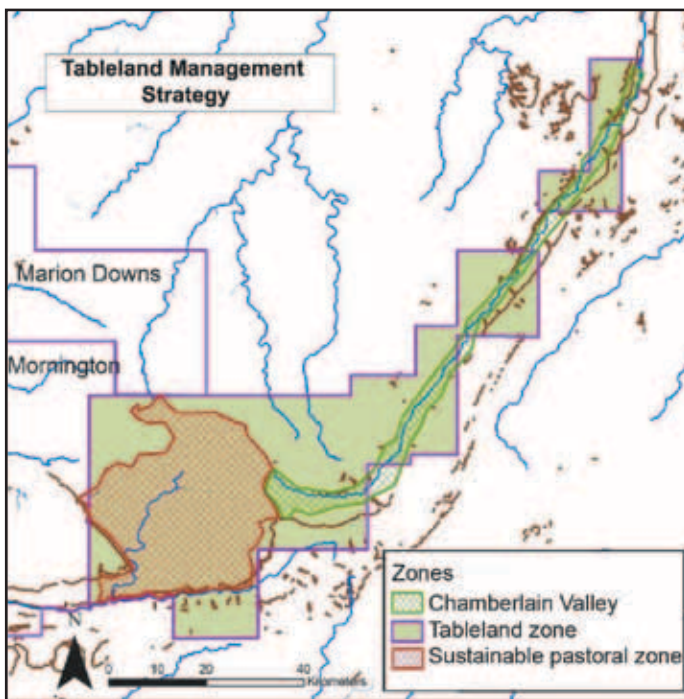
- The ongoing development and implementation of land management strategies will be guided by a Management Advisory Team made up of Yulmbu community members and AWC staff.

AWC Ngowija Guardians



W.Lawler

The AWC Ngowija Guardians have been established to assist in delivering integrated land management across Tableland, Mornington and Marion Downs. The Ngowija crew will be working on a range of programs under the Yulmbu Partnership including fire management, cattle management, weed control, biological surveys and a range of infrastructure development tasks. In this picture, Lindsay, James and Corey Malay are undertaking weed control, preventing the spread of weeds like Parkinsonia. **The Yulmbu Partnership includes a commitment to 650 person-days employment over the first three years.** This is a very significant outcome in a community where, until now, there have been no jobs “on country”.

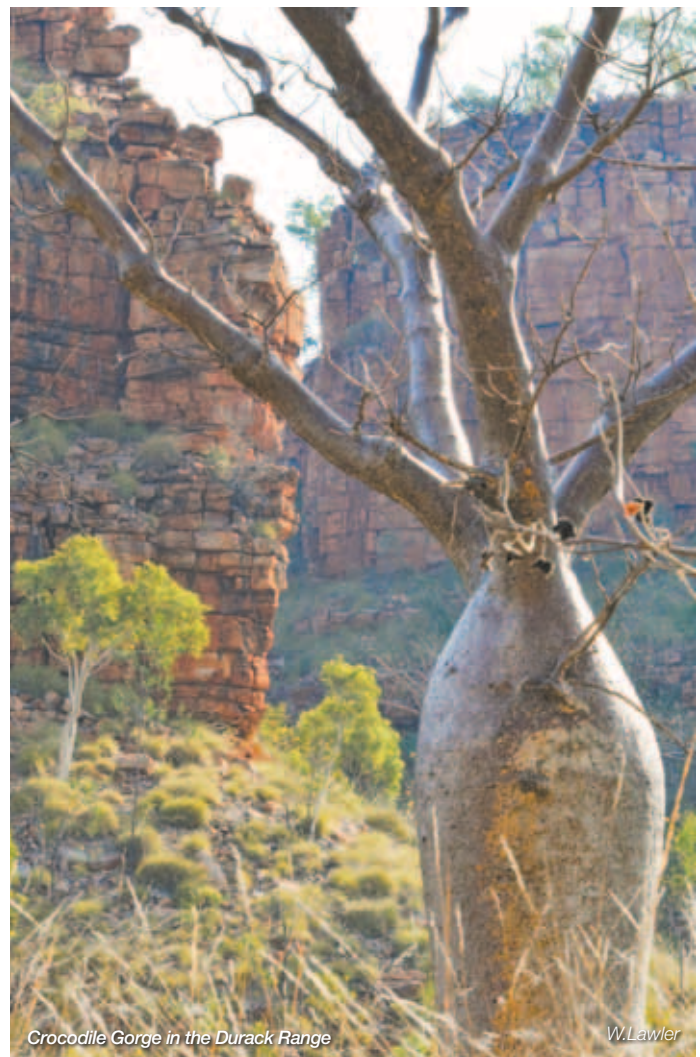


A distinguishing feature of AWC's approach to conservation is the delivery of practical land management, informed by a strong science program, with measurable outcomes. This approach will be applied at Tableland, with a strong focus on feral animal control, cattle management, fire management and weed control.

