
WWF
for a living planet®
Australia's
hidden treasures

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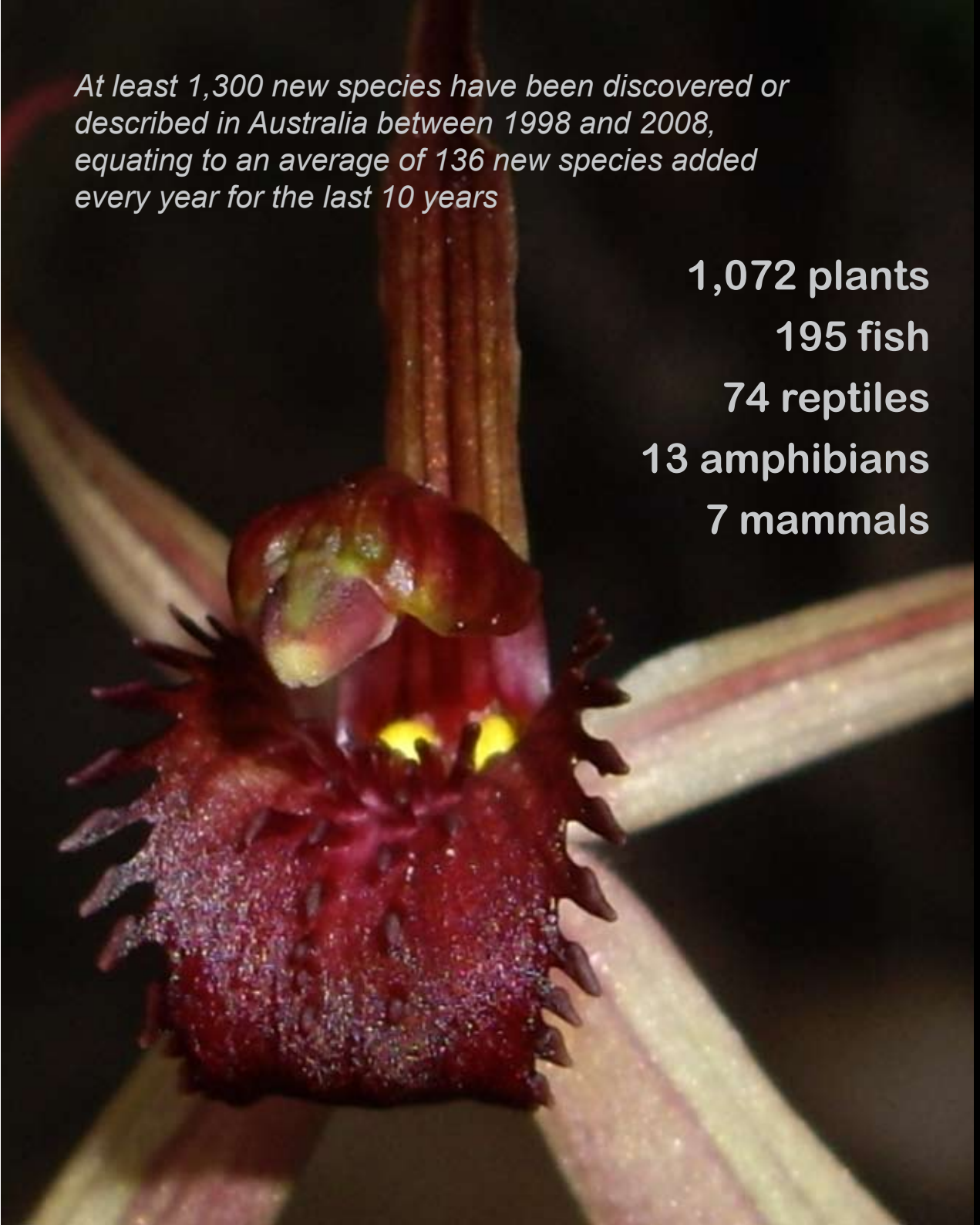


At least 1,300 new species have been discovered or described in Australia between 1998 and 2008, equating to an average of 136 new species added every year for the last 10 years

1,072 plants
195 fish
74 reptiles
13 amphibians
7 mammals

Australia's new species

Some of the richest and most valuable habitats on Earth can be found in Australia.

