MARINE TURTLE FACT FILE

QUICK FUN FACTS

- **Marine turtles cannot retract their head or limbs under their shell as a land turtle can**
- **Green Turtles can stay under water for 5 hours**
- **Leatherback Turtles can dive to more than 1,190m**
- **The largest Leatherback Turtle recorded weighed 916kg**
- **Marine turtles can live for at least 80 years**
- **Marine turtles do not have an external ear opening**
- **The temperature of the nest will determine if a turtle hatchling is female or male. Warmer nests produce more females and cooler nests produce more males.**

Marine turtles have been living in our waters for over 100 million years - that means they were around when dinosaurs walked the earth. They have evolved some incredible adaptations that have allowed them to survive over such an impressive period of time. For a start, they can obtain fresh drinking water from the salty sea water by excreting the excess salt through a special gland in their eye. Females also use this gland to flush sand out of their eyes when laying their eggs on sandy beaches.

Some turtle hatchlings have the ability to imprint the location of their nesting grounds and use the Earth's electromagnetic field to return to the same spot up to 30 years later ready to lay the next generation of turtle eggs.

The marine turtle's shell is another distinctive evolutionary modification which is made up of about 50 different bones, and is an adaption of the rib cage and spine. Millions of years ago, the early turtle's lower ribs became wider and fused with each other to give the bottom half of the shell - the plastron. Then, the upper ribs followed suit and merged with the spine, creating the top half of the shell - the carapace.

Why are marine turtles so important?

Marine turtles have played a vital role in maintaining the health of the world's oceans for more than 100 million years. They support the health of sea grass beds and coral reefs, providing key habitat for other marine life, helping to balance marine food webs and facilitating nutrient cycling from water to land. Marine turtles even improve our iconic beaches by supplying a concentrated source of high-quality nutrients to their nest sites. These nutrients aid the growth of vegetation and help to stabilise important sand dunes. Additionally, they are an integral part of the traditional culture of many coastal indigenous people throughout the world.

What do marine turtles need to thrive in the wild?

Australia has some of the largest marine turtle nesting areas in the Indo-Pacific region, including the only nesting populations of the Flatback Turtle. Nearly all species of marine turtles are listed on the International Union for Conservation of Nature (IUCN) Red List of Threatened Species which means they are recognised internationally at being at risk of extinction.

Many species of marine turtle love to eat jelly fish, unfortunately they often mistake people's rubbish for food, swallowing things like plastic bags, balloons, and bottle tops. This rubbish can cause internal organ damage, prevent them from feeding and eventually kill them. In order to thrive in the wild, marine turtles need a clean, safe ocean that is free from pollution, especially plastic!

What is Taronga doing to help marine turtles thrive in the wild?

Whilst Taronga Zoo does not have any marine turtles on permanent display, we are committed to

MEET 'ANDREW' THE GREEN TURTLE

Andrew the Green Turtle came to the Taronga Wildlife Hospital on the 28th August 2014 from Copacabana Beach. He was found upside down on the sand as a hatchling weighing 5 grams. Andrew had serious damage to both rear flippers and had ingested plastic which was discovered in his faecal matter. A Taronga Zoo nutritionist started his rehabilitation by very carefully monitoring his diet. At first, Andrew ate fish and squid before progressing to seagrass. Young marine turtles live in tropical waters so the water temperature of his tank was heated until he was larger and better able to cope with colder temperatures. He spent 16 months in care at the Taronga Wildlife Hospital, eventually growing to over 9kg and graduating to a deep-water tank in preparation for release off Sydney Heads. Prior to being released, Andrew was fitted with a small satellite tracker and now provides valuable information to help scientists learn more about the migratory patterns for his species, which is endangered in the wild.

their conservation which we do through our rescue, rehabilitation, and release programs. The Taronga Wildlife Hospital treats an average of 45 marine turtles each year that have been washed up on beaches or found floating in the ocean unable to dive. Rehabilitating and releasing these animals is a priority of the staff at Taronga Wildlife Hospital. Turtles admitted to the Taronga Wildlife Hospital are given a full veterinary examination, radiographed, have blood tests and in many cases, spend weeks in intensive care to ensure their survival. When they have recovered enough to leave intensive care, they are moved into the rehabilitation pools. Once they are eating well, gaining weight and swimming and diving proficiently, they are released back into the wild.

In 2013 Taronga launched a satellite tracking program for marine turtles released after life-saving rehabilitation. The project focuses on tracking marine turtles with prior plastic ingestion or entanglement – the aim is to map turtle habitat use and monitor survival after rehabilitation. The project is funded by the sale of re-useable shopping bags sold at Woolworth's supermarkets and Taronga Zoo.

How you can help secure the marine turtle's future in the wild

Australians love plastic bags, using more than 10 million single-use shopping bags every day. Sadly, much of this plastic ends up in our waterways which then impacts the species that call our oceans home. Marine turtles, sea birds and marine mammals mistake it for food and can ingest, choke and even be suffocated from single-use plastic bags causing millions of deaths every year. You can become an ocean defender – simply choose re-usable shopping bags and keep our oceans plastic free!

Photo: Harriet Spark

OUR CENTENARY COMMITMENT TO MARINE TURTLES

For the next ten years, Taronga's Wildlife Hospital will continue to treat and rehabilitate injured marine turtles. We will use this opportunity to increase our understanding of their behaviour through the satellite tracking program. Taronga is also committed to inspiring our guests to choose re-usable shopping bags to help keep our oceans plastic free.

SOUTHERN CORROBOREE FROG FACT FILE

Southern Corroboree Frogs are Australia's most iconic amphibian species and amongst the most visually spectacular frogs in the world. They can be readily distinguished by the bold yellow and black longitudinal stripes on their top, sides and legs. Their bellies are marbled black, white and yellow.

All known populations of Southern Corroboree Frogs inhabit Kosciuszko National Park, which is one of the best known and most loved national parks in Australia, attracting around three million visitors each year. The frogs are found in marshlands and sclerophyll forests under logs and vegetation. Catching a glimpse of these stunning creatures is a rare and exciting occurrence. They are largely nocturnal but are occasionally active during the day.

Southern Corroboree Frogs breed in high altitude bogs and swamps. The males produce a mating call during summer from nests in thick vegetation at the edges of pools and seepages. Female Southern Corroboree Frogs are attracted to these calls and lay their eggs in the nests. The eggs develop and hatch when sufficient rain falls in autumn and winter; the rain floods the nest sites and stimulates the tadpoles to hatch. Once hatched, the tadpoles move through the vegetation into a main pool where they metamorphose by the following summer. It then takes four years for the frogs to reach sexual maturity and repeat the life-cycle.

QUICK FUN FACTS

- **'Corroboree' is an Indigenous Australian word for a gathering or meeting where traditionally the attendees paint themselves with yellow markings similar to those of this frog**
- **This species has no known predators due to its toxic skin secretions. Not only does it obtain toxins from its diet, it also produces its own poisons**
- **During the breeding season, males compete for females via song**
- **The frogs toes are not webbed and they can't hop**

Why are Soutern Corroboree Frogs so important?

As well as being an iconic Australian species, Southern Corroboree Frogs are an important component of our natural heritage. They contribute to the richness of the alpine ecosystem in which they're found. Even as tiny tadpoles they remove algae from alpine ponds, keeping the waters crystal clear and benefiting other aquatic plants and animals.

