



KIMBERLEY EXPEDITION

Rich and rare

Returning to the Kimberley for the AG Society 2012 scientific expedition meant excitement in the form of discovering a species thought to be locally extinct and dipping frogs in fluoro paint.

STORY BY NATSUMI PENBERTHY

IT'S JUST PAST 9pm and I'm perched on a rock in the humid warmth of fern-fringed El Questro Gorge, listening to sandshoes slosh through water and watching seven head torches bobbing brightly ahead. I catch up with the others, and, as our group clambers on, Simon Clulow – a lanky University of Newcastle amphibian ecologist who's been gathering population, diet and life-cycle data on magnificent tree frogs – turns on a UV light, sweeps it across a rock wall, and reveals lines of glowing pink, orange and purple markings.

"You have to see the shake-and-bake frogs," Di Hardiman, a cheerful retired schoolteacher from Copacabana, NSW, had said to me earlier, taking out her camera and bringing up pictures of frogs daubed in fluoro colours. "Simon puts them in little plastic baggies, shakes them and voilà – fluoro frogs." These frogs are released, and leave the non-toxic dye on the rock walls as they go, creating disco-bright luminescent data trails.

After an hour's trek into the gorge, we're literally in the heart of the red-gold escarpments and waterfall-studded cliffs of the east Kimberley, about 85km south-west of Kununurra, WA. Fluoro frogs are probably the last thing you'd expect to see in this remote, big-sky country, where 10 scientists

This tiny woodworker frog was found near Emma Gorge. These amphibians, 4–6cm long when fully grown, breed in spring and summer, laying 350–400 eggs in foam nests in rock pools.



and 12 volunteers are camping on the AG Society's 11th scientific expedition. It's the second year in a row the Society's scientists and volunteers have come early in the dry season to the east Kimberley's El Questro Wilderness Park (see AG 105). They're collecting population and behavioural data on lizards, frogs and turtles – and this year, on crocs and rare possums – with the aim of understanding ecological changes as toxic cane toads begin to spread through the region.

DESPITE FIERCE competition from the fluoro frogs, the award for generating the most excitement in camp goes to head scientist and invasive species ecologist Dr Sean Doody. Sean's on a quest to find the scaly-tailed possum, which, until last year, hadn't been seen in the east Kimberley since 1917. He knows it's here, because one was snapped by a remote camera trap at Emma Gorge last year. Now, the hunt is on for a

Late March rains...transported cane toads about halfway through the park to the doorstep of Emma Gorge.

live specimen and a DNA sample. If one's found, it will extend the species' known range 300km eastwards. But, more importantly, with only possum-hostile savannah between Emma Gorge and the scaly-tailed's closest identified habitat, 270km north-west at the Mitchell Plateau, there's a real possibility that this is a distinct species.

On day eight of the expedition, Simon and turtle expert Dr Christina Castellano hurtle back into camp buzzing with excitement. They've just emptied the traps in Emma Gorge and hit gold – a rare possum with a hairless, scaly tail. Amid the ensuing brouhaha, AUSTRALIAN GEOGRAPHIC editor Ian Connellan says in all his years with the journal, he's never seen anything

like it. "The joke was always that we'd find a new mammal on one of these trips," he says. And perhaps we had.

A small piece of ear skin is taken for a DNA sample, to be sent to mammal geneticist Dr Sally Potter at the Australian Museum, Sydney. Another five possums turn up over the next eight days, each creating a ruckus, until we eventually pat ourselves on the back, concluding that Emma Gorge boasts a healthy population of the marsupial.

LATE MARCH rains have created a lush mantle of foliage over El Questro's normally dusty grandeur, but the water also transported cane toads about halfway through the park to the doorstep

While creating an AG documentary, filmmaker Clark Carter (left) and ornithologist Simon Cherriman looked for pretty scenes like this fading sunset at Saddleback Ridge, and recorded the hubbub generated by the discovery of a scaly-tailed possum (below), not seen in the region since 1917.



of Emma Gorge. Wilderness park manager 'Micko' Bass and some of his rangers have been trying to stop the toads from breeding inside the gorge. They've been nabbing them along the 2km-long toad-resistant fence at the gorge mouth, which was built by Kim Hands of the Stop the Toad Foundation and her volunteers.