A staggering 14 of WWF's Global 200 ecoregions, critical landscapes of international biological importance, are found here. These precious landscapes are home to some of Australia's estimated 20,000 species of plant, 828 bird species, 1,088 species of reptiles and amphibians, and 378 mammal species, including 50 of our most iconic species, the kangaroos, wallabies and their close relatives. This confirms Australia's place as one of the world's 18 megadiverse countries; those that harbour the majority of the world's species.

Such is the extent of Australia's biodiversity that new species continue to be regularly described by science. Between 1998 and 2008 at least 1,300 new species were discovered or described in Australia. This equates to more than two new species a week on average every year for the past 10 years. Species discovered over the last decade include 1,072 plants, 195 fish, 56 lizards, 14 snakes, 13 frogs, 4 turtles, and 7 mammals.

New insects and other invertebrates also continue to be discovered including 19 new species in the last year alone in Western Australia that include an underground crustacean without eyes and a spider hunting wasp.

And even this is just the tip of the iceberg – with hundreds of new species of corals and other marine creatures being discovered on coral reefs and in deep waters south of Australia in recent years.

The rate of species discoveries in Australia over the last decade is equivalent to that of two other regions combined, both known for their unique and diverse species. Over the same period, 353 new species were discovered in the Eastern Himalayas, and 1068 in the Greater Mekong Region. Furthermore, these new species may represent just a fraction of those new species yet to be discovered. There may be many more thousands of new species in Australia that await discovery.

This report celebrates some of the unique and fascinating species that have been discovered in Australia in the last decade. The discoveries also highlight many vital habitats that face growing pressures. Australia faces a wave of pressure as our population grows and our demand for natural resources increases. The host of threats to biodiversity in Australia is dominated by habitat loss and degradation, invasive species, and pollution. Australia is also vulnerable to global climate change, which will amplify the impacts of these threats.

Arachnorchis grampiana

Achieving a balance between pursuing development and conserving natural resources presents one of the greatest challenges facing Australia today. Economic development and environmental protection must be mutually supportive to provide for human needs, and to ensure the survival of Australia's astonishing array of species and natural habitats.

Effecting urgent changes to our personal and business practices is vital as we adapt to life in Australia under vastly different climatic conditions. We can no longer afford to procrastinate over the protection of our landscapes, seascapes and wildlife.

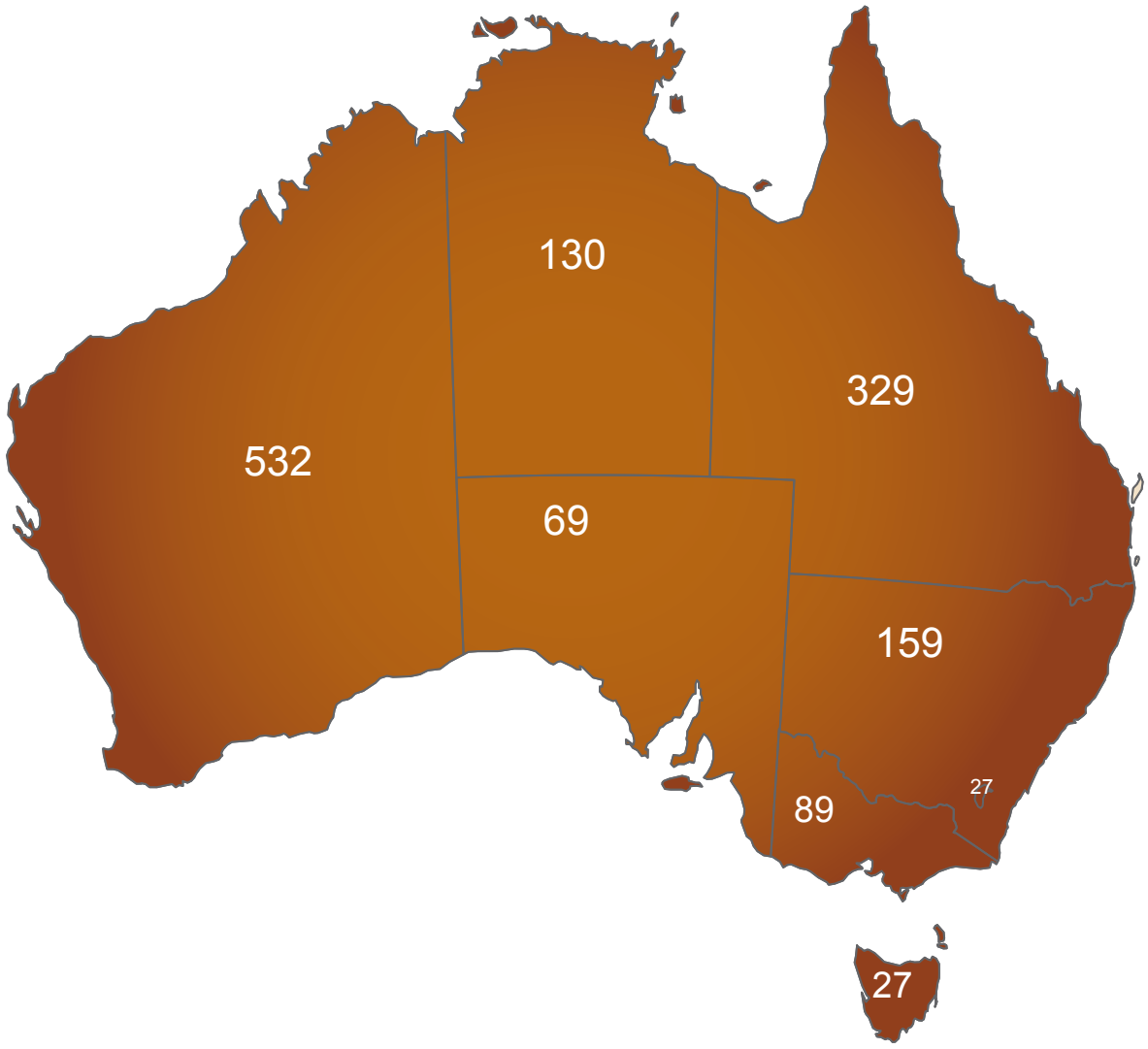
The new species include 1,072 plants, 195 fish, 74 reptiles, 13 amphibians, and 7 mammals.