Saving the Southern Corroboree Frog will represent a major achievement for the conservation of amphibians globally. Worldwide, amphibians have declined over the past 50 years and are becoming extinct at a greater rate than birds, reptiles or mammals. Australia alone has seen the extinction of six frog species in recent decades. Luckily, Southern Corroboree Frogs have attracted significant publicity which is helping to save it from extinction. Some of the broader management actions undertaken specifically for Southern Corroboree Frogs (like monitoring and managing disturbance to alpine bogs by feral pigs) are benefiting other alpine species, and contributing to the overall recovery of the ecosystem.

What do Southern Corroboree Frogs need to thrive in the wild?

The decline of Southern Corroboree Frogs, and many other frog species throughout Australia, is due to a disease known as Chytridomycosis. This disease is a recent introduction to Australia, which is why many of Australia's frog species have limited resistance to this pathogen. The fungus attacks the skin of frogs and causes an electrolyte imbalance, resulting in a cardiac arrest. The fungus does not cause immediate death, allowing time for infected frogs to spread the disease. In order for these iconic little creatures to thrive in the wild they need an environment which is free from pests and diseases.

What is Taronga doing to help Southern Corroboree Frogs thrive in the wild?

Taronga is heavily involved in a National Recovery Program to help save the Southern Corroboree Frog together with the NSW Office of Environment and Heritage, Zoos Victoria, the Amphibian Research Centre, Tidbinbilla Nature Reserve and the University of Wollongong. Taronga has two specialised breeding facilities equipped with computerised temperature and water filtration systems. This ensures the conditions remain perfect as these frogs require very specific climatic conditions to breed and survive.

Some of the captive bred frogs are re-introduced to the wild while others are kept at Taronga to develop our breeding program. This is done to guarantee we maintain a genetically diverse population for many generations to come. Maintaining a broad genetic population for the species is important as it can help capture any potential genetic adaptation to disease that may be present.

How you can help secure the Southern Corroboree Frog's future in the wild?

You can help the Southern Corroboree Frog by not disturbing or moving tadpoles or frogs from their native areas. This helps reduce the spread of disease and parasites between different habitat areas. Additionally, you can join a conservation group such as Landcare or Coastcare and help save and create precious habitat.

OUR CENTENARY COMMITMENT TO SOUTHERN CORROBOREE FROGS

Taronga is committed to the long-term involvement in the National Recovery Program to help save this striking frog. Our Zoo Keepers and experts maintain a large conservation breeding population. Taronga has successfully released hundreds of frogs and thousands of eggs to prevent the extinction of this species and increase the wild population.

PLATYPUS FACT FILE

The platypus is one of the most unusual creatures in the animal kingdom. When first discovered, European naturalists and scientists believed that the animal was an elaborate hoax. They thought that a trickster had sewn many different animals together as it had; a paddle-shaped tail like a beaver, a sleek, furry body like an otter, and a flat bill and webbed feet like a duck.

This amazing little monotreme spends its days resting in the burrows of a riverbank, emerging after dusk in the water to feed. The platypus has fur thicker and denser than a Polar Bear – each square millimetre of platypus hide contains around 900 hairs. It also has two layers that trap air to keep the platypus dry when submerged. This gives them a silvery sheen when underwater.

Platypuses are among the few venomous mammals in the world. Males have a spur on the back of their hind feet that is connected to a venom-secreting gland. More venom is secreted during mating season, leading researchers to think that the spurs and venom help males compete for mates. They are also one of the few semi-aquatic mammals and have amazing retractable webs on their feet. When they are in the water the webbing expands to act like a paddle for swimming and retracts when they are on land, making the claws more pronounced. They walk awkwardly on their knuckles to protect this incredible webbing.

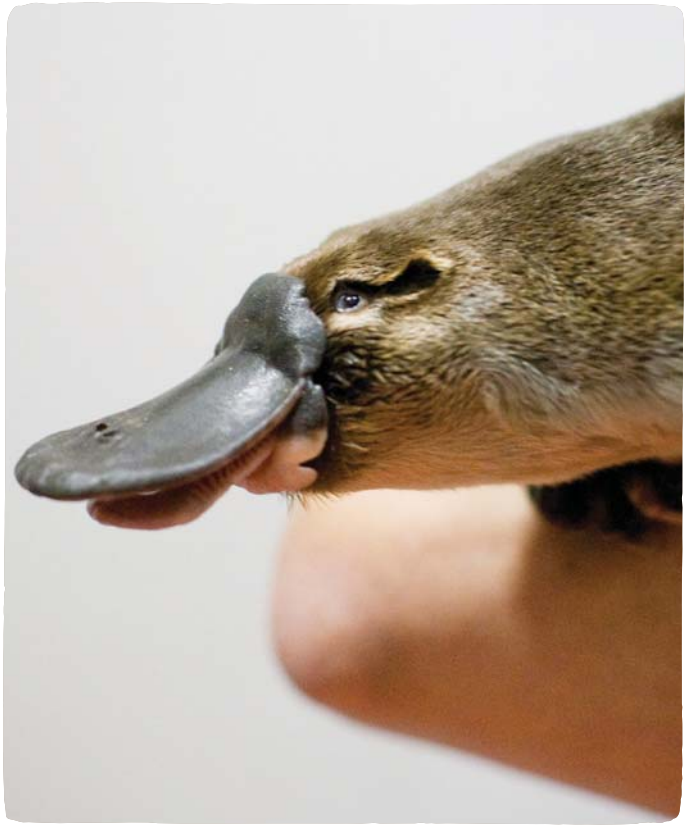
QUICK FUN FACTS

- **The platypus uses its tail for storage of fat reserves**
- **Platypuses that live in colder climates are bigger than those living in warmer areas**
- **They have strong claws on their feet for burrowing and moving on land**
- **The venom from the back foot ankle spur of a male platypus is powerful enough to kill small animals**

Why is the Platypus so important?

The platypus is an incredibly unique and iconic Australian native species that plays an important role in the food web and ecology of Australian freshwater ecosystems. The animal is the sole living representative of its family and its unique features make it an important subject in the study of evolutionary biology. The platypus is featured on the back of the 20 cent coin and is the animal emblem of the state of New South Wales.

Researchers believe that these incredible animals, which are also our oldest mammalian relative, may help us to better understand ovarian cancer. DNA mapping of the platypus has uncovered an interesting relationship between their sex chromosomes and DNA sequences found in human ovarian cancer.



What do Platypus need to thrive in the wild?

The predominant threat to the platypus is reduction in stream and river flows due to droughts and extraction of water for agricultural, domestic, and industrial supplies. River bank erosion and stream sedimentation are also of great concern. Deteriorating water quality is adversely affecting its habitat, particularly from household chemicals, pesticides and fertilisers that enter our waterways through human activity.

Accidental drowning in nets and traps set for fish and crustaceans has the potential to impact on the distribution and abundance of the platypus in all parts of its range, especially in small streams where populations may be critically small. Feral cats, foxes, dogs and dingoes also kill platypus that move on land or in shallow waters. Bank erosion and clearing has a huge impact on the habitat of the platypus, as they need substantial vegetation to support the delicate balance of their habitats.

What is Taronga doing to help the Platypus thrive in the wild?

Taronga supports platypus conservation in collaboration with the Australian Platypus Conservancy. Some styles of yabby traps are particularly dangerous to aquatic wildlife such as the platypus. These traps result in death by drowning for many animals. Taronga supports a research program that investigates modifications to trap designs that significantly reduce platypus mortality. Taronga Conservation Society is also collaborating with the University of New South Wales to investigate the impacts of water extraction methods on platypus habitats.

