

bushtracks

Bush Heritage Magazine | Autumn 2019



Feral focus

How we're working beyond our boundaries to control foxes and feral cats in south-west Western Australia.

Burning the right way

Using Western technologies and traditional knowledge to keep country healthy and a millenia-old tradition alive.

Battle for the bite sized

A landmark restoration project on Bon Bon is helping native species to bounce back.



BUSH HERITAGE
AUSTRALIA

Bush Heritage acknowledges the Traditional Owners of the places in which we live, work and play. We recognise the enduring relationships they have with their lands and waters, and we pay our respects to elders, past and present.

CONTRIBUTORS

Heather Campbell
Jane Lyons
Kate Thorburn
Dr Viki Cramer

DESIGN

Viola Design

COVER IMAGE

A sleepy Western Pygmy Possum caught and released during fauna monitoring in the Fitz-Stirling region of Western Australia. Photo by William Marwick

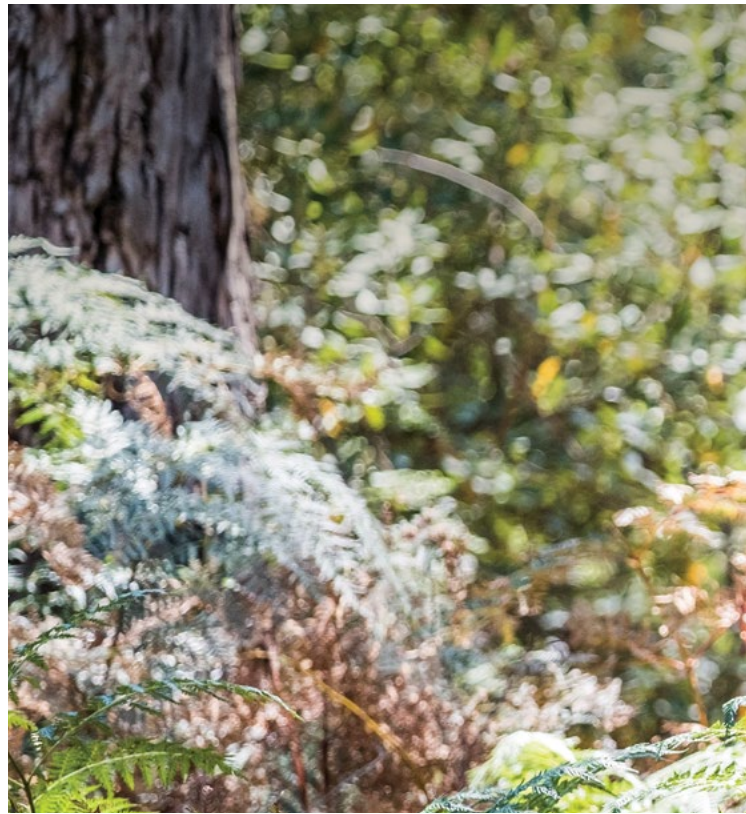


This publication uses 100% post-consumer waste recycled fibre, made with a carbon neutral manufacturing process, using vegetable-based inks.

BUSH HERITAGE AUSTRALIA

T 1300 628 873
E info@bushheritage.org.au
W www.bushheritage.org.au

Follow Bush Heritage on:



↑ Bush Heritage CEO Heather Campbell on Oura Oura Reserve, Tas. Photo by Chris Crerar



2
Feral focus



6
In the field



8
Burning the right way



10
Battle for the bite sized

“Humans are capable of bringing about positive change on a large scale when we collaborate and open ourselves up to new or different ways of thinking.”



In January, I visited my first Bush Heritage reserve. As chance would have it, the reserve was Oura Oura in Tasmania, Bob Brown’s former home and the land upon which Bush Heritage was founded in 1991 when a group of friends banded together to save two bush properties from wood chipping.

Standing there in January amidst towering Stringybark Gums, with Drys Bluff rising 800 metres above me, I was struck by my own insignificance – that unique feeling you get when confronted with the vastness of the natural world. Bush Heritage’s founding story is proof, however, that despite our size, humans are capable of bringing about positive change on a large scale when we collaborate and open ourselves up to new or different ways of thinking. This edition of *bushtracks* is a celebration of those principles.