The distribution within Australia of the land and freshwater new species is:
Australian Capital Territory 27
New South Wales 159
Northern Territory 130
South Australia 69
Tasmania 27
Queensland 329
Victoria 89
Western Australia 532

Some species were found in more states/territories than one, so when added the above numbers do not equal the total number of new species identified.

In addition 183 marine fish species and one marine dolphin were found in the waters surrounding Australia.

In the last decade at least 1,300 new species have been discovered across Australia



Seven mammals have been discovered or described as new species

2 bats

3 small carnivorous marsupials

1 possum

1 dolphin

Highlights…

Mammals

Australian snubfin dolphin *Orcaella heinsohni*

Once thought to be members of the Irrawaddy species of dolphin; the Australian snubfin dolphin was described as a new species by scientists in 2005. Researchers found genetic differences and that the snubfins have different colouration as well as different skull, fin and flipper measurements to the Irrawaddy species making the mammal the first new dolphin species described for at least 30 years.

The expected range of the Australian snubfin dolphin includes coastal zones of Australia from Western Australia, Northern Territory and Queensland. Sightings indicate that these dolphins occur mainly in protected, shallow, coastal waters, especially those adjacent to river and creek mouths.

Torresian flying fox *Pteropus banakrisi*

The Torresian flying fox, also known as the Moa Island fruit bat, is the smallest flying fox species known to occur in Australia.

This flying fox is known to occur on only one island, Moa Island, which lies midway between Cape York Peninsula and Papua New Guinea in the Torres Strait.

It is currently listed as vulnerable under Queensland threatened species legislation. Flying foxes are heavily hunted for food throughout the South Pacific and as a result many species are subject to international conservation measures that restrict trade in these species.

Short-eared possum *Trichosurus caninus*

It has only been recently that scientists confirmed that the mountain brushtail possum is actually two different species.

The newly described *Trichosurus caninus*, is a stocky possum covered with a thick grey to dark grey fur and is found from northern NSW to central Queensland. They are heavier and more territorial than their relative the common brushtail possum.

Short-eared possum *Trichosurus caninus* © Stewart Macdonald

Highlights…

Amphibians

‘Fast-talking’ tree frog *Litoria myola*

Found in the Kuranda area of the wet tropics of northeast Queensland the fast-talking tree frog has a distinctive excited short, fast tapping call. The call consists of rapidly uttered notes with each note consisting of two pulses heard as a single ‘toc’. A longer call is used during aggressive encounters between male frogs with aggressive calling bouts often resulting in wrestling.

The common name ‘Kuranda tree frog’ refers to the township around which the distribution is centred. It has a very small distribution, being known from short sections of 13 streams draining into the Barron River in the Kuranda area. All sites are between 320 and 360 metres above sea level. The total area of occupancy of the frog is just 3.5 square kilometres. Because of its very limited distribution, small and fragmented population size the species is listed as Critically Endangered under IUCN criteria.