The Tableland Management Strategy

AWC and Yulmbu have developed a land management strategy based around dividing the property into three zones (see above map). The approach to fire management and weed control is consistent across the entire property. However, each zone has separate objectives in relation to feral herbivore control.

- The Chamberlain Valley Zone:** There has been no muster in the Chamberlain River valley for many years and the impact of horses, donkeys and feral cattle is clearly evident. While the valley is protected by steep escarpments along much of its length, feral herbivores have access at either end of the valley. We will construct exclusion fencing at these entrances before removing feral herbivores, with the objective of ensuring the Chamberlain River valley is, to the extent practicable, feral-herbivore free.
- Sustainable Pastoral Zone:** We will establish a fenced area, in reasonable proximity to the access road, in which a sustainable cattle herd can be managed. Cattle management is important to the Yulmbu community, as it is to indigenous communities across northern and central Australia. However, there has been no pastoral activity in recent years and infrastructure is in disrepair. AWC will help re-establish infrastructure and will assist with the management of the cattle herd for both domestic consumption and sale.
- Tableland Zone:** Across the balance of the property, an intensive feral animal control program will aim to reduce the density of feral herbivores to the level where their impact is negligible. We expect reinvasion of feral herbivores from adjoining areas, meaning this will need to be a sustained program.



Specific **conservation targets** for feral animals and fire have already been set (see box). Our progress against these targets – and the response of wildlife and habitats – will be measured by a rigorous biological survey program designed to report on the Ecological Health of Tableland. Over 20 biological monitoring sites will be established, with more than 2,000 trap nights carried out each year.

Implementing the AWC/Yulmbu strategy will require a substantial **investment in infrastructure** – for example, more than 35 kilometres of fencing will need to be built and over 150 kilometres of access roads repaired. Yulmbu community members will be **employed** to assist in the establishment and maintenance of infrastructure as well as the delivery of cattle management, feral animal control, prescribed burning, weed control and biological surveys.

Specific conservation targets

Feral animal population targets

Tableland Zone:

- Cattle < 300 animals
- Horse < 100 animals
- Donkey < 50 animals

Chamberlain River:

- Cattle < 100 animals
- Horse < 25 animals
- Donkey < 25 animals

Fire management

- Total area of property burnt annually < 35%
- Proportion of each year's fires that occur in the late dry season < 50%
- Area of 3+ year old (old growth) vegetation increased to 25%