Our cover story looks at how we’re collaborating with our neighbours and other organisations in south-west Western Australia to implement the region’s first integrated feral predator control program. Australia has lost around 25 native mammals in the last 250 years, primarily due to feral cats and European Red Foxes, and there are many species in the south-west that could be added to that list if we don’t act now. We cannot hope to succeed in combatting this crisis if we don’t work together; in this highly fragmented landscape, there is little point in controlling feral cats on our reserves if our neighbours aren’t doing the same.

On Bon Bon Station Reserve in South Australia, we are taking a different approach. At 216,808 hectares,

this reserve is about 22 times bigger than our 10 Fitz-Stirling reserves and partnerships combined. We cannot eradicate cats and foxes from this vast landscape completely, so our aim instead is to suppress their numbers enough that species might be able to regain or maintain a presence there. It’s a step into unexplored scientific waters, but we have to give it a shot.

Also in this edition is the story of the Bunuba people, from the Kimberley region of Western Australia, who are combining their traditional knowledge with modern technologies to look after 650,000 hectares. Bush Heritage is proud to have been working with the Bunuba people since 2014. Partnerships such as this not only allow us to expand our conservation impact, they also allow us to learn from a culture with many millennia of experience.

Late last year, we formalised a new partnership that will see us supporting the management of Karajarri country, south of Broome. We hope to expand our partnership program further over the next 12 months, and as always your continued support is what will allow us to do that.



Heather Campbell
Chief Executive Officer

Feral focus

For the first time, Bush Heritage and its partners have the ability to simultaneously control feral cats and foxes in the south coast region of Western Australia. Our efforts will help native species to rebuild their populations.





← Bush Heritage ecologist Angela Sanders and Healthy Landscape Manager Simon Smale, with the Stirling Ranges in the background. Photo by William Marwick

In the Fitz-Stirling region of Western Australia, the sun beats down on a rack of sausages sweating in the sun.

Moist to begin with, these sausages become wetter and more pungent with the heat. The smell can turn even the strongest of human stomachs, but it's just the kind of delicacy that feral cats love.

"It's an awful smell," admits Bush Heritage ecologist Angela Sanders, "and the people who drop this bait out of planes need to have really strong stomachs."

The pungent delicacies are Eradicat baits, and they are ready to take centre stage in the first-ever integrated feral predator control program in the Fitz-Stirling region of south-west Western Australia. The baits contain a poison that most West Australian native animals have an evolved tolerance to because it occurs naturally in some endemic plants. This means they can be used to control feral cats with little risk of unintentionally harming native species.

Bush Heritage has joined forces with the WA Department of Biodiversity, Conservation and Attractions (DBCA), South Coast Natural Resource Management, Fitzgerald Biosphere Group, Noongar Traditional Owners and private landowners to plan a five-year program of integrated control on multiple tenures across 37,000 hectares.

The large project site is located in a 70 kilometre-long stretch of country between the Fitzgerald River and Stirling Range national parks, a fragmented landscape largely dedicated to livestock grazing, and grain and oilseed crops. With the planning complete, the groups are currently seeking the funding required to put the plan into action.

Feral cats are very efficient and intelligent killers. They'll sit and wait, whereas a fox will just be fairly opportunistic.

"A lot of it's been cleared for agriculture, but there are patches of remnant bushland left, so Bush Heritage has been slowly buying up properties and revegetating them with the long-term goal of reconnecting the two national parks," says Angela. "That enables the wildlife to move around, it helps to keep country healthy and it creates more habitat, which is significant because the wheatbelt region of WA has been absolutely devastated."



↑ A Splendid Fairy-wren. Photo by Ben Parkhurst



↑ A feral cat stalks a Malleefowl mound on Monjebup North Reserve.

→ A Honey Possum is released back into native bush. Photo by William Marwick

Many animals are now returning to these carefully revegetated areas, including Honey Possums, Pygmy Possums, Western Spiny-tailed Geckoes, Black-gloved Wallabies, Tammar Wallabies, Southern Emu Wrens, Malleefowl and a range of other birds.

However, these animals are threatened by Australia's most efficient killers, feral cats and European Red Foxes. Both predators have been on Bush Heritage's regional list of priority threats since 2004, but we have only been able to control foxes — until now.

“Feral cats are very efficient and intelligent killers. They'll sit and wait, whereas a fox will just be fairly opportunistic. The two of them together are just a diabolical combination and they're pushing a lot of our wildlife towards extinction,” says Angela.