Northern stony-creek frog *Litoria jungguy*

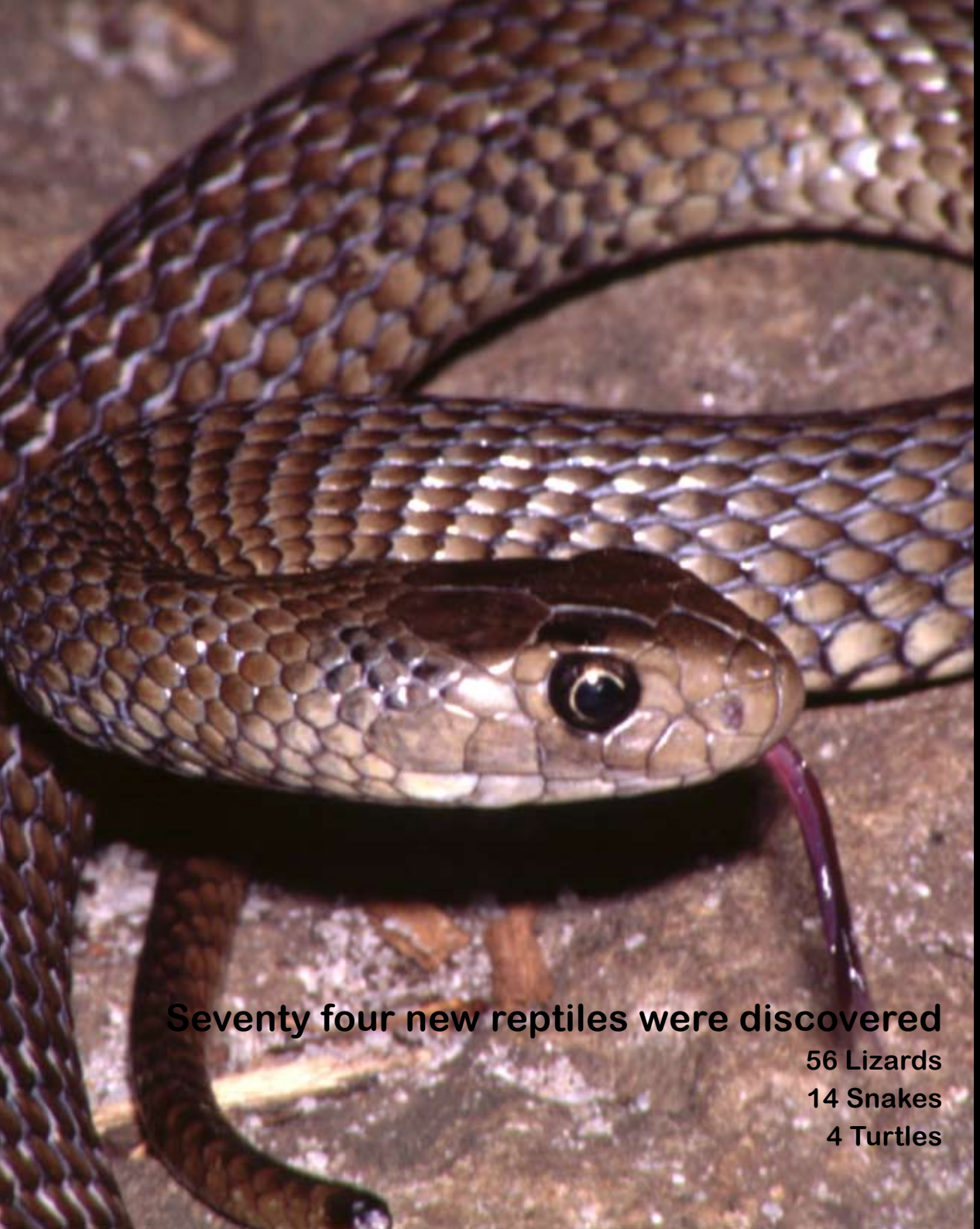
This moderately sized streamlined frog found primarily in the rainforest of Queensland is common around rocky streams. Males and females are brown for most of the year but males turn yellow during breeding season and bright yellow during mating. Male frogs are much smaller than females and lack a vocal sac to amplify their call so they emit a soft, purring trill. Nests built by this species are perfectly circular and of remarkably uniform size.