W.Lawler

Fitzroy River



W.Lawler

Boab Valley, Phillips Range



W. Lawler

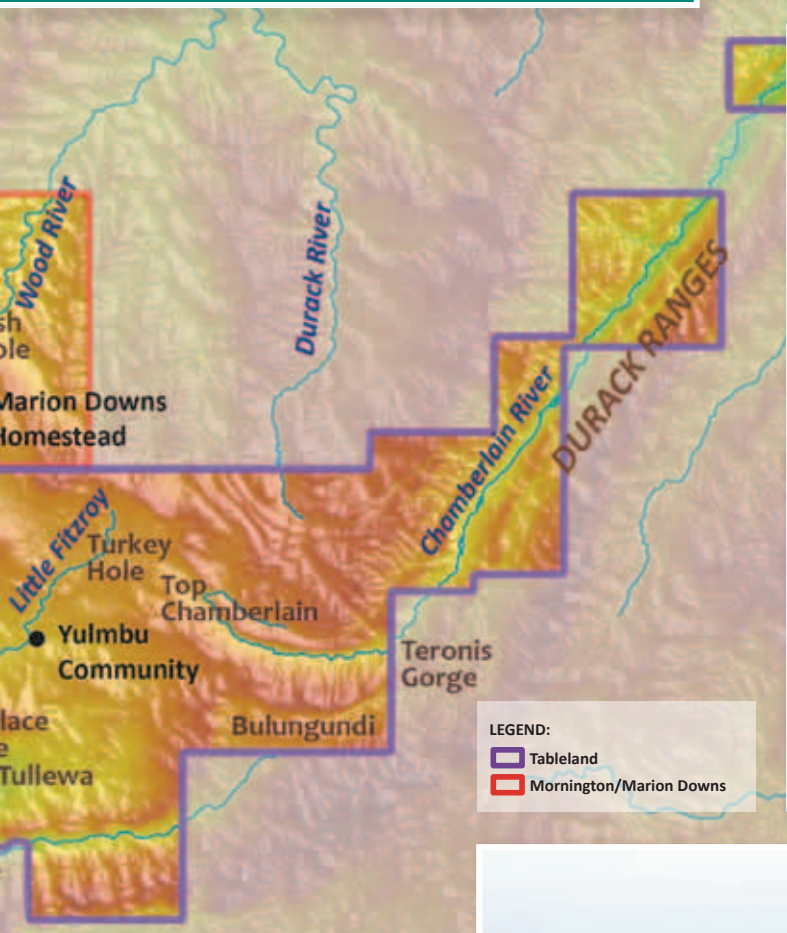
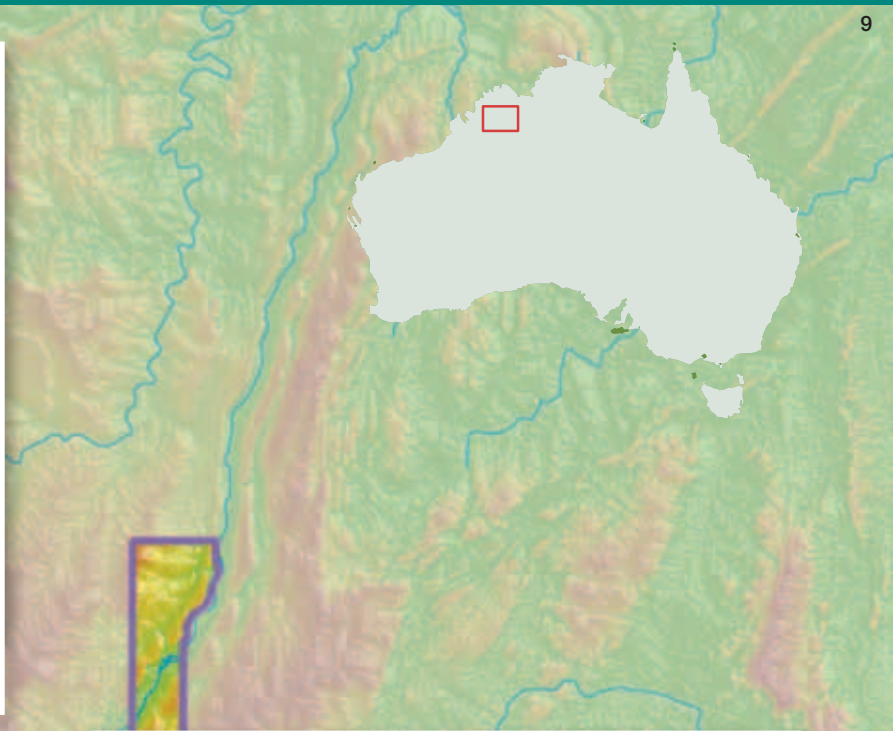
Fitzroy Bluff