“It hasn't been until the last few years really that we've had the ability to do an integrated program; we didn't have access to bait that was suitable for cats and you can't only control foxes because that could lead to an increase in the cat population. Now, for the very first time, we're able to control the cats and the foxes at the same time.”

DBCAs regional ecologist Sarah Comer says the Bush Heritage project builds on work by the Department and its Integrated Fauna Recovery Project. The project has involved the use of Eradicat alongside species monitoring in the Fitzgerald River and Cape Arid national parks since 2010. The monitoring data has highlighted the effectiveness of Eradicat in attracting and killing feral cats, and consequently increasing the numbers of Western Quolls, Malleefowl, Southern Scrub Robins and Dibblers, a carnivorous marsupial.

But to make a real impact in the region, the Department recognises the need to move beyond the borders of its parks and work with Bush Heritage and other stakeholders to manage cats in a coordinated way.

“This project is different in that it's a multi-stakeholder collaboration, and it will be the first time this sort of effort has been tried in WA,” says Sarah.

Bush Heritage is also benefitting from Sarah's PhD, which involves placing GPS collars on feral cats and examining their stomach contents to collect data on their diet, habitat use, movement and activity patterns, home range and genetics.

“Her very, very preliminary results are telling us that feral cats seem to travel along river and creek corridors, tracks and fence lines, so likely that's where we'll focus on putting out our bait,” says Angela.

“This bait will either be thrown out of a plane (by DBCA) or out of a vehicle, and it will be put out in a fairly high density compared to how fox baits used to be distributed.”

Bush Heritage will also carry out pre- and post-baiting monitoring of native species and feral cats to assess the effectiveness of the integrated control program. And the newly opened Michael Tichbon Field Station (p. 6) on our Red Moort Reserve will support this work.

“It's a really exciting project because we know the results of cat and fox baiting in the national parks, and if we can duplicate that in the area we're working in, it'll be very good news for the native wildlife we protect,” says Angela. ●



“It's a really exciting project because we know the results of cat and fox baiting in the national parks, and if we can duplicate that in the area we're working in, it'll be very good news for the native wildlife we protect.”



In the field

The recent opening of the Michael Tichbon Field Station heralds a new era for Bush Heritage's conservation work in the species-rich Fitz-Stirling region of the south-west.

For more than a decade, Bush Heritage ecologist Angela Sanders had two choices after a long day of monitoring work in the Fitz-Stirling region of south-west Western Australia. She could either cosy up with the mozzies in a tent or old caravan, or drive 1.5 hours home to Albany.

“When we just had a couple of days' work to do, it really wasn't worth putting a tent up for one night, so we used to do a lot of day trips. But then three hours of the day was spent traveling and you got less done,” she says.

But Bush Heritage's newly-opened Michael Tichbon Field Station is transforming the way Angela and other Bush Heritage ecologists, researchers, volunteers and partners work by enabling them to stay out in the field longer.

“Now, we can really get some serious work done, and we've already been able to attract a lot of volunteers,” says Angela.

In December 2018, Bush Heritage opened the Michael Tichbon Field Station on Red Moort Reserve, 130 kilometres by road north-east of Albany. Named after one of its key benefactors, the field station is located at the heart of 10,000 hectares that Bush Heritage owns or manages between the Fitzgerald River and Stirling Range national parks.

The field station includes seven individual bedrooms and a four-bed dormitory, a kitchen, hot showers, a workroom with internet, a meeting space and plans for a wet lab. Solar panels and batteries, composting toilets, and a rainwater collection and reticulation system make the station entirely self-sufficient.

Most importantly, the purpose-built research hub heralds a new era for conservation and community engagement in this biodiverse and fragmented region.

“This south-west corner of Australia is a global biodiversity hotspot, which makes it important not just for Australia but for the world,” says Simon Smale, Bush Heritage's Healthy Landscape Manager for the area.



↑ The Michael Tichbon Field Station on Red Moort Reserve, WA. Photo by Lee Griffith

“It's astonishingly diverse, which is a consequence of it being such an ancient part of the Earth's surface. There's been no glaciation, no major volcanic activity, no earthquakes that have turned this landscape upside down, so evolution's just been ticking over uninterrupted for millions of years,” he says.