Sean says that for the AG Society's scientists, the fence has also become "probably the largest biodiversity trap line in Australia". As well as slowing the toads' passage, the fence directs thumb-sized marsupial planigales, a variety of legless and other lizards, and numerous snakes and frogs into pit and funnel traps. These are cleared daily in the cool of the morning, with expedition volunteers working alongside Kim, and also Steve Wilson of the Queensland Museum, Mike Swan of the Healesville Sanctuary in Victoria, and Geoff Kay of the Australian National University, Canberra. The fence might even become part of

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Stop the Toad's Kim Hands (above) takes eager volunteers (centre) through the process of recording wildlife at the Emma Gorge fence. Later, some of the 'volliers', such as Anna-Marie Gervas (left), rock-hop into El Questro Gorge to admire the colourful fluorescent trails left by magnificent tree frogs.

JOIN THE AG SOCIETY IN THE KIMBERLEY

Location: El Questro Wilderness Park, 85km south-west of Kununurra, WA.

Duration: We will be returning to the east Kimberley from mid April to early May 2013, and taking two separate groups of volunteers. Each group will participate in six days of field work. You may wish to stay on afterwards; talk to El Questro about bookings.

Cost: \$2700 pp. There may be some negotiation on price if you can provide support in the form of a five-seat 4WD. Cost includes accommodation and food.

Register your interest: Download the

volunteer registration form at www.australiangeographic.com.au/society and return it ASAP. You will be contacted shortly after this is done. Half of the fee is due by 5 November 2012, and the remainder by 15 March 2013.

Travel: Ground transport is provided from Kununurra to El Questro and throughout the expedition; however, volunteers will need to organise their own transport to and from Kununurra.

For more information: 02 9263 9825 or society@ausgeo.com.au. For more details on El Questro, go to www.elquestro.com.au/station.

Serene starscape. The Australian Geographic Society's 2013 Kimberley expeditioners can expect to enjoy the same kind of remote majesty captured in this image of star trails over the boab trees.

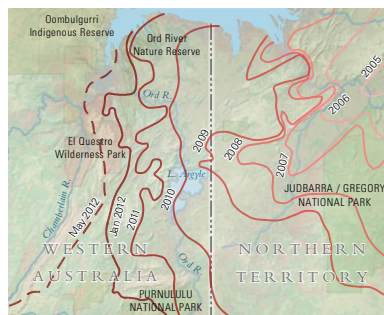


Jochen Schlenker / Getty / BOAB: Adansonia digitata



With the help of a volunteer, Dr Christina Castellano measures a sandstone snake-necked turtle, which could increase in number if local predators are affected by the cane toads.

Cane toads (below) are moving into the Kimberley, one of the last pristine reptile ecosystems in the world, and Dr Sean Doody is measuring their impact on biodiversity near Emma Gorge, with the help of ecologists such as the Queensland Museum's Steve Wilson (bottom).



CANE TOADS ARE ON THE MOVE

In the mid-'90s cane toads travelled west across Australia at about 30km a year. Now, bigger, stronger toads are colonising west at a rate of 50km annually. Each year the front (left) is mapped by WA's Department of Environment and Conservation.



The fence might even become part of the region's ecotourism circuit, as it will allow visitors to see wildlife up close.

the local ecotourism circuit, as it will allow visitors to see wildlife up close that's normally very difficult to spot.

This year, El Questro rangers and AG Society volunteers also find a number of turtles outside the Emma Gorge fence – a bonus addition to the turtles found by Christina Castellano's snorkelling volunteers in the clear, cool waters of the region's five most accessible gorges. "It indicates that the water sources outside the gorge aren't abundant enough in the dry season, and wildlife are heading into the gorges for refuge," says Christina, who has been working with turtles for the past 15 years. "We've also discovered that they're moving more at night, which

we didn't realise before. You learn something new every day here."

LOOKING CONTENT with his lot, Dave Rhind, who's collecting data for his PhD at Monash University, stands atop a dusty four-wheel-drive brandishing a blue antenna on day 15 of the trip. Dave's after monitor lizards: the yellow-spotted and Mertens' water varieties. "They're in decline across the Top End, which is attributed to cane toads, but they're also in similar habitats along riverine areas along the floodplains," says Dave, who's been in the Kimberley for three weeks by the time we get there and has the look of someone who's happier

outdoors. "I'll look at their [body shape] and ecology and see how they interact when the toads arrive."