Davies’ tree frog *Litoria daviesae*

Davies’ tree frog is a small tree frog found only in New South Wales. Populations are narrowly distributed along the eastern side of the great escarpment of the Great Dividing Range and the tablelands. It is listed as vulnerable on the IUCN Red List. This frog may be at risk of local extinction, due to small population size, isolation and limited distribution of known populations.

Thirteen amphibians have been discovered in Australia in the last decade

Fast talking tree frog *Litoria myola* © Aaron Payne



Highlights...

Reptiles

Central Ranges taipan *Oxyuranus temporalis*

A recent expedition to the central ranges of Western Australia discovered a new species of taipan to the east of the Walter James Range near the border of Northern Territory and South Australia. The new species represents a third species in the Australo-Papuan elapid genus *Oxyuranus* and it is potentially one of the most venomous snake species in the world. Its two closest relatives, the inland taipan and the coastal taipan, are ranked first and third most venomous snakes in the world, respectively[+].

Scientists believe that the discovery of a third species of taipan after more than 125 years is testament to the large areas of the Australian arid zone that remain poorly surveyed for reptiles. There are likely to be other undescribed species of reptiles in parts of north-eastern Western Australia and western Northern Territory that are seldom visited by biologists.

Pilbara death adder *Acanthophis wellsi*

Acanthophis is a genus of highly venomous elapid snakes. Commonly called death adders, they are native to Australia, New Guinea and nearby islands, and are among the most venomous snakes in the world. Death adders inject on average 40 - 100 milligrams of extremely toxic venom with each bite. A 0.4 - 0.5 milligram dose would kill a rat. This makes an untreated death adder bite one of the most dangerous in the world with a bite causing the death of an adult in as little as six hours.

This new species is therefore one of the most dangerous snakes in Australia and the world. Distribution of this species appears restricted to the range areas around the Hamersley and Chichester Ranges and surrounding areas of the Pilbara, Western Australia.

[+] The other described species of *Oxyuranus* are among the most venomous snakes in the world, with *O.microlepidotus* (McCoy 1879) ranked the most and *O.scutellatus* (Peters 1867) the third most venomous (after *Pseudonaja textilis*) (Broad et al. 1979).

Pseudonaja elliotti © Snakeman Raymond Hoser Snakebuster

Highlights...

Plants

A “flesh-eating” pitcher plant *Nepenthes tenax*

Discovered in 2006 in northern Cape York, Queensland the *Nepenthes tenax* can grow a maximum height of 100 cm with vines exceeding to 25 cm high. *Nepenthes tenax* is regarded as exceptional specie of pitcher flower since others can only grow to a maximum height of 15 cm.

Botanical experts believe that this flower can actually consume small rats, mice, lizards and even birds. This lowland species of tropical pitcher plant is native to northern Queensland, Australia. This specie is the third *Nepenthes* species recorded in Australia and is the country’s second endemic species.

