

Captive breeding success

# Island life for WA's dibblers

A breeding program at Perth Zoo will result in the release of 150 tiny carnivorous marsupials onto Gunton Island in the Recherche Archipelago.

**I**N OCTOBER 2015, 29 dibblers were released onto an island in south-west Western Australia by the Perth Zoo and the WA Department of Parks and Wildlife. These small carnivorous marsupials were reintroduced onto 95ha Gunton Island in the Recherche Archipelago, near Esperance, in an effort to add to a list of five other established populations in the state. The plan is to release another 100 dibblers on Gunton in the next two years.

They were once common in coastal heath and “widespread from Shark Bay right around to the Eyre Peninsula in South Australia”, says the zoo’s Dr Peter Mawson. “They are very engaging little animals, quick in their movements.”

Sightings became rare in the early 1900s, and the species was thought to be extinct until 1967 when a photographer discovered some east of Albany. A population was subsequently found at Fitzgerald River National Park. The zoo established a captive breeding program and reintroduced dibblers to Boullanger, Whitlock and Escape islands near Jurien Bay, and Peniup on the mainland.

It’s important, however, they establish more populations, says Peter. A 30–40 per cent drop in rainfall since 1970 has meant more bushfires. On top of this, male dibblers only survive a single breeding season, while females live 2–3 years and produce one litter a year, meaning that if they don’t breed even for a single year, the population can be in a perilous position. “It’s a high-stakes strategy,” Peter says.

Plans are also afoot for populations at Waychinicup NP, Whiteman Park near Perth and 63,000ha Dirk Hartog Island. “To put a population on an island of that size would be really something,” says Peter, adding that one day they will be returned to South Australia too.



**Cathy Lambert**, supervisor of the native species breeding program at Perth Zoo, prepares to release dibblers at Waychinicup NP (above), while Department of Parks and Wildlife staff release them at Gunton Island (above left). The department’s conservation officer Emma Massenbauer (right) is happy to be setting this dabbler free.





EARLY 2016

Event

**Kaninjaku: Stories from the Canning Stock Route**

This new exhibit at the National Museum in Canberra includes highlights of the successful 2010 exhibition *Yiwarra Kuju: The Canning Stock Route* and adds another 17 pieces of work from the collections that have not been displayed publicly before. ‘Kaninjaku’ means Canning Stock Route – a track that was created across Aboriginal lands in outback WA as mining and pastoral leases expanded. The artworks – such as *Nyilnigil* (below) – tell the story of the track from the Aboriginal perspective, which the museum notes is “a story of contact with kartiya (white people), of conflict and survival, of exodus and return. Above all, it is a story of family, culture and country”.

**When and where:** At the National Museum of Australia until August 2016.

**More info:** [www.nma.gov.au](http://www.nma.gov.au)

**NYILNIGIL**

This painting by Nyangkarni Penny K-Lyons shows Nyilnigil, a ‘big water’ in her homeland in the jila country, surrounded by white gum trees. She was one of the last desert people to leave her country, travelling north to the Fitzroy Valley, in the Kimberley, WA.