Morningson, Marion Downs and 880,000 hectares of the central

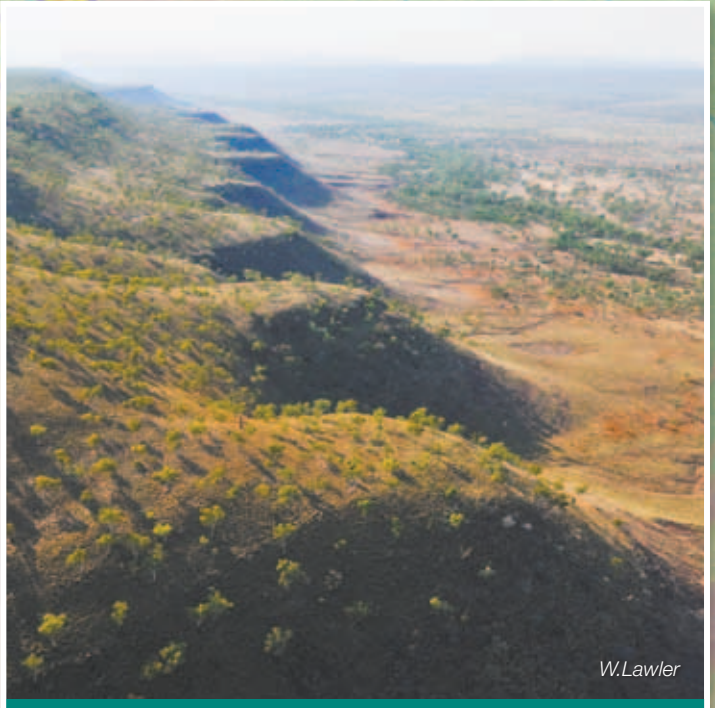


W.Lawler

Little Fitzroy and Baulkface Range



LEGEND:
 [Purple Outline] Tableland
 [Red Outline] Mornington/Marion Downs



W.Lawler

Chamberlain Valley

Tableland
Kimberley



W.Lawler

Tullewa Hill

Public-private partnership increases protection for the Artesian Range



Golden-backed Tree-rat

D. Bettini



Black Grasswrens

D. Bettini

Australian Wildlife Conservancy and the Western Australian Government have entered into an historic private-public partnership which will increase protection for the Artesian Range and its threatened wildlife. Under the partnership, AWC is being contracted to deliver land management across 37,000 hectares of land held by the Department of Environment and Conservation in conjunction with our management of the adjacent Artesian Range Wildlife Sanctuary (139,000 hectares).

The Artesian Range is located in the heart of a narrow strip of land along the Kimberley coast which is perhaps the most important region for conservation in northern Australia. It is home to at least 6 mammal species and more than 30 bird, reptile and frog species which are found nowhere else on mainland Australia. Species like the Golden Bandicoot and the Golden-backed Tree-rat have disappeared from over 90% of their range, but find refuge in the deep gorges and hidden valleys of the Artesian Range.

The integrity of the Artesian Range stands in stark contrast to most of northern Australia. Even in the 2 million hectare Kakadu National Park, small mammal populations have fallen by over 75% in little more than a decade. Kakadu is representative of much of northern Australia, where feral animals and altered fire regimes are causing dramatic declines in small mammals and seed-eating birds. However, the Artesian Range and adjacent areas of the Kimberley coast remain a stronghold for many species. Endemic animals like the Kimberley Rock-rat and the Monjon are abundant in the Artesian Range, while endangered species such as the Northern Quoll still occur in high densities.

Topography and high rainfall are two of the factors which have helped protect the Artesian Range. Bounded by the Charnley River, the area features a maze of rainforest-filled gorges and a network of rugged sandstone ranges and escarpments. To date, this topography has provided some protection from wildfire and has limited the invasion and impacts of feral herbivores and feral cats.

However, in recent years, the threat posed by wildfires around the Artesian Range has increased. In addition, our research at Mornington continues to highlight the catastrophic impact of feral cats (which kill an estimated 2 million native animals per day across northern Australia).

Unless we act decisively, the Artesian Range could suffer the same fate as Kakadu and the rest of northern Australia. We have a rare opportunity to protect a part of Australia that has survived largely intact for the last 200 years – but proactive, on-ground action is urgently needed, before it is too late.



The Charnley River in the Artesian Range

D. Bettini



The Charnley River as it enters Walcott Inlet

D. Bettini

A new model of public-private collaboration

Recognising the value of the Artesian Range, and the need for decisive action, the Western Australian Government and AWC have forged an innovative partnership designed to ensure its protection in perpetuity.

Currently, the Artesian Range straddles two separate parcels of land: the 139,000 hectare AWC conservation area (part of the Charnley River Pastoral Station) and a 37,000 hectare area of land managed by the Department of Environment and Conservation. The AWC area, which also encompasses the adjacent Munboon Plateau and Synnot Range, captures around 20 kilometres of the Artesian Range from its origins near the Charnley River Gorge. Extending in a south-westerly direction, the Range enters the DEC area and extends for a further 15 kilometres before falling away to the Isdell River and the tidal plains of Walcott Inlet.