He's hoping to come back to track and collect data each year for another four or five, but, he tells me, the shape of his thesis will all depend on whether there are enough animals left to finish his data set once the toads become established. For now, volunteers jump out of our expedition vehicles each day wearing saucer-sized grins. Tracking 20 monitors, each with home ranges of up to 500ha, has them straddling roof racks, trekking across untrammelled savannah and wading through creeks, directed by a bleeping antenna and a moving target. "It's better than the Leyland brothers," declares business consultant Sheralyn Simmony, hopping bright-eyed from one of the Pajeros.

IT'S STILL HOT IN the east Kimberley in April and May. Most days are over 30°C, and it's sweaty ▶



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The **yellow-spotted** monitor sits at the apex of the Kimberley ecosystem, but Dave Rhind (top) worries that 4–5 years after the cane toads arrive, there may not be many monitors left to track.

and energy sapping. Volunteers and scientists head out early and late if possible to work in the cool shadows either side of the night.

But Kimberley wildlife itself loves the heat, and the scientists' boundless excitement at finding something that has ventured out is infectious. Volunteers are quick to catch the bug despite the heat, and we spend the hot middays chatting and fixing traps, and wash off the sweat by splashing in the Pentecost River, just east of camp.

On day 17 the volunteers and scientists gather at Saddleback Ridge Lookout to gaze out at a hot pink sunset, its colour boosted by smoke curling from bright lines of back-burning in the distance. Six days of working together in the outdoors and sleeping side by side in generous two-person tents has lent the group an easy familiarity. We lean shoulder to shoulder against the rail and gaze across the vast 4050sq.km park, casually throwing out scientific names of animals we've met and soaking up the rhythm of the vast place laid out in front of us. **AG**



GALAPAGOS ISLANDS

WHO: Peregrine Adventures
COST: 10 days from \$5125 pp twin share **BOOKINGS:** 1300 854 445
peregrineadventures.com/ausgeo

Join AG editor and AG Society trustee Ian Connellan on a once-in-a-lifetime visit to one of the world's great natural wonders. On the Galapagos archipelago you'll walk amid marine iguanas and giant tortoises; snorkel with sea lions, turtles and a dazzling array of fish; and visit seabird rookeries teeming with life. Call now to secure a Galapagos berth!



DATE:
26 Nov–
5 Dec
2012

HEARD ISLAND EXPEDITION

WHO: Heritage Expeditions **COST:** 25 days from \$15,500 pp **BOOKINGS:** 1800 143 585
info@heritage-expeditions.com

STOP PRESS! We're delighted to announce former Australian National Antarctic Research Expeditions medical officer and explorer Dr Grahame Budd, and award-winning filmmaker Michael Dillon will be the AG Society hosts on this trip. This is the chance of a lifetime to travel with these extraordinary men.

On this expedition, you'll see Big Ben, Australia's highest mountain and only active volcano, on one of the most remote islands in the world. This snowy monolith is more than 500m higher than Mt Kosciuszko, and stands on the pristine and isolated Heard Island. The volcano shares the island with Antarctic fur seals, southern elephant seals and king, gentoo and rockhopper penguins. A percentage of profits go to the AG Society and all society members receive a 5 per cent discount when booking.

DATE:
8 Nov–
2 Dec
2012



DATE:
5–8
April
2013

BAY OF FIRES LODGE WALK

WHO: Bay of Fires Lodge Walk
COST: \$2125 pp **BOOKINGS:** 03 6392 2211
bookings@cradlehuts.com.au

Walk along pristine Tasmanian beaches, enjoy magnificent coastline colours, and spot native wildlife on this four-day Bay of Fires experience. Hosted by AG Society trustee Jo Runciman, you'll taste fine Tasmanian wine and food, and visit the secluded beaches and caves towards Eddystone Point Lighthouse.



DATE:
20–27
January
2013

PNG NUAKATA ISLAND ADVENTURE

WHO: Explore PNG and the AG Society **COST:** \$1850 pp plus airfares
BOOKINGS: hello@explorepng.com

Join AG Society chairman Gregg Haythorpe and Explore PNG on a community expedition to Nuakata Island. The island is known as the jewel of Milne Bay and for its fantastic dive sites, fishing,

snorkelling and pristine beaches. Stay in spacious, locally made bungalows built over the water and experience island life. Guides are available for bush walks, dugout canoe trips and craft workshops.