Taronga Western Plains Zoo's Project Platypus is a community conservation education project aimed at supporting platypus populations that live in NSW's Western region. Project Platypus is designed to raise awareness in the community to empower students to become advocates in their communities. As part of the program, students have the opportunity to plant native shrubs, conduct field surveys to assess habitat quality, and learn about the environment from local indigenous perspectives.

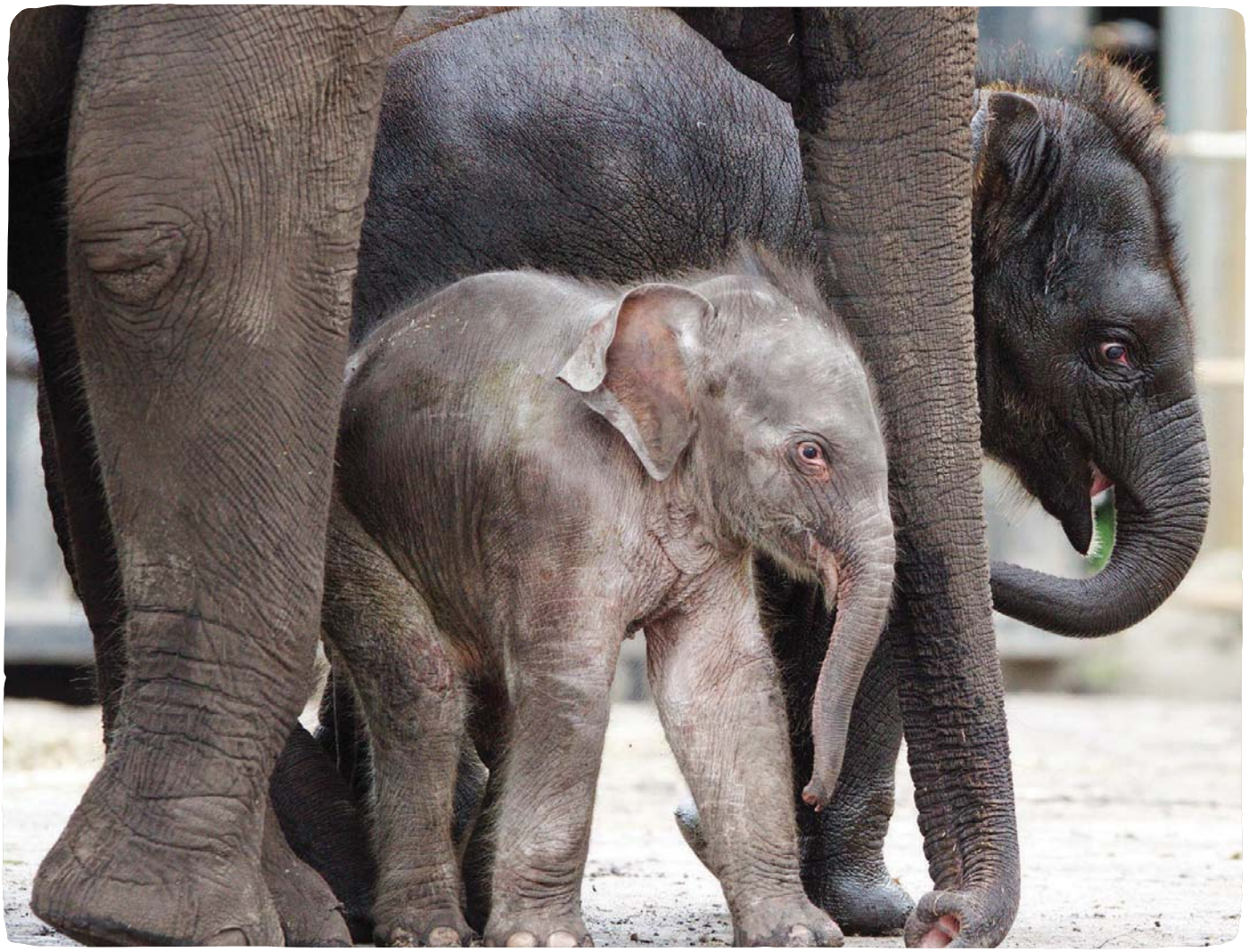
How you can help secure the Platypus' future in the wild?

In order to help the platypus thrive in the wild there are some easy things you can do that make a big difference. Try to minimise the amount of chemical waste, pesticides and fertiliser entering creeks and rivers, minimise your water consumption and install rainwater tanks or grey water systems. Be a responsible pet owner and make sure you keep your pet inside at night and on a leash where there is wildlife. You can also plant local native plants in your backyard, balcony and courtyard and join a conservation group such as Landcare or Coastcare to help save and create animal habitat.

OUR CENTENARY COMMITMENT TO THE PLATYPUS

In partnership with the Australian Platypus Conservancy, Taronga supports a research program investigating and promoting alternatives to reduce the capture of Platypus through yabby trapping.

ASIAN ELEPHANT FACT FILE



Elephants are an important cultural icon in Asia. They once roamed from the Tigris and Euphrates rivers in western Asia to as far east as China's Yangtze River. Exceedingly adaptable in diet and behaviour, Asian Elephants can survive anywhere from grasslands to rain forests but they must migrate across large areas to find water and suitable food at different times of the year. Such vast ranges have become extremely rare in densely populated, rapidly developing Asia.

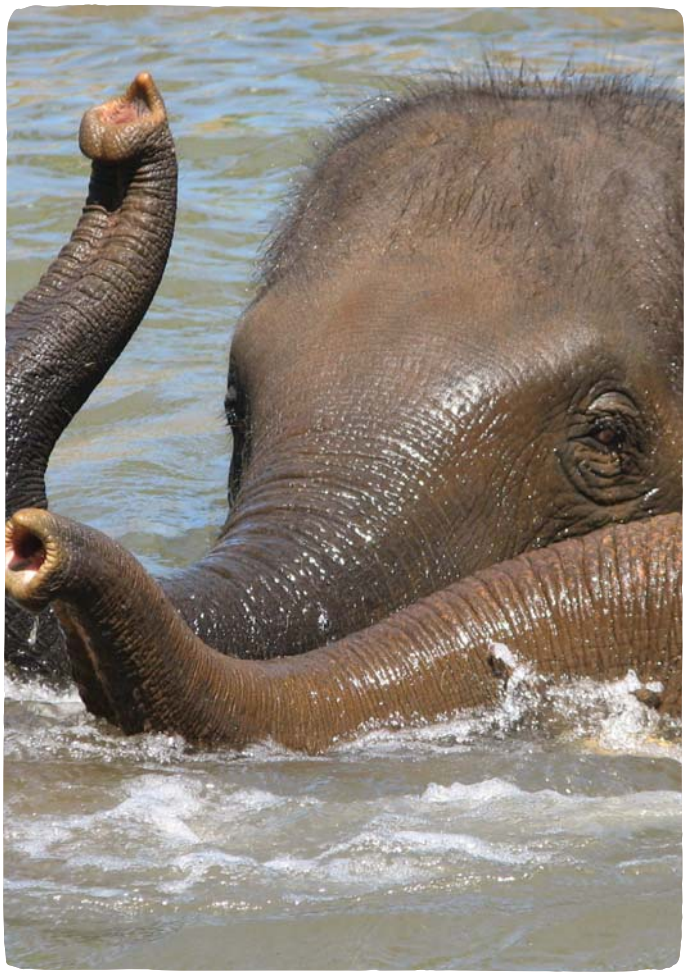
Asian Elephants have an amazing trunk, which is a fusion of the nose and the upper lip. It contains over 40,000 muscles but no bones or cartilage and is an incredibly versatile appendage used for breathing, eating, drinking, dust bathing, showering and as a snorkel when swimming. An elephant's trunk can pick up something as small as a peanut and as big as a tree trunk. It also assists in communication, smelling, lifting, defence and offence.