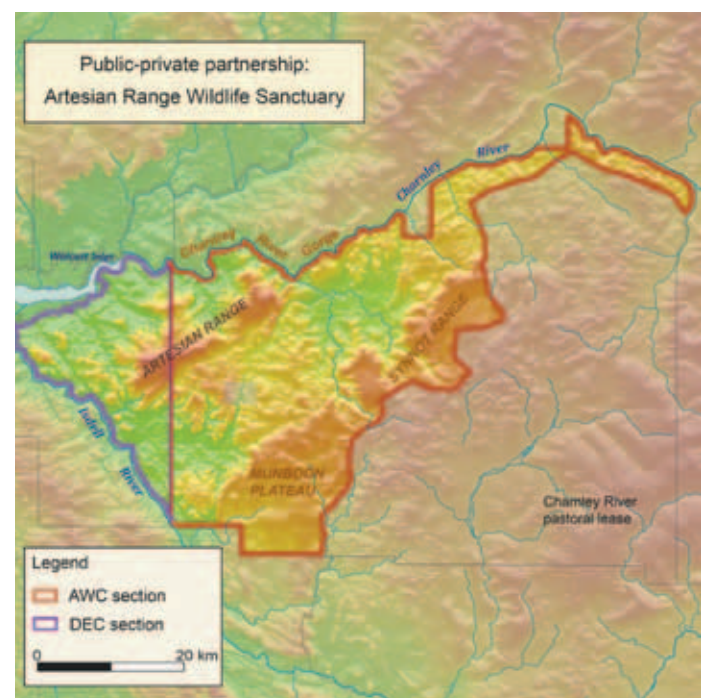
Under the Artesian Range partnership, management of the two areas will be integrated. AWC has been contracted by the Government to deliver land management – including fire management, feral animal control and biological surveys and monitoring – across both parcels of land, protecting the full length of the Artesian Range. Covering 1,750 square kilometres (175,000 hectares), the combined Artesian Range Wildlife Sanctuary will stretch from the mangroves and mudflats of Walcott Inlet to the escarpments and deeply dissected plateaux of the Range itself.

This is the first time in Australia's history that a public conservation agency and a private (non-profit) organisation have combined forces in this way. In particular, **it is the first time that a non-profit organisation will be delivering land management on a substantial area of public conservation land.** Combining the strengths of both organisations, and reflecting a shared commitment to innovation, it represents a precedent of national and international significance – a new strategy to maximise ecological returns with the limited resources (public and private) available for conservation.

The investment by the Western Australian Government (\$565,000 across three years) is substantial, forming part of the Government's broader Kimberley Science and Conservation

Strategy. However, in order for the Artesian Range partnership to succeed, it is critically important that this Government funding is matched by donations from AWC supporters. *The future of the Artesian Range and its wildlife depends now on philanthropic investment.* The returns from your investment will be carefully measured against key ecological health criteria (see next page). **Your gift to AWC can help build an exciting new model for conservation which secures one of Australia's most valuable natural assets – the Artesian Range and its threatened wildlife.**

For information on donating to AWC in support of the Artesian Range, see the back page of this newsletter or the enclosed donation form.





Synnot Range

D. Bettini

Measuring the ecological return on public and private investment in the Artesian Range

The Artesian Range partnership will be funded by both the State Government and AWC donors. This investment of public and private (philanthropic) funds will be used by AWC to deliver land management activity that secures the ecological health of the Artesian Range and so delivers a “return” in terms of habitat quality and wildlife conservation. This ecological health return will be measured through the implementation of a rigorous biological monitoring program.

Fire management: AWC will deliver aerial and ground-based prescribed burns, working in co-operation with DEC and traditional owners. The objective of fire management is to limit the extent of late season wildfires. The specific fire management targets are:

- The percentage of the Artesian Range that is burnt annually should be less than 30% of the overall area.
- Late season fires should be responsible for less than 50% of the total area burnt each year.
- The area of “old growth” vegetation (i.e. at least 3 years without fire) should exceed 25% of the Artesian Range.

Feral herbivore control: Through a combination of mustering, strategic fencing and shooting, AWC will aim to reduce feral herbivore densities to the following levels:

- The population of feral cattle should be reduced to less than 300 animals in the 1,750 square kilometre wildlife sanctuary, representing a density of approximately 0.2 animals/sq km (or one cow for every 580 hectares).
- The population of feral horses should be reduced to less than 30 animals in the 1,750 square kilometre wildlife sanctuary, representing a density of approximately 0.02 animals/sq km (or one horse every 5,800 hectares).
- The population of donkeys should also be reduced to less than 30 animals.

As there will be some reinvasion of feral herbivores, an ongoing control program will be required.

Weed control: Weeds do not appear to be having a significant impact on the ecosystems of the Artesian Range at this stage. Our priority will be to identify and map existing weed infestations and then implement a control program which delivers a measurable reduction in the area occupied by weeds and reduces the risk of future invasion.

Measuring ecological health: AWC will monitor 40 sites across the Artesian Range, undertaking an average of 4,000 trap nights each year to measure key ecological health indicators including the population of key species such as the Golden-backed Tree-rat. In this way, it will be possible to measure the “ecological return” on the investment of public and private funds in the Artesian Range.