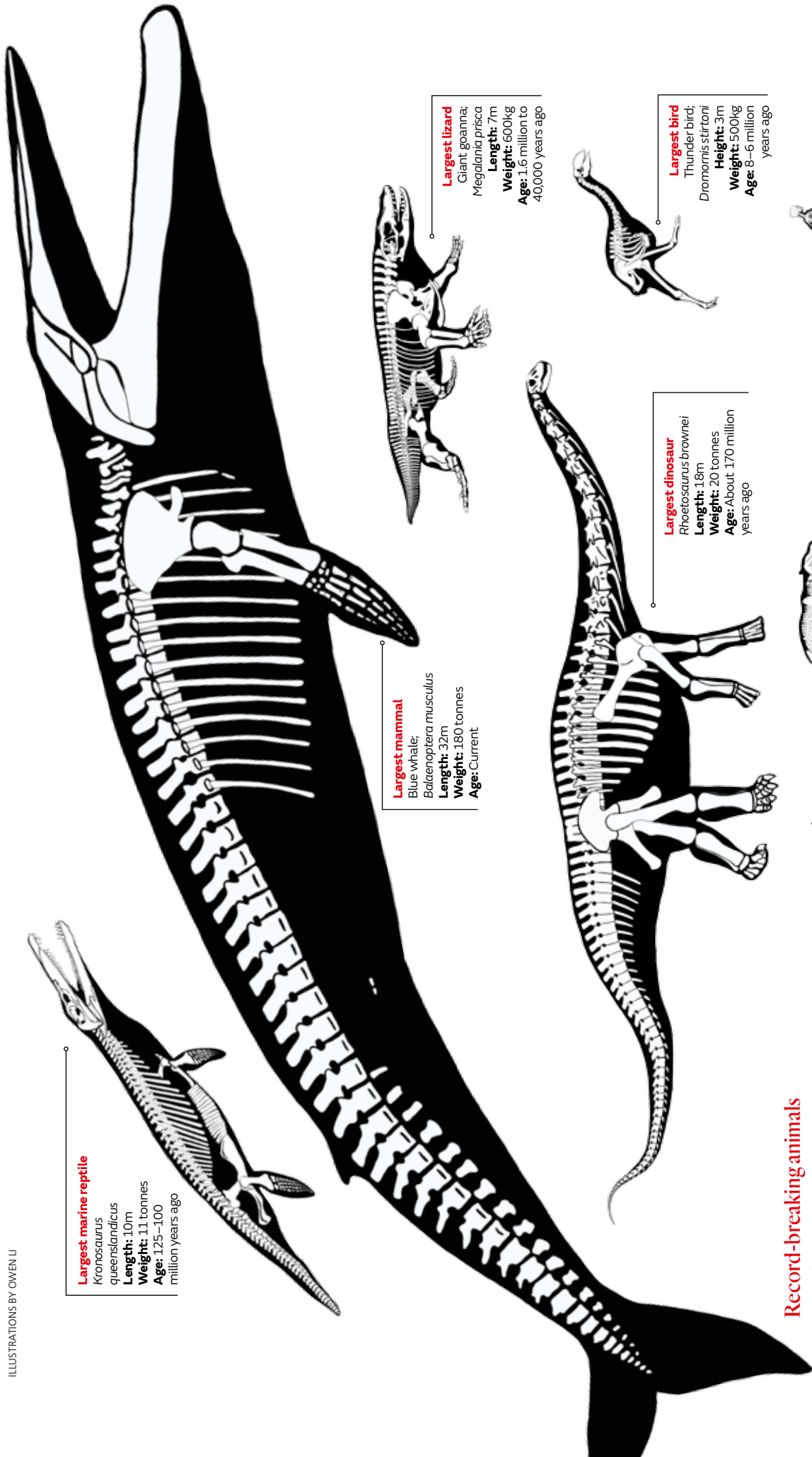


*Nyilnigil* by Penny K-Lyons



**Dibblers are feisty** little animals of about 70–120g that are generally solitary in their habits. Mating is typically a brief and rough affair that can result in injury for one or both partners. With luck, the female will produce a litter of up to eight young (above). At Perth Zoo dibblers get treats of pine cones hiding tasty mealworms and nectar-laden flowers (top row). The zoo has 8–12 pairs which produce 50–90 young a year.

NYANGKARNI PENNY K-LYONS, MANGKAJA ARTS



**Largest marine reptile**

*Kronosaurus queenslandicus*  
 Length: 10m  
 Weight: 11 tonnes  
 Age: 125–100 million years ago

**Largest mammal**

Blue whale;  
*Balaenoptera musculus*  
 Length: 32m  
 Weight: 180 tonnes  
 Age: Current

**Largest lizard**

Giant goanna;  
*Megalania prisca*  
 Length: 7m  
 Weight: 600kg  
 Age: 1.6 million to 40,000 years ago

**Largest dinosaur**

*Rhoetosaurus browniei*  
 Length: 18m  
 Weight: 20 tonnes  
 Age: About 170 million years ago

**Largest bird**

Thunder bird;  
*Dromornis stirtoni*  
 Height: 3m  
 Weight: 500kg  
 Age: 8–6 million years ago

**Largest marsupial**

*Diprotodon optatum*  
 Length: 3.8m  
 Weight: 2.8 tonnes  
 Age: 1.6 million to 40,000 years ago