QUICK FUN FACTS

- **An elephant's trunk is the most versatile appendage in the animal kingdom**
- **The brain of an adult elephant weighs between 3.6-5.4kg**
- **Elephants develop six sets of molar teeth throughout their lifetime**
- **Tusks are modified upper incisor teeth and are made of dentine and calcium salts**
- **50% of females grow 'tushes' which are much shorter than tusks and in some cases may not be seen under the trunk**

Why are Asian Elephants so important?

Elephants are not only a cultural icon throughout Asia, they also help to maintain the integrity of forest and grassland habitats. They may spend up to 19 hours a day feeding and they can produce about 100kg of dung per day that can cover up to 125 square kilometres. This helps to disperse germinating seeds.



What do Asian Elephant need to thrive in the wild?

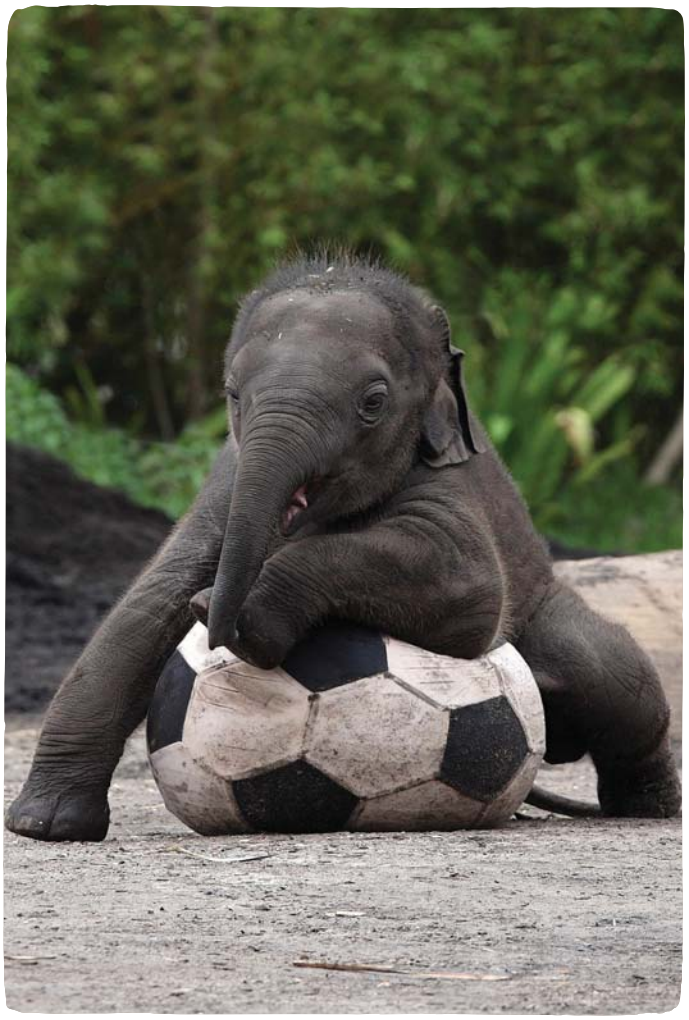
About 75 years ago, natural forest covered approximately 85 % of Sumatra. As the human population and the demand for various resources increased, forests in Sumatra shrunk rapidly, to only about 27 % in 2008. The conversion of forest to agricultural land took place in flat lowland areas that are most suitable for agriculture, especially palm oil plantations. Unfortunately, these lowland forests are also where elephants are mostly concentrated. Sadly, this reduction and fragmentation of habitat has led to increased human/elephant conflict and poaching remains an ongoing problem, with large elephants killed for their tusks.

What is Taronga doing to help the Asian Elephant thrive in the wild?

Taronga Zoo is a driving force behind an Asian Elephant program that assists a number of Asian government and non-governmental organisations in their efforts to combat the many problems facing Asian Elephant conservation. Taronga has provided direct support for field conservation initiatives including Wildlife Protection Units and expertise on environmental education, wildlife health, facility design and management of elephant populations in Sumatra, Thailand, Cambodia, Nepal and Sri Lanka.

How you can help secure the Asian Elephant' future in the wild?

You can lend your eyes to the wild - download the free Wildlife Witness app and report illegal wildlife trade. You never know when you may witness wildlife crime, especially when travelling to markets and shops across South East Asia that are hotspots for wildlife trade. Share the Wildlife Witness app with your friends and family and let's put an end to illegal wildlife trade within our generation.



OUR CENTENARY COMMITMENT TO THE ASIAN ELEPHANT

Taronga supports wild elephants in Thailand and Indonesia by funding Wildlife Protection Rangers. We fund and work with TRAFFIC, the wildlife trade monitoring network.

SUMATRAN TIGER FACT FILE

Tigers are a symbol of all that is splendid, mystical and powerful about nature. The Sumatran Tiger has lived exclusively, for over a million years, in the once extensive humid tropical jungles of the island of Sumatra, Indonesia. The appeal of these magnificent creatures creates tourism value that runs into billions of dollars and contributes to the livelihoods of millions of people.

The Sumatran Tiger has thinner stripes on its coat than other tigers, which helps it to camouflage itself as it darts with agile precision through the long grasses of its habitat. Male Sumatran Tigers have particularly long fur around their faces, giving them a distinctive maned appearance.

QUICK FUN FACTS

- **Sumatran Tigers are the smallest surviving subspecies of tiger**
- **Tigers love water and are fantastic swimmers, they even have webbing between their toes**
- **Sumatran Tigers have white spots behind their ears, which are known as “eye spots”. These function as false eyes warning off any predators approaching from behind**
- **The pattern of stripes is unique to each animal**
- **The tiger’s whiskers are just a little longer than the width of its body which helps it to navigate in the dark dense undergrowth**

Why are Sumatran Tigers so important?

Sumatra is one of the top biodiversity hotspots in the world and being an apex predator, Sumatran Tigers are incredibly important in maintaining this balanced, healthy ecosystem. Loss of large cats such as tigers from their natural habitat has resulted in irreversible changes to natural ecosystems. Apex predators are at the top of the food web, their decline may lead to an over-abundance of herbivores, which has consequences on tree regeneration and seed dispersal. Such effects impact through the food-web, causing long-term changes in natural flora and fauna, eventually leading to species losses.

What do Sumatran Tigers need to thrive in the wild?

The two major threats to the survival of Sumatran Tigers are habitat destruction and poaching. The rapid agricultural growth on the island of Sumatra has reduced the area of habitat available to tigers and the encroachment by villages has increased the contact and conflict between tigers and humans. Sadly, tigers are illegally poached to support the trade in tiger products, including their body parts for use in traditional medicine and their pelts as trophies.

What is Taronga doing to help the Sumatran Tiger thrive in the wild?

Taronga is very fortunate to be caring for Sumatran Tigers, as part of international conservation efforts to protect this critically endangered species. Construction is underway on a new Sumatran Tiger experience which will be one of the Zoo's most exciting and engaging experiences. It is scheduled to open in 2017. While construction is underway, Taronga Zoo's Sumatran Tigers have moved to Taronga Western Plains Zoo. They have joined Taronga's young male tiger Sakti.