“But it's under threat now, and humans have made a bit of a mess of it in our haste to develop farming and other enterprises here.”

Bush Heritage's vision is to reconnect this highly fragmented area, and Angela's monitoring work is already highlighting the success of our progress to date. In 2018, her surveys picked up Malleefowl, Pygmy Possums, Honey Possums, Black-gloved Wallabies and many different bird species in the restored areas.

Thanks to the field station, Bush Heritage can now build on the success of this restoration work, supporting new endeavours such as an integrated feral predator control project (p. 2), and attracting new collaborators and partners.

Simon says the WA Department of Parks and Wildlife has already booked the station for its annual workshop on threatened invertebrates and several PhD students from the University of WA's Albany campus have approached him about using the station for thesis work.

“The station is a tangible marker of our long-term commitment to this landscape and community. We've effectively been absentee landowners until now, but the field station affords us a much stronger presence,” he says.

“We're also really keen now to start looking at our next reserve acquisition and getting on with the large-scale ecological restoration work that's at the heart of what we're doing here.” ●

Bush Heritage gratefully acknowledges financial contributions from Michael Tichbon, Lotterywest, Middlesex Conservation Farming Club Inc. and Bush Heritage donors toward the construction of the Michael Tichbon Field Station. The 1042-hectare Red Moort Reserve, on which the field station is built, was purchased in 2014 with support from Beth, Phill and Rosalie Schultz.

An aerial photograph of a river valley in Western Australia. The river flows through a valley with green vegetation on the banks. In the background, there are rolling hills and mountains, with several plumes of white smoke rising from the landscape, indicating a controlled burn. The sky is blue with some light clouds.

Burning the right way

On Bunuba country, in the central Kimberley region of Western Australia, Aboriginal rangers are combining Western technologies with their traditional knowledge to keep a millenia-old tradition alive.

← Burning along the banks of Bandaral Ngarri (the Fitzroy River) on Bunuba country. Photo by Richard Geddes

When the northern monsoons have made their way across the Kimberley and the goannas start to get fat, the Bunuba rangers wait for a bright yellow flower to appear on sandy river banks.

The Gilini plant (*Sesbania cannabina*) heralds the start of a season known to the Bunuba people as *Girinybali*. In *Girinybali*, water abounds. Country is active and alive. Plump *Bambarri* (freshwater mussels) are plentiful and the mighty *Balga* (Barramundi) start their annual migration upstream to permanent waters.

But the flowering of Gilini is more than an indicator of seasonal change.

For thousands of years, Bunuba people have dried the stems of Gilini to make *gunggali* (traditional fire sticks), which they use to burn patches of their country in *Girinybali*.

They call this process ‘right-way *winthali* (fire)’.

“Right-way fire is what people have been doing for years,” explains Bunuba Ranger Kendrick ‘Kendo’ Chungal. “It’s important to burn to get rid of the old grasses and rejuvenate for new growth. The fire helps keep the country healthy.”

Right-way *winthali*’s role in maintaining healthy wildlife and plants is enshrined in a new 10-year plan developed by Bunuba people, in partnership with Bush Heritage. The *Jalangurru Muwayi* (Healthy Country) Plan 2018-2028 identifies the implementation of right-way *winthali* as a key strategy for maintaining or improving the health of four out of the plan’s eight key targets.

“The plan will guide us to get things done on country, and protect and care for our country through the Western side and our ancient knowledge,” says Bunuba Ranger Monique Middleton.

“The Healthy Country Plan will let people know when it is the right time to let it burn, and when is not the right time,” adds Kendo. The goal of right-way *winthali* is to create a patchwork mosaic of burnt and long-unburnt areas across the landscape, thus ensuring diversity of habitat for animals and plants.

Matches, drip torches, helicopters and traditional burning methods are all used to create this mosaic effect. High resolution images and mapping from Sentinel satellites allow rangers to identify patches of country that have previously been burnt and other areas that need to be protected from fire.

“It’s important to burn to get rid of the old grasses and rejuvenate for new growth. The fire helps keep the country healthy.”

“We look at the fire history over at least 10 years and we really want to try and protect some of the areas that haven’t burnt for three years or more,” explains Bush Heritage’s National Fire Program Manager, Richard Geddes, who works closely with the Bunuba rangers to plan and implement burns on their country.