**Largest marsupial carnivore**

Marsupial lion;  
*Thylacoleo carnifex*  
 Length: 1.5m  
 Weight: 90–160kg  
 Age: 1.6 million to 40,000 years ago

**For comparison**

Human; *Homo sapiens*  
 Height: 1.7m  
 Weight: 70kg  
 Age: Current

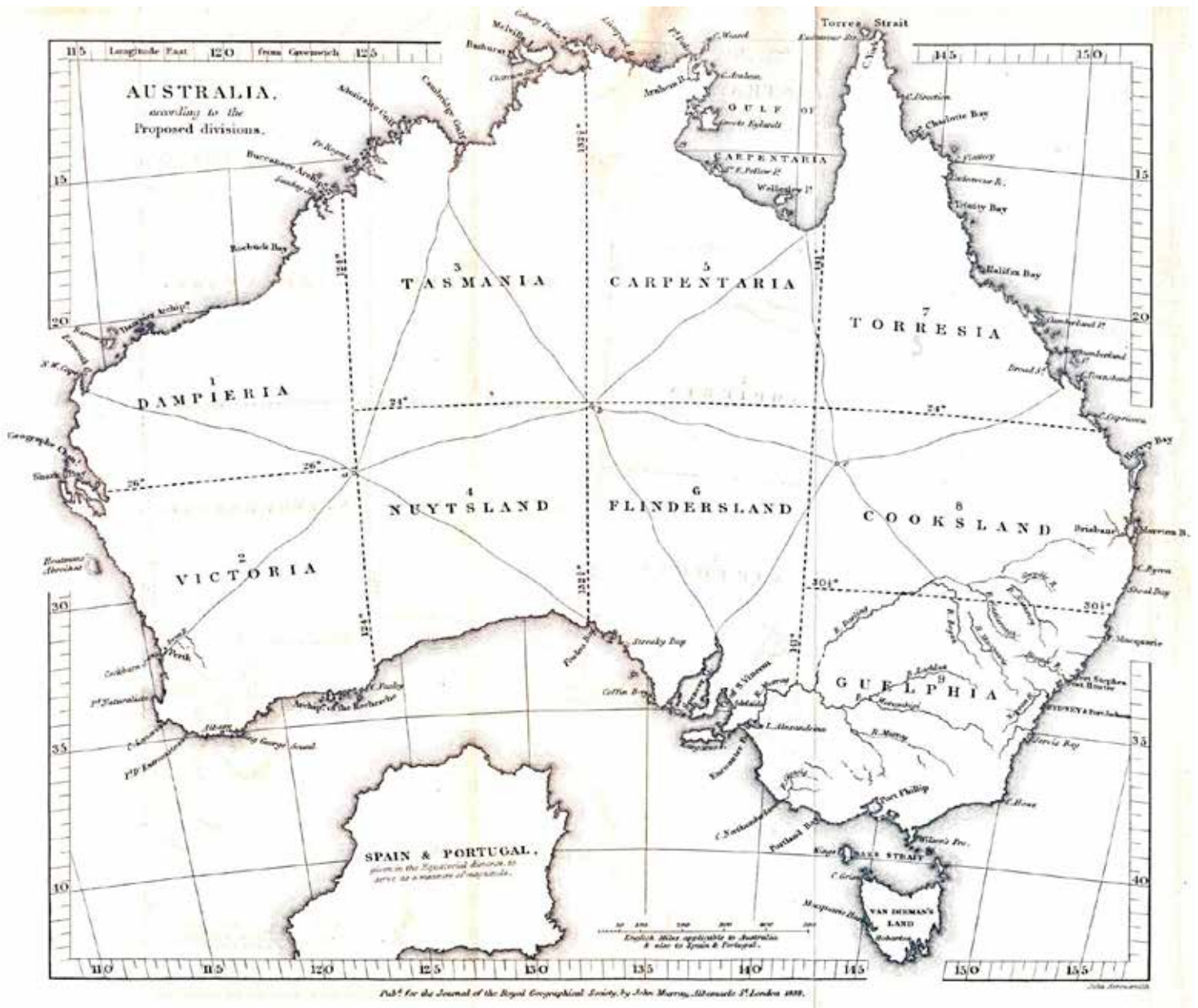
**Record-breaking animals**

# Titans Down Under

Here's our rundown of Australia's largest ever animals.