In 2011, Jumilah, our female tiger became the proud mother of three cubs. Kembali was the first born, followed by Kartika and Sakti. We were extremely excited by the birth of our three cubs which was the result of years of work by the carnivore keepers to create the perfect environment for breeding success. These three precious cubs represent nearly 1 % of the total wild population of tigers, so their birth was incredibly important in developing a world-wide safety net against the loss of Sumatran Tigers in the wild. When Kartika, Sakti and Kembali become adults they will have a vital role to play in the conservation of this stunning creature.

Breeding programs for these big cats are now more important than ever. Taronga is proud to be part of a regional conservation management plan for Sumatran Tigers including breeding, fundraising, research and community action to support sustainably produced Palm Oil. Taronga's involvement in the International Conservation Insurance Breeding Program is carefully monitored to ensure that the species are managed with high genetic diversity, to provide a healthy and viable insurance population for the future.

Taronga also assists with funding Wildlife Protection Units (WPU) to protect the 3,200km^2 Bukit Tigapuluh national park refuge in Sumatra. The WPU protect against illegal logging and poaching, which is vital as this region is home to at least 30 Sumatran Tigers and has been identified as one of 20 critical habitats for global tiger survival.

How you can help secure the Sumatran Tiger's future in the wild?

You can lend your eyes to the wild - download the free Wildlife Witness app and report illegal wildlife trade. You never know when you may witness wildlife crime, especially when travelling to markets and shops across South East Asia that are hotspots for wildlife trade. Share the Wildlife Witness app with your friends and family and let's put an end to illegal wildlife trade within our generation.

OUR CENTENARY COMMITMENT TO THE SUMATRAN TIGER

Taronga supports Wildlife Protection Units in Sumatra to protect Sumatran Tigers and conserve their natural habitat. We also are part of an international breeding program to grow the Sumatran Tiger Population.

SUMATRAN RHINOCEROS FACT FILE

Sumatran Rhinoceros, also known as Sumatran Rhinos, are the smallest and hairiest of all the rhinoceros species and the closest living relative of the Woolly Rhinoceros that lived during the ice age. They love to spend their time wallowing in mud holes and licking salt from natural mineral springs and rocks. Their horn is made from a protein called keratin, the same substance as hair and fingernails. Unfortunately, many people believe this horn can be used for medicine, causing the rhinoceros to be illegally poached. This combined with habitat loss has caused the Sumatran Rhinoceros to become a critically endangered species.

QUICK FUN FACTS

- **The Sumatran Rhinoceros is the smallest of all rhinoceros**
- **The rhinoceros's armour-like skin is nearly 2cm thick**
- **They are also referred to as the Hairy Rhinoceros or the Asian Two-horned Rhinoceros**
- **Their upper lip is hooked and prehensile**
- **They eat an average of 50 kg of food every day**

Why are Sumatran Rhinos so important?

The Sumatran Rhinoceros has been on earth longer than any other living mammal, however with less than 100 individuals remaining in the wild, they need round-the-clock protection to allow the remaining population to recover and thrive. Sumatran Rhinoceros play an important role in their ecosystem, when they browse, they keep the areas trimmed, making paths and more accessible areas for smaller mammals. They also enrich the soil and help plants by spreading seed through their dung. Rhinoceros inhabited areas can have up to 20 times

more prime eating vegetation than areas without the rhinoceros. This means their survival directly impacts the survival of other animals and plants.

What do Sumatran Rhinos need to thrive in the wild?

Hunting is a major threat to the Sumatran Rhinoceros and is primarily driven by the demand for the rhinoceros' horns and other body parts for the treatment of a variety of ailments. Another threat comes from the species declining genetic diversity. No single Sumatran Rhinoceros population is estimated to have more than 75 individuals, making them extremely vulnerable to extinction due to natural catastrophes, diseases and inbreeding. Current populations may not be viable unless connecting corridors are maintained or created.

Finally, habitat loss due to forest conversion for agriculture and human settlements is threatening to push the Sumatran Rhinoceros towards extinction. Precious habitats are still being destroyed due to conversion of forest for oil palm, coffee and rice production by illegal settlers. Sumatran Rhinoceros are known to use these logged areas where there is an abundance of regenerating plants. However, the construction of logging roads makes areas more accessible to poachers and a threat to the survival of the rhinoceros.

What is Taronga doing to help the Sumatran Rhino thrive in the wild?

Taronga is committed to combating the global illegal wildlife trade by supporting organisations like TRAFFIC. They are a global wildlife monitoring network that works to investigate and stop the illegal wildlife trade. Taronga together with TRAFFIC have created an app called Wildlife Witness. This app is a simple way anyone can record and report incidents of illegal wildlife trade.

How you can help secure the Sumatran Rhino's future in the wild?

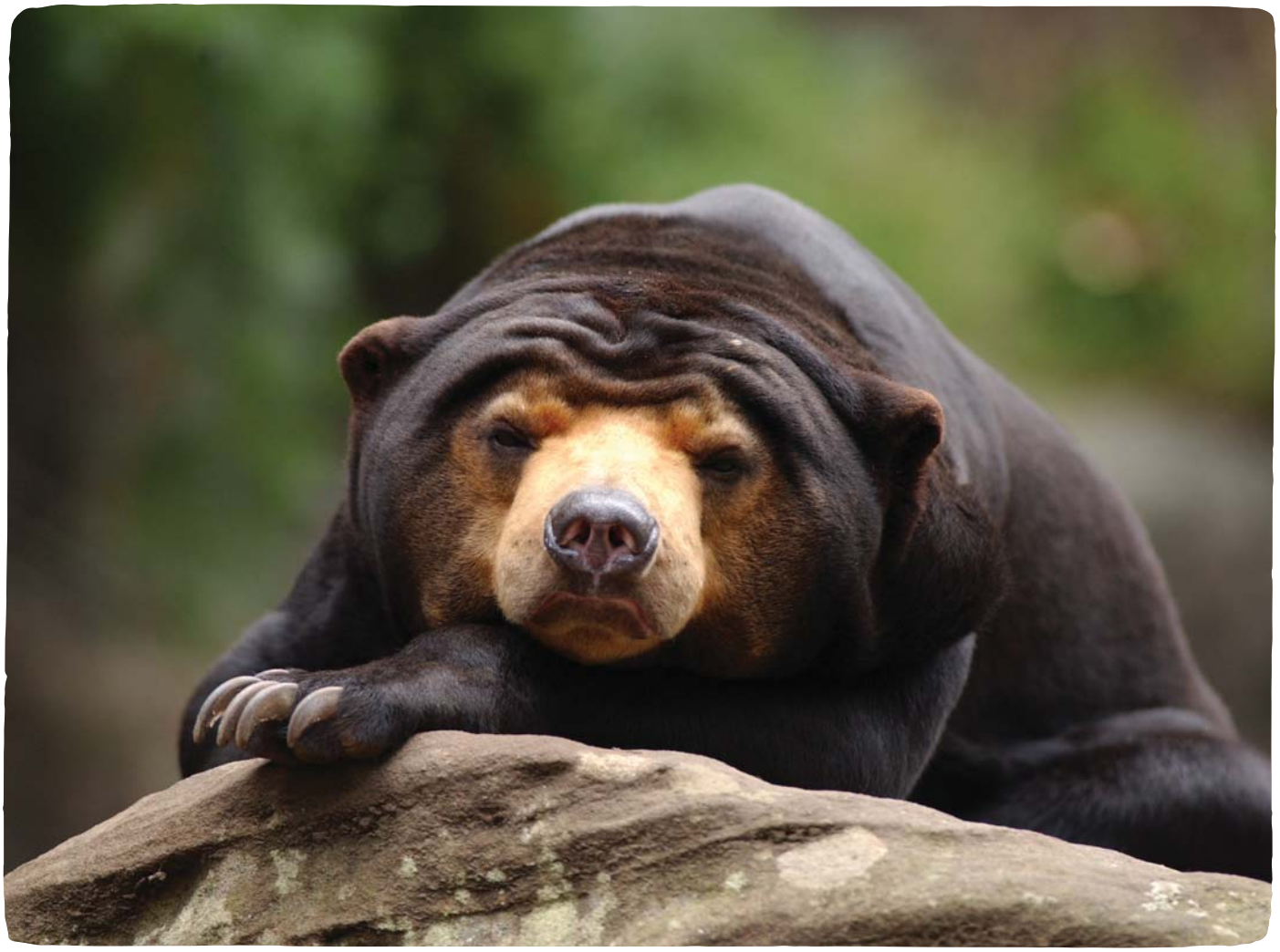
You can lend your eyes to the wild - download the free Wildlife Witness app and report illegal wildlife trade. You never know when you may witness wildlife crime, especially when travelling to markets and shops across South East Asia that are hotspots for wildlife trade. Share the Wildlife Witness app with your friends and family and let's put an end to illegal wildlife trade within our generation.