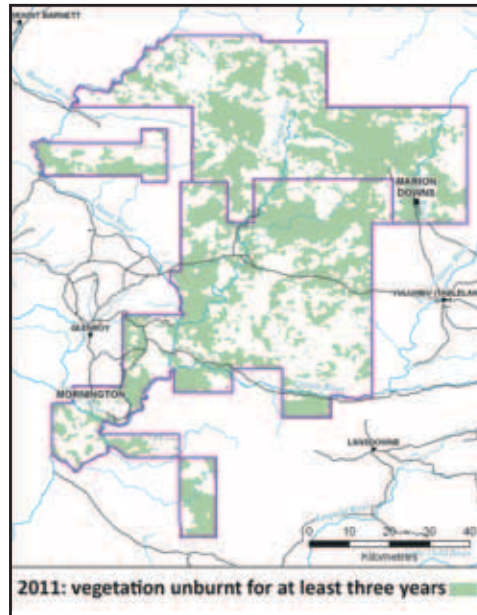
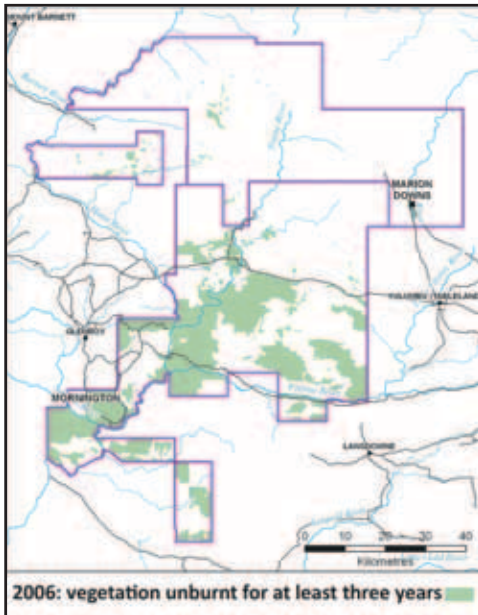
Golden Bandicoot

R. Knowles

William Tataya and Dean Smith,
Wunggurr Rangers at the Artesian Range

R. Knowles

Delivering effective conservation in the Kimberley



Our two new Kimberley initiatives – the Yulmbu project and the Artesian Range partnership – have been structured to incorporate specific targets for fire management and feral animal control. Our experience at Mornington demonstrates that meeting these targets will help secure the Kimberley’s threatened wildlife.

Removal of feral herbivores leads to small mammal increase

One of our first major land management interventions at Mornington involved the establishment of a feral herbivore-free area covering more than 40,000 hectares. This area remains the largest feral herbivore free area on mainland Australia (although, by the end of 2012, we hope to set a new benchmark by establishing a 100,000 hectare feral herbivore-free area at Wongalara).

We have implemented an extensive biodiversity monitoring program to record changes in ecological health at Mornington. An analysis of data from 2004-2007 showed that, after controlling for the effects of inter-annual variation and habitat, **mammal abundance doubled** following the removal of feral herbivores. Mornington is the only protected area in northern Australia where such a result has been achieved: see Legge *et al.* 2011. *Rapid recovery of mammal fauna in the central Kimberley, northern Australia, following the removal of introduced herbivores.* *Austral Ecology* 36: 791-799.

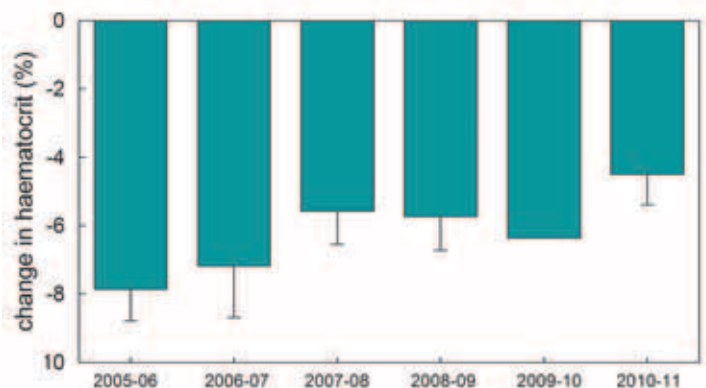
The results achieved at Mornington highlight the importance of controlling feral herbivores including horses, donkeys and feral cattle. The targets we have set for feral control at Tableland and the Artesian Range are intended to promote ecological health at these properties, particularly at Tableland where baseline feral densities are higher.

Fire management improves the health of Gouldian Finch population

Since 2007 AWC has been implementing EcoFire, a regional fire management program across more than 4 million hectares of the central Kimberley. Working in partnership with pastoral and indigenous landholders, as well as Government, Rangelands NRM and other stakeholders, we have reduced the extent and frequency of late season wildfires across the EcoFire area.