“We want to protect the fire-sensitive areas like rainforest patches, sandstone heaths and spinifex, so we’ll burn small breaks around them to try and stop the large bushfires from spreading into those areas later in the year.

“Long unburnt spinifex is a really critical food source for threatened Gouldian Finches and other granivorous (seed-eating) birds, so that’s another area we try to identify and protect.”

By creating regular and welcome opportunities for Bunuba people to go out on and care for their country, often for the first time in many decades, it is clear that the benefits of right-way *winthali* far surpass simply the ecological. For the first time, female Bunuba rangers like Monique are undertaking the fire training required for them to take part in fire work, while a new Healthy Country Camp focussing on fire is in the planning phase.

“It’ll be a great improvement this year to have more female rangers on the ground and working on fire,” says Richard. “We’re planning to do a fire camp so we’ll hopefully get some older Traditional Owners out with some of the younger generations and they can show them how to use the fire sticks.”

The rangers, who are leading these plans, couldn’t be happier.

“I like that I get to go places, places that you’ve never been before,” says Kendo.

“Going out on country, it’s healing,” agrees Monique. ●

Battle for the bite sized

Restoration efforts on Bon Bon Station Reserve are allowing native animal populations to recover and laying the groundwork for the return of species not currently present in the region.

Bon Bon Station Reserve is painted from a rich palette. Bold strokes of red-soiled Bluebush shrubland, chalky-green Mulga and black-trunked Desert Oak blend northward to shimmering buckshot plains.

But while it may be rich in colour, Bon Bon – like much of arid Australia – is not as rich in species as it should be. The reserve’s small mammals, birds and reptiles have all suffered from the arrival of European Red Foxes and feral cats.

“I have seen this devastation first hand,” says Kate Taylor, Project Officer at Bon Bon.

She lists the animals she has found in the stomachs of feral cats: skinks, Knob-tailed Geckos, frogs, small snakes, native mice, rabbits, centipedes, crickets, grasshoppers and small mammals like the Kultarr.

“Anything small and bite sized is on the menu.”

One of Bush Heritage Australia’s long-term goals for Bon Bon is to reintroduce species that were once

widespread across the region, such as the Bilby and Burrowing Bettong. The last of the mainland subspecies (two other subspecies persist on islands off the West Australian coast) of the Burrowing Bettong disappeared from South Australia’s deserts in the late 1950s, their extinction largely due to predation by cats and foxes.

For the past two years, Kate and her husband Clint, who manages Bon Bon Reserve, have been intensively controlling foxes and cats through hand-baiting, shooting and trapping within a ‘core’ area of the reserve. Cats and foxes are also controlled on the reserve outside of the core area, but less intensively. The aim is not to rid the entire reserve of cats and foxes; rather, we’re trying to lower their density so that native species numbers can naturally regenerate.

Each year, a team of Bush Heritage staff and volunteers traps small mammals and reptiles at 18 sites across the reserve, half of these inside the core area and half outside. Comparing the numbers and types of animals trapped within and outside of the core area allows Kate to assess the conservation benefit of the intensive predator control program.


Over the five day trapping period, three teams of people monitor 108 pitfall traps, which are 60 cm-deep buckets dug into and level with the ground, with a long, low mesh fence radiating out from the bucket to ‘guide’ animals into the trap. Even with three teams of people, the pitfall trapping can be challenging and tiring.

Each team must traverse the 216,808 hectare reserve (roughly the size of the ACT) twice a day; once at



← A Burrowing Bettong at Arid Recovery. Photo by Kate Taylor

→ A Painted Dragon trapped during monitoring on Bon Bon Station Reserve. Photo by Carly Earl/The Guardian

A close-up photograph of a person's hand holding a small, blue lizard. The person is wearing a gold watch and a white shirt. The background is a blurred, reddish-brown landscape, likely a desert or savanna. The person is wearing blue jeans and is kneeling on the ground. The lizard is small and has a blue body with yellow spots. The person's hand is gently holding the lizard, and the lizard is looking towards the camera. The overall scene is brightly lit, suggesting a sunny day.

“Three teams of people monitor 108 pitfall traps, which are 60 cm-deep buckets dug into and level with the ground, with a long, low mesh fence radiating out from the bucket to ‘guide’ animals into the trap.”