Additionally, you can ensure that any products purchased containing palm oil, come from sustainable palm oil. Similarly, if you purchase timber products make sure that they have been sustainably sourced and FSC (Forest Stewardship Council) certified.

OUR CENTENARY COMMITMENT TO THE SUMATRAN RHINO

Taronga is a founding member of the International Rhino Foundation (IRF). Our vets, pathologists, reproductive biologists and tourism staff are actively engaged in projects with the Sumatran Rhino Sanctuary at Way Kambas National Park, Sumatra. We also support Rhino Protection Units to prevent and prosecute wildlife criminals.

SUN BEAR FACT FILE



Sun Bears are the smallest of all the bears weighing only 65kg. Despite their size, they are strong and fast and have a reputation for being vicious fighters when necessary. If bitten by an attacker, their loose skin allows them to turn completely around inside their skin and attack back. Their sleek, black coat is short, thick and coarse which helps prevent overheating as well as providing protection from branches and rain. Their name comes from the yellow patch on their chest which looks like a rising sun.

Sun Bears are the only truly tropical bear, living in beautiful rainforests in South East Asia. They forage for food in the cool and safety of night, spending most of the day sleeping and sunbathing in their nest. They build nests in a fork of a tree by lying on their stomach and scooping in twigs and leaves.

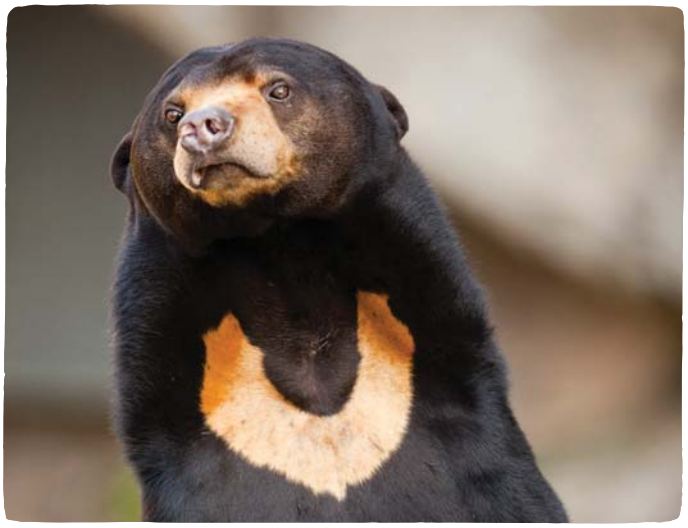
Sun Bears are omnivorous eating fruit, berries, grasses, insects and even eggs and chicks found in a bird's nest. With 7.5cm long claws they are skilled climbers ripping bark from trees where they use their 25cm long tongue to lick up insects and wild honey from tree hollows. Food is available all year round so unlike other bears, the Sun Bear doesn't need to hibernate in winter.

QUICK FUN FACTS

- **Sun Bears are the smallest of all the bears**
- **Sun Bears are the only bear that does not hibernate**
- **They have a 25cm long tongue**
- **Sun bears have a patch on their chest which looks like the rising sun**

Why are Sun Bears so important?

Sun Bears are important in maintaining the health of the lush rainforests of South East Asia. The holes their claws make in trees and fallen logs provide homes for other animals and as avid fruit eaters they are critical seed dispersers for many plants. Sun Bears are an indicator species meaning they give us information about the environment, when Sun Bear populations are healthy it indicates that the ecosystem is also healthy and balanced.



What do Sun Bears need to thrive in the wild?

Sun Bears love to live in tropical and subtropical rainforests that provide them with food and shelter. Sadly, large scale deforestation, logging and conversion of forest to agricultural land has destroyed much of the Sun Bear's habitat. They face a high risk of extinction in the wild, not only because of habitat loss but also due to the illegal wildlife trade. In order for these beautiful animals to thrive in the wild it is important to protect our rainforests and avoid purchasing food or medicines that may contain Sun Bear products.

What is Taronga doing to help the Sun Bear thrive in the wild?

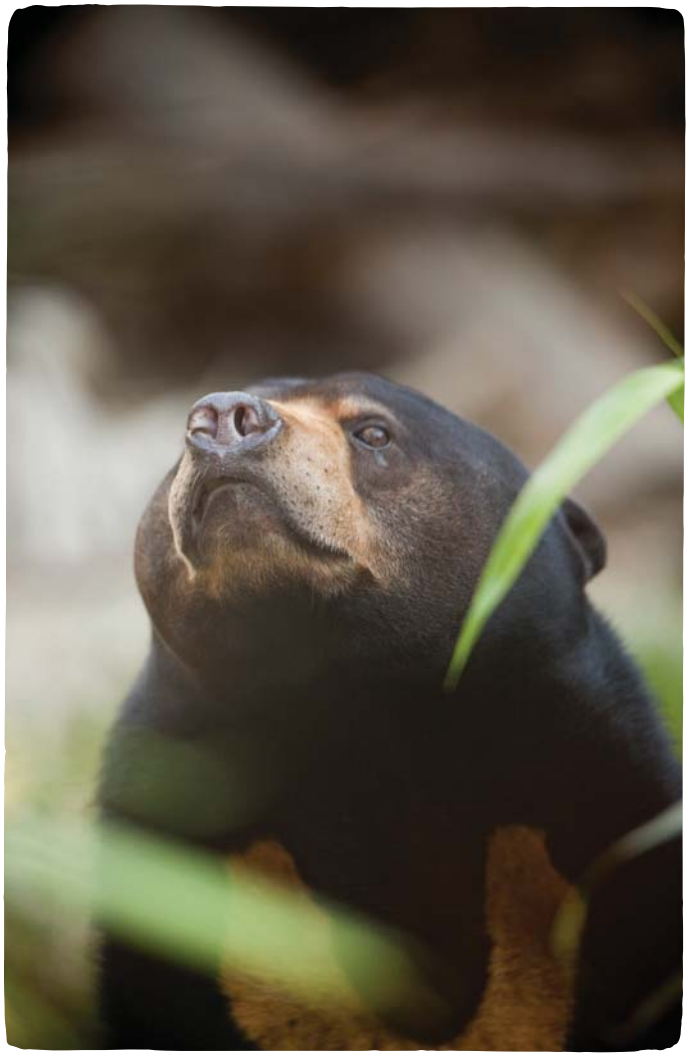
Taronga works with an organisation called Free the Bears to conserve Asian bears. Since 1997 Free the Bears has developed various projects, including ranger training, wild habitat surveys and long-term population monitoring in Cambodia and Vietnam. Helping local people become better caretakers of forests, bears and wildlife is an important part of conserving many threatened species not only the Sun Bear.