At Mornington-Marion Downs, the effectiveness of our fire management can be measured by the extent of each property that contains “old growth” vegetation – ie, vegetation that is unburnt for at least three years. The maps on this page illustrate the significant increase in the extent of old growth vegetation, and its dispersion, since EcoFire commenced. In summary, we have both increased the area of old growth vegetation and scattered such vegetation across the sanctuaries in a fine-grained fashion.

This is good news for Gouldian Finches: they need old-growth spinifex because it is a vital food source during the wet season, when other food is scarce. We have been tracking the health of the Gouldian Finch population by measuring their drop in haematocrit levels each wet season. Haematocrit, or packed cell volume, is a general measure of condition; levels of haematocrit signal anaemia. The graph below shows that, as our fire management has delivered more old-growth spinifex in the north of Mornington, the drop in haematocrit levels has been significantly reduced. In other words, better fire management will promote healthier populations of Gouldian Finches and other seed-eating birds.



Sanctuary highlights



W. Lawler

The Warburton River in flood at Kalamurina (2010). As this magazine goes to print, AWC and the Dieri traditional owners are entering into an historic native title consent determination covering land south of the Warburton on Kalamurina.

This edition of *Wildlife Matters* has focused on our historic new initiatives in the Kimberley. At our other sanctuaries around Australia, our science and land management program continues to break new ground. With around 80% of our staff based in the field, AWC is uniquely placed to implement a new model for conservation which delivers measurable, on-ground improvements in ecological health.

Scotia plays a critical role in saving the Woylie

Scotia Wildlife Sanctuary, covering 650 square kilometres midway between Broken Hill and Mildura, incorporates the largest feral predator-free area on mainland Australia. Within Scotia's secure, fenced area of 8,000 hectares, AWC has successfully reintroduced populations of Bilbies, Burrowing Bettongs (Boodies), Brush-tailed Bettongs (Woylies), Bridled Naitail Wallabies, Numbats and Stick-nest Rats. Our previous edition of *Wildlife Matters* reported on the significance of the Bridled Naitail Wallaby population, with Scotia now home to around 90% of the entire population of this species. The results of our recent biological monitoring, carried out in March-April, demonstrate that Scotia is also playing a critical role in preventing the extinction of the Woylie.

The Scotia feral-free area is divided into two adjacent sections. In Stage 1, the latest population estimate of the Boodie is over 1,000. The population appears to have peaked after high rainfall in

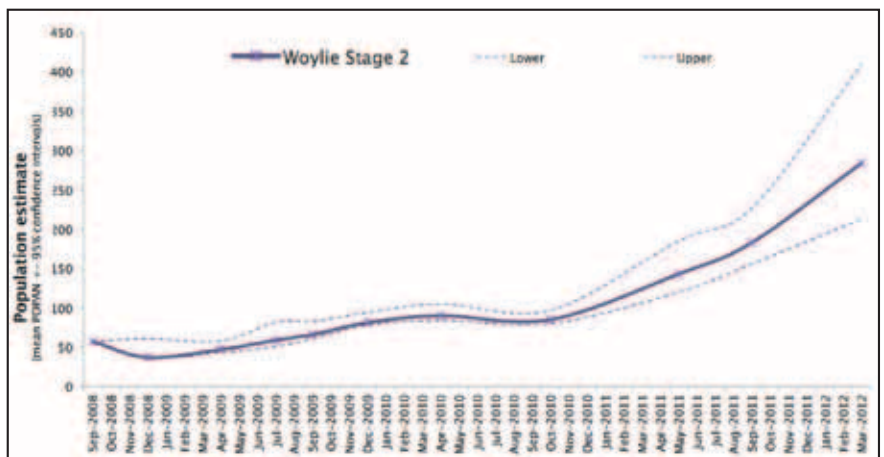
the last 18 months. The Woylie population in Stage 1 is around 25 animals: it has remained relatively consistent at this level for much of the last three years.

In contrast, the estimated population of Woylies in Stage 2 (where there are no Boodies) has now grown to more than 280. It appears likely that Boodies outcompete Woylies in Stage 1, which would explain the difference in the Woylie population between the two areas (they are of similar size and contain similar habitat). This is an important issue for the design of future reintroduction strategies: for example, it will influence whether we reintroduce both Woylies and Boodies at Mt Gibson. The issue of Boodie-Woylie interactions at Scotia will be examined in more detail by a PhD student from the University of Queensland. As the Woylie population in south-western Australia continues to decline, AWC properties such as Scotia and Karakamia are set to play a vital role in preventing its extinction, highlighting the vitally important role of fenced areas in saving our threatened mammals.