ASIDE FROM THE blue whale, which is thought to be the largest animal that has ever lived, many of today's creatures are mere pygmies compared with what came before them in Earth's prehistoric past. Australia's first human inhabitants would have come face to face with some, such as *Diprotodon*, *Megalania* and *Thylacoleo*.





### Evolution of the Commonwealth

# Failed states

Had these proposed colonies been created, Australia would look very different today.

**T**HE DIVISION OF Australia went through a long evolution from 1770, when the eastern half was claimed for Britain as New South Wales, through to 1927, when the Northern Territory was split into North Australia and Central Australia, only to be reunited again in 1931. No states have been added since federation in 1901. New Zealand was once part of NSW, and there were proposals for it to become a state, most recently prior to the creation of the Commonwealth.

This map shows a proposal for the subdivision of Australia that was published in the *Journal of the Royal Geographical Society of London* in 1838. 'Tasmania' and 'Victoria' here are unrelated to the modern states with those names. This plan would have split the continent purely on geometric grounds, and the proposal never came to pass. Shortly afterwards in 1851 Victoria was proclaimed, followed by Queensland in 1859. Van Diemen's Land was renamed Tasmania in 1856.

Australian Geographic Society



**PLANT POWER**

A new project is recording the cultural value of plants.

THE SOUTH-WESTERN corner of Western Australia is one of the planet's most botanically diverse areas, but its flora is at risk. The region is a biodiversity hotspot, and has many endemic species threatened by human activities. Although the ecological importance of its flora is recognised in conservation efforts, the cultural value of the plants is often overlooked. To help protect the flora, AGS-supported expert Dr John Ryan, at Perth's Edith Cowan University, is aiming to increase appreciation for these plants by exploring their cultural significance.

"Scientific and cultural conservation go hand in hand," John says. "Plants are not only biological and genetic repositories, but also important catalysts for cultural production, personal inspiration and community identity. Supporting the cultural value of the plants can benefit the protection of actual, living plants."



**Clockwise from top left:** Wildflower tourists were one group John spoke to; WA Christmas tree; qualup bell; Stirling Range mountain flower.



John is developing an archive of audio and video clips that document the relationships people have with the plants. To date, he has recorded 35 interviews with a range of subjects, including seed savers, conservationists, artists, photographers, botanists, orchid enthusiasts, tourism operators, horticulturalists, residents and visitors to the region. The interviews and transcripts will be made publicly

available at [www.floracultures.org.au](http://www.floracultures.org.au).

"The knowledge of my interviewees is informed by science, but it is also distinctly experiential, firsthand, and based in memories of their family lives and upbringings," John says. "To ensure the continuity of living plants, it is crucial to consider this kind of knowledge, and to reflect on the roles plants play in shaping our memories and cultures."

**Ask an expert**

**Dr Scott Carver**, wildlife ecologist at the University of Tasmania.

**Q** How heavy are wombats and can they cross streams like hippos do, walking on the riverbed?  
Alan Mackay



The average weight of an adult common wombat on the mainland is about 25–26kg, whereas in Tasmania it is 20kg. Southern hairy-nosed wombats weigh an average of 25kg and northern hairy-nosed wombats are larger, at 30–32kg. However, although wombats are relatively heavy, they are not able to walk across the riverbed as hippos can. Hippos have unusually dense bones, which act as ballast and allow them to remain under water with ease. Wombats will cross shallow water, such as puddles and streams, and are on occasion seen to swim across small stretches of water using doggy paddle, but are not known to swim frequently.

**A** The weight depends on such things as species, age, location and health.

**On this day**

14 March 1836

Charles Darwin sailed away from Albany on the *Beagle* with 10,000 scribbled words on Australia, which helped build his theory. On his world circumnavigation, he arrived at Sydney on 12 January, went to the Blue Mountains and met a platypus, and then sailed onto TAS and WA. On departing he noted: "Farewell, Australia! You are a rising infant and doubtless someday will reign a great princess in the South."



FLOWERS: JOHN RYAN / Pimelea physodes / Nuytsia floribunda; WOMBAT: TOMI BRAKEFIELD / GETTY / Vombatus ursinus; BEAGLE: WIKIMEDIA