Taronga is committed to combating the global illegal wildlife trade. We support TRAFFIC, a global wildlife monitoring network that works to investigate and stop illegal wildlife trade of species like the Sun Bear. Taronga has created an app called Wildlife Witness that helps people report illegal wildlife trade and helps expose the criminal networks involved.

Taronga is also currently home to two beautiful Sun Bears, Mary and Mr Hobbs. Mr Hobbs was rescued from Cambodia by Free the Bears and Mary was the second Sun Bear ever to be born in Australia. Mary is named after Free the Bears founder, Mary Hutton and Mr Hobbs' name was from the movie "Mr. Hobbs takes a Vacation" starring James Stewart.

How you can help secure the Sun Bear's future in the wild

Lend your eyes to the wild - download the free Wildlife Witness app and report illegal wildlife trade. You never know when you may witness wildlife crime, especially when travelling to South East Asia a hotspot for wildlife trade. Share the Wildlife Witness app with your friends and family.



OUR CENTENARY COMMITMENT TO THE SUN BEAR

Taronga has committed to long-term support of Wildlife Protection Units in the Bukit Tigapuluh ecosystem, central Sumatra. This has been identified as one of 20 critical habitats for the survival of the Sun Bear, Asian Elephant, Sumatran Tiger and Sumatran Rhino. Wildlife Protection Units have been recruited, trained and equipped and have recently received the power to make arrests in the forest. They also have the power to prosecute poachers and loggers in the local courts.

PANGOLIN FACT FILE

Pangolins are one of the most fascinating and bizarre mammals in the world and are often referred to as a walking pine-cone or modern-day dinosaur. They are "the most trafficked mammal you've never heard of" however there is a chance they could go extinct before most people even realise they exist.

Pangolins possess none of the status of better-known animals that are hot on the international black market. It lacks the tiger's grace or the rhino's brute strength. Covered in tough, overlapping scales, they love to eat ants and termites using an extraordinarily long, sticky tongue which is longer than their body.

Poaching for illegal wildlife trade and habitat loss has made two pangolin species become critically endangered and the others threatened. Many people believe that the pangolin's scales and blood can be used as medicine and their meat is considered a delicacy.

QUICK FUN FACTS

- **Baby pangolins ride on their mothers tail**
- **They are most active between 3am-6am**
- **Their tongues are longer than their body, and are sticky to scoop up ants**
- **When threatened, they curl up into a ball**
- **They are also called Scaly Anteaters**
- **Their tough, protective scales have razor sharp edges**

Why are Sunda Pangolins so important?

Pangolins' insatiable appetite for insects gives them an important role in their ecosystem - pest control! Estimates indicate that one adult pangolin can consume more than 70 million insects annually. Pangolins have special muscles that seal their nostrils and ears shut, protecting them from attacking insects. They also have special muscles in their mouths which prevent ants and termites from escaping after capture. By constructing burrows and digging to get at ants and termites, these animals also aid in soil aeration.

What do Sunda Pangolins need to thrive in the wild?

Hunting is the primary threat to the Sunda Pangolin, with its meat, scales and skin being highly prized for food and traditional Chinese medicine. In the last decade this trade has involved tens of thousands of Sunda Pangolins and the species is subject to very heavy collection pressure across much of its range. Pangolins fetch such high prices on the international market that local use for either meat or their scales has completely halted in favour of international trade. Habitat destruction and degradation resulting from human activities may also be having a negative impact.

What is Taronga doing to help the Sunda Pangolin thrive in the wild?

Taronga has provided a Field Conservation Grant to the organisation Save Vietnam's Wildlife which plans to create a Pangolin Conservation Action Plan.This plan will ensure that the latest scientific research and the best management practices are brought together to achieve the best possible outcomes for the Pangolin. It will represent the first time a coordinated approach to the conservation of the species is adopted within Vietnam.

How you can help secure the Sunda Pangolin's future in the wild

You can lend your eyes to the wild - download the free Wildlife Witness app and report illegal wildlife trade. You never know when you may witness wildlife crime, especially when travelling to markets and shops across South East Asia that are hotspots for wildlife trade. Share the Wildlife Witness app with your friends and family and let's put an end to illegal wildlife trade within our generation.

OUR CENTENARY COMMITMENT TO THE SUNDA PANGOLIN

Taronga supports TRAFFIC, a global wildlife monitoring network that works to investigate and stop illegal wildlife trade of animals like the striking Pangolin. Taronga Zoo have partnered with TRAFFIC, to create Wildlife Witness; the first global community action smartphone app in the fight against illegal wildlife trade. The Wildlife Witness app allows tourists and locals to easily report wildlife trade by taking a photo, identifying the exact location of an incident and sending these important details to TRAFFIC.

REGENT HONEYEATER FACT FILE

The Regent Honeyeater is a favourite of bird watchers as it is a beautifully patterned native Australian bird. It has striking black and yellow lacy scalloping on its breast and back, with brilliant yellow patches on its wings and tail feathers that are visible during flight. It was once seen overhead in flocks of hundreds, these days the birds are elusive and their distribution is patchy. They can fly long distances to follow the flowering of favoured plant species and generally move north in autumn and winter. During this winter period, they often exhibit an unusual behaviour where isolated individuals will associate with and then often mimic the calls of wattlebirds and friarbirds. Although many birds display the behaviour of vocal mimicry, no other bird species is known to mimic close relatives in this way.

The Regent Honeyeater loves the flowers of four eucalypt species for their sweet nectar supply and will also eat fruit, insects, manna gum and lerps which are a small bug that lives on gum leaves. They feed quickly and aggressively in the outer foliage then fly swiftly from tree to tree collecting nectar and catching insects in flight. If you listen closely, they make a beautiful quiet, flute-like, metallic ringing call. When several birds congregate in a feeding tree, they squabble among themselves, bobbing and stretching their heads.

Regent Honeyeaters are very clever nest builders. Their nests are constructed of strips of eucalypt bark, dried grasses and other plant material. The bark strips form a thick, walled cup with cobwebs binding it together and fine dried grasses lining the nest. Their eggs are an unusual red-buff colour and are speckled with small purple-red and violet-grey markings. While the female incubates the eggs the loyal male is always close in a nearby tree. He even helps the female with the feeding of the young once they hatch!