Woylie

Jiri Lochman/Lochman Transparencies





A Pale Field Rat is released at Wongalara

E. Mulder



AWC intern, Andrew Morton, with a Brush-tailed Mulgara at Newhaven

A. James

Newhaven diversity still high

A period of intense biological survey activity at Newhaven is helping AWC assess the ecological impact of wildfires in 2011. Initial results are promising: the number of species at our monitoring sites remains high although, as expected, the capture rates are less than those we recorded immediately following the very high rainfall in 2010/11. Further analysis – and future surveys – will help reveal the full picture.

- Almost 8,000 trapping nights were conducted across the 60 permanent monitoring sites in April. Capture rates of larger dasyurids (carnivorous marsupials such as the nationally threatened Brush-tailed Mulgara) remain high. A range of other small mammals were also caught including the Spinifex Hopping-mouse, the Wongai Ningau and the Lesser Hairy-footed Dunnart.
- A group of dedicated volunteer birders carried out 268 bird surveys at 70 permanent monitoring sites. 106 species were recorded including the rarely observed Black Falcon. Good records of fire-sensitive species such as the Rufous-crowned Emu-wren and the Dusky Grasswren were another feature of the survey.
- Nyirripi and Yuendumu Rangers worked with AWC staff to complete tracking surveys at 70 sites across Newhaven. These tracking surveys record feral predator activity (which has increased in conjunction with the increase in native animal numbers) as well as records of native species.

Wongalara: Assessing feral cat impacts and returning native rats

The experimental reintroduction of Pale Field Rats at Wongalara has entered a new phase, with the release of an additional 46 rats into a second set of enclosures. Half of these animals were released into a cat-proof enclosure, surrounded by a six-foot high fence, while the other half were released into an enclosure surrounded by a smaller fence that prevents the Rats escaping but is not cat-proof.

One of the key objectives of this experiment is to examine the impact of feral cats on small mammal populations. As reported in our Summer 2011/12 edition of *Wildlife Matters*, 31 Pale Field Rats were released into an initial set of paired enclosures in late 2011. During our trapping program in March 2012, we caught 36 Pale Field Rats in the first cat-free enclosure and only 20 rats in the first cat-accessible enclosure. It is too early to draw definitive conclusions about the extent to which feral cats have caused the lower rate of survival/growth in the cat-accessible enclosure but, over time, we hope this experiment will help us better understand the overall impact of cats (as well as leading to a successful reintroduction of Pale Field Rats!). Such knowledge will help us develop strategies to reduce the threat posed by feral cats, which kill an estimated 75 million native animals per day across Australia.

Frogs rule at Bowra: Our 2012 annual survey at Bowra was dominated by frogs! When our survey team arrived at Bowra, parts of the property were still inundated as a result of extensive rains across southern Queensland. In total, five new species were confirmed for the Bowra inventory: four reptiles, including the Robust Blindsnake (*Ramphotyphlops ligatus*), and Sudell's Frog. During the course of the survey, 1,919 individual animals were captured including **1,811 frogs**. Fifteen different species of frog were captured, but not a single cane toad. Ninety-two bird species were sighted including the iconic Grey Falcon.



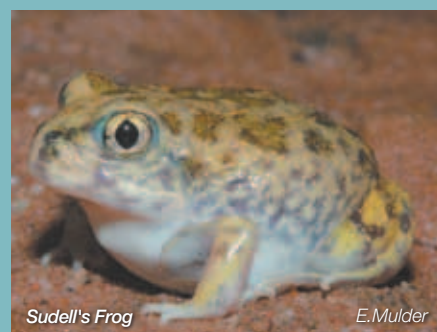
Crucifix Frog

E. Mulder



Water-holding Frog

E. Mulder



Sudell's Frog

E. Mulder

The Bilby Challenge: matching your donations to AWC.

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Where the due date falls 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...
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You may request a change to the donation amount and/or frequency of the monthly donations by contacting us...
Where you consider that a drawing has been initiated incorrectly... you may take the matter up directly with us...

Your commitment to us, Your responsibilities:

- It is your responsibility to ensure that sufficient funds are available in the nominated account to meet a drawing on its due date.
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.
It is your responsibility to advise us if the account nominated for transactions with the Australian Wildlife Conservancy Fund is transferred or closed.
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.
Please enquire with your Financial Institution if you are uncertain whether direct debit functions are available on your account.