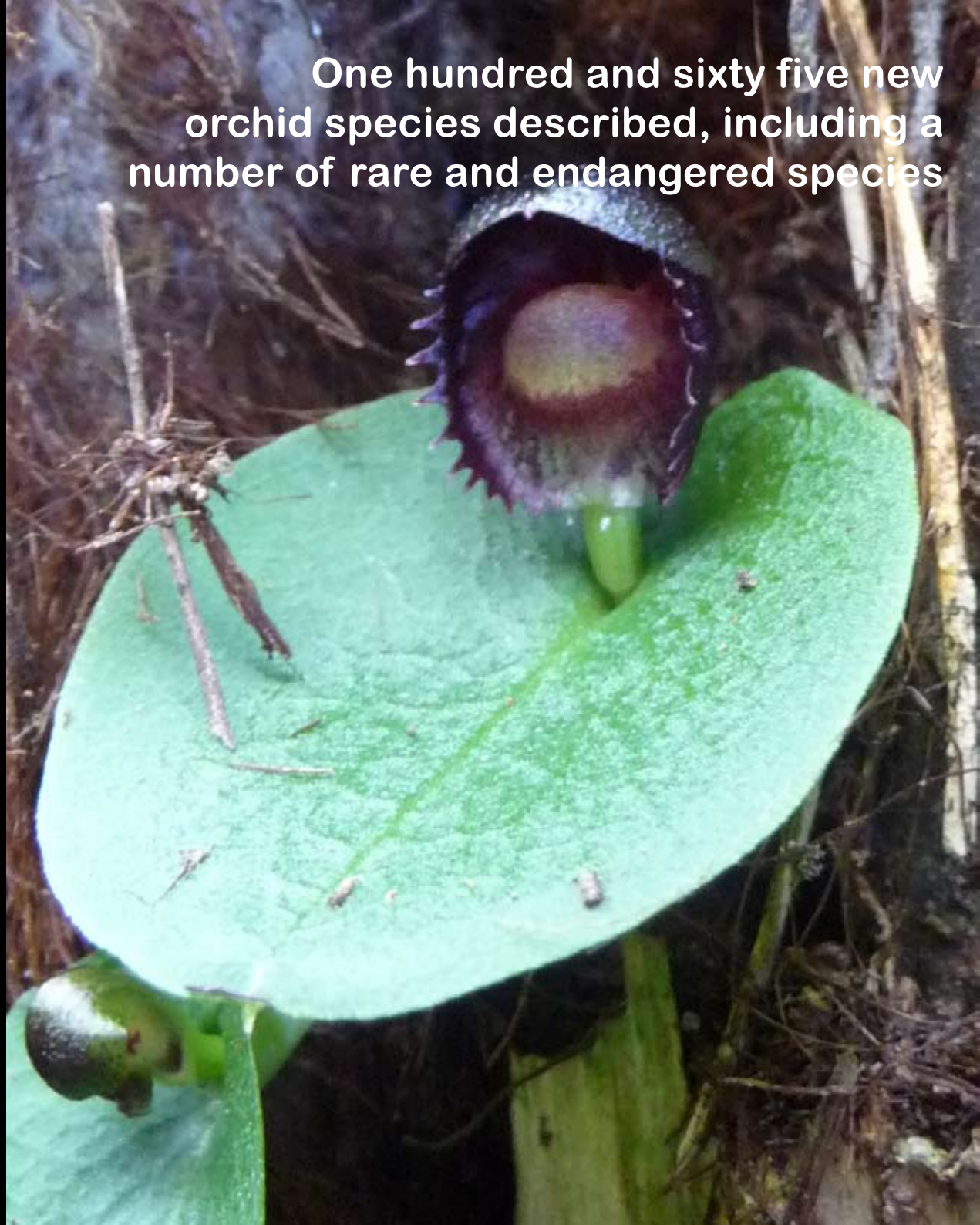
Mountain helmet orchid *Corysanthes grumula*

This ground-hugging orchid is called the ‘mountain helmet orchid’, as it appears to be wearing a helmet. This orchid is found in mountainous country in moist eucalypt forests as well as on tree ferns in the Australian Capital Territory.

Corybas dowlingii

An endangered species facing a very high risk of extinction in New South Wales. This orchid is facing continuing decline as a result of habitat clearing, fragmentation and degradation, and due to its highly restricted geographic distribution.

The species is only found in four locations in New South Wales: Port Stephens (2 localities), Bulahdelah and Freemans Waterhole south of Newcastle. The geographic distribution of the species is highly restricted with populations at three locations occupying areas of less than a few hectares and one population at Port Stephens occupies approximately 50 hectares.



Mountain helmet orchid *Corysanthes grumula* © Robert Johnston

At least 195 fish have been discovered or described in Australia and its waters in the last decade including 12 freshwater and 183 marine fish

Highlights…

Fish

Longfin velvetfish *Pseudopataecus taenianotus*

This subtropical fish is found in the southwestern Pacific off the coast of Australia. It measures over 10cm in length and can be found at depths of 20-40m.

The species is distinct as it has a high dorsal fin that extends down the length of its body.

Yellowlip grubfish *Parapercis flavolabiata*

The yellowlip grubfish is known only from inter-reef habitats between Anzac Reefs and Lady Musgrave Island, Great Barrier Reef.

It measures over 9cm in length and can be found at depths of 45-79m. The species is colourful with six broad red stripes across the back and a row of dark-red spots along its dorsal fin.

Longfin velvetfish *Pseudopataecus taenianotus* © Jeff Johnson

WWF is one of the world's largest and most experienced independent conservation organizations, with almost 5 million supporters and a global network active in 100 countries.

WWF's mission is to stop the degradation of the planet's natural environment and to build a future in which humans live in harmony with nature, by:

- conserving the world's biological diversity
- ensuring that the use of renewable natural resources is sustainable
- promoting the reduction of pollution and wasteful consumption.

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Australian snubfin dolphin *Orcaella heinsohni* © Guido J. Parra