QUICK FUN FACTS

- **Regent Honeyeater eggs are speckled with small purple-red and violet-grey markings**
- **200 Regent Honeyeaters bred at Taronga Zoo have been released into the wild at Mt Chiltern, Victoria**
- **It's estimated that there may be fewer than 1500 Regent Honeyeaters in Australia today**

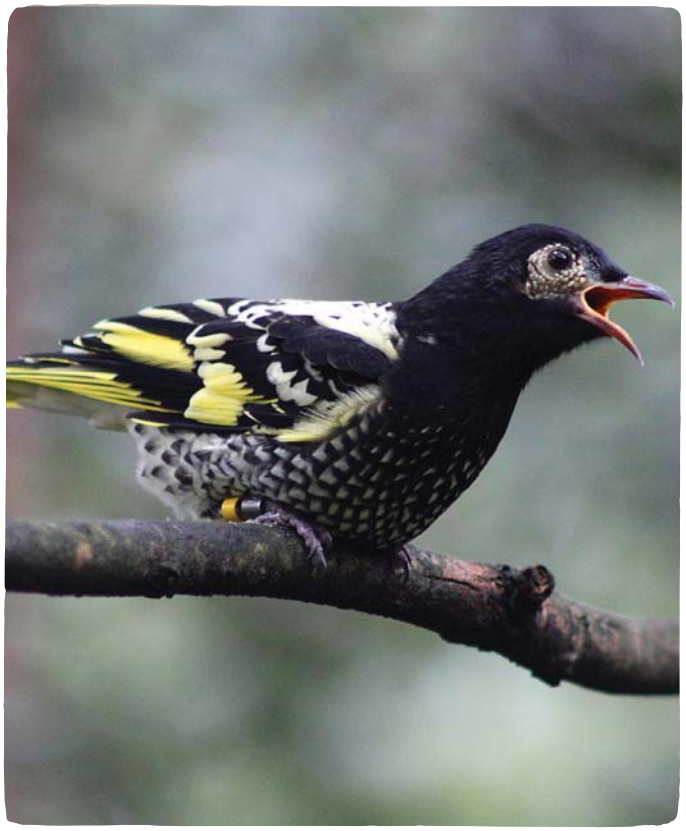
Why are Regent Honeyeaters so important?

The Regent Honeyeater has become a 'flagship species' for conservation in the threatened box-ironbark forests of Victoria and NSW on which it depends. These stunning birds help maintain healthy populations of our iconic eucalyptus trees through seed dispersal. This provides important food and habitat for many other native animals including the Koala. The plight of this species in the wild has drawn attention to the importance of protecting our beautiful natural forest landscapes. Efforts to save the Regent Honeyeater will also help to conserve remnant communities of other threatened or near threatened animals and plants, including the Swift Parrot, Superb Parrot, Brush-tailed Phascogale, Squirrel Glider and Painted Honeyeater.

What do Regent Honeyeaters need to thrive in the wild?

The Regent Honeyeater once ranged from Rockhampton in Queensland to the Mount Lofty Ranges in South Australia, but now are only found from the Warrumbungle Ranges in New South Wales to central Victoria. The Regent Honeyeater once occurred in congregations of 50-100 but today it is found either singly, in pairs or small groups of no more than ten. Sadly, land clearing has reduced the abundance of the eucalypt species that the Regent Honeyeater is dependent on for nectar and stock grazing is preventing the regeneration process. It is estimated that there

may be fewer than 1500 Regent Honeyeaters in Australia today and they are listed as endangered on the IUCN Red List. The Action Plan for Australian Birds 2010 added the Regent Honeyeater to the "critically endangered" list. In order for Regent Honeyeaters to thrive in the wild they need us to create more habitats for them to feed on. By planting the four species of eucalypts that the Regent Honeyeater feeds on, their chances of survival can be greatly increased.



What is Taronga doing to help the Regent Honeyeater thrive in the wild?

Taronga Zoo has established a captive population of the endangered honeyeaters as part of a recovery plan. The Regent Honeyeater is on display in the Blue Mountains Bushwalk and in other nearby aviaries at Taronga Zoo. This population ensures that there is a genetically viable insurance group and enables the captive breeding and release of these critically endangered birds back into the wild. So far, almost 200 birds have been bred at Taronga and released into the wild at Mt Chiltern, Victoria. In 2015, 77 birds were released. Breeding between captive bred and wild birds has been recorded which is evidence of the success of this conservation program.

The Regent Honeyeater recovery plan also includes the protection of woodland areas in which Regent Honeyeaters have been sighted. These areas will be protected from activities such as clearing, logging and firewood collection. Landcare organisations are revegetating areas to link remaining patches of habitat.

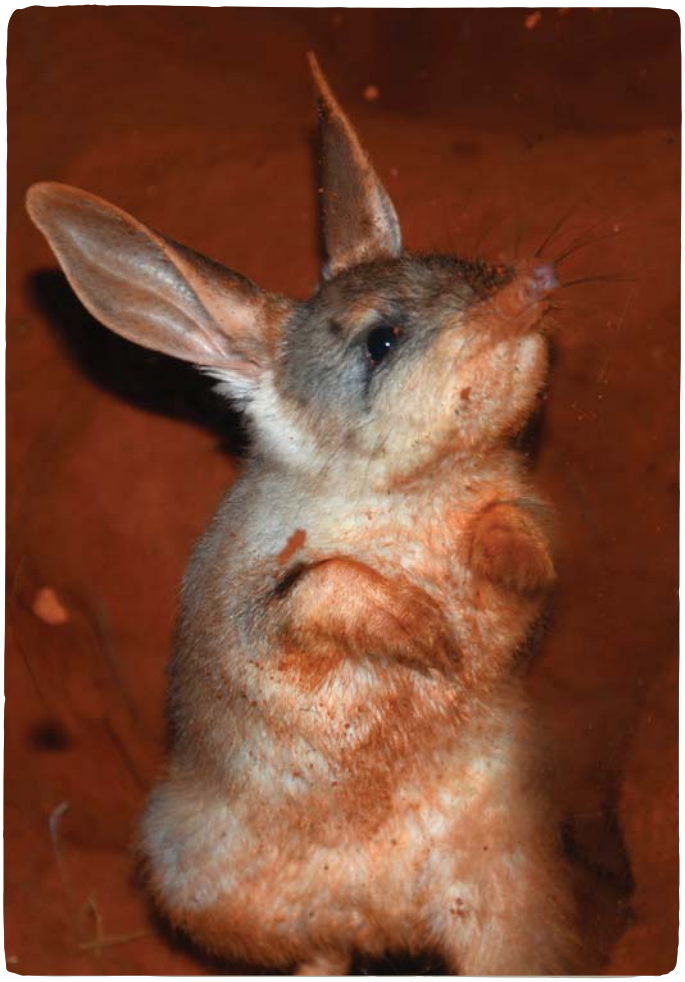
How you can help secure the Regent Honeyeaters future in the wild?

You can help Regent Honeyeaters and other woodland birds by protecting remnant woodland in your community which provides essential habitat for all our native animals, including the Regent Honeyeater. Leave dead and fallen timber on the ground and avoid taking trees with hollows. Ask firewood merchants where their timber comes from and avoid box iron-bark species. Support local efforts to conserve threatened species by joining local organisation such as Landcare, Green Corps or the Australian Trust for Conservation Volunteers. Look out for Regent Honeyeaters when bushwalking. If you see a Regent Honeyeater try and take a photo or take a record of its band colours (if any) and the specific area it was spotted, then report your find to the Recovery team co-ordinator on freecall 1800 621 056

OUR CENTENARY COMMITMENT TO THE REGENT HONEYEATER

Almost 200 Regent Honeyeaters bred at Taronga have been released into the wild at Mt Chiltern, Victoria. Successful wild breeding has been recorded and each year more than 60 volunteers including Taronga staff, students and volunteers head to Capertee Valley, NSW to plant trees to support these birds. Taronga is extending its Regent Honeyeater breeding program to Dubbo so more birds can be bred and released each year.

GREATER BILBY FACT FILE



Bilbies are the largest species in the bandicoot family and have beautiful fluffy, silky grey fur and a long snout with a slender tongue. They keep cool in the hot Australian summer by using their strong claws to dig cool burrows underground. These burrows are generally spiral and up to 3 metres deep. Their large, hairless ears let heat escape