↓ Bush Heritage Project Officer Kate Taylor checks a pitfall trap. Photo by Carly Earl/The Guardian

dawn to check the traps for nocturnal animals, and then again in the late afternoon to check for diurnal (non-nocturnal) animals. When an animal is found, it is generally taken back to the homestead so it can be measured and the data recorded, before being returned to the capture site.

“We have three to four volunteers on each team, so we really couldn’t do these trapping events without their help,” says Kate.

During the 2018 trapping period, the team captured 176 animals comprising 35 species, including the first Giles’ Planigale recorded at Bon Bon. With the largest males weighing in at 16 grams, Giles’ Planigale is one of Australia’s smallest carnivorous marsupials. Other species of note included a Spinifex Hopping-mouse, Burton’s Legless Lizard and Painted Dragon. Kate acknowledges that it’s early days for the predator control program and no definite conclusions can yet be drawn about the recovery trajectory of small mammals like the Kultarr. But she is optimistic that it is having a positive effect.

During the 2018 trapping period, the team captured 176 animals comprising 35 species, including the first Giles’ Planigale recorded at Bon Bon.

As she travels around the reserve, she is noticing increasing numbers of many small animals that cats and foxes are known to prey on, including juvenile Sand Goannas and Bearded Dragons, Emu chicks, and ground-dwelling birds such as quails and the rare Australian Bustard.

“Sightings like those give us hope that, yes, our control work is definitely having an impact,” she says. ●

This project is supported by Arid Recovery, the NESP Threatened Species Recovery Hub, the Ian Potter Foundation, the Besen Family Foundation and the Letcombe Trust.



Parting shot

My happy place

Will Hansen

Charles Darwin Reserve Manager

📍 @WillHansenBHA



Whenever I get the chance, I walk into the bush at the southern end of Charles Darwin Reserve, on Badimaya country, to see a particular Gimlet Gum (*Eucalyptus salubris*). She is an ancient thing – much older and larger than any other Gimlets in the area. When I look at her, I often find myself thinking about the things this old tree must have seen. For hundreds of years, it has been providing life-giving habitat, food and shade for countless species, and playing its role in the complex nutrient cycle of this fascinating eucalyptus woodland ecosystem of the mid-west.

It's also interesting to think about why this one tree is so much older than the surrounding Gimlet forest. Was it the sole survivor of a major disturbance, such as a fire or a storm? Can it be thanked for supplying seed from which the surrounding, younger Gimlets have since germinated? If so, that would make this beauty all the more special.

Conserving these ancient landscapes in perpetuity is at the heart of why Bush Heritage exists. If lost, landscapes like this would take hundreds of years to rebuild at best, and it's possible we could never recreate the complex dynamics that underpin their ecosystems. ●



“When I look at her, I often find myself thinking about the things this old tree must have seen. For hundreds of years, it has been providing life-giving habitat, food and shade for countless species.”

Bush Heritage is a national not-for-profit organisation.

Our work relies on the support of generous and passionate people like you.

Please tear off and return this coupon to:

Bush Heritage Australia

Reply Paid 329

Flinders Lane VIC 8009

You can also donate online at:
bushheritage.org.au/donate

DM AUTUMN2019 bushtracks

Yes, I will draw the line here to protect Australia's native species before it's too late.

Title First name Last name

Address State Postcode

Email Phone Date of birth /


I will give \$ via: Cheque/money order (enclosed) Visa MasterCard AMEX Diners

Card no. Expiry Date

Cardholder's name Signature

Please send me information about including a gift to Bush Heritage in my will.

All donations of \$2 or more are tax-deductible.

An aerial photograph of a red desert landscape. The ground is a vibrant red-orange color, dotted with small, green, scrubby bushes. A long, dark, thin object, possibly a log or a branch, lies on the ground, running diagonally across the frame. Two people are walking along a path that follows this object. The person in the foreground is wearing a dark jacket and a hat, while the person further back is wearing a pink and black jacket and a white hat. The scene is brightly lit, casting long shadows from the bushes and the people.

Where will you draw
the line when it comes
to protecting Australia's
native species?

Thank you

**Bush Heritage gratefully acknowledges the
estates of Wendy Scanlon and Margaret
Elizabeth Garner.**

**Thank you, also, to the many other people
who support our work. Together, we are
returning the bush to good health.**

*Did you enjoy this edition of bushtracks?
Pass it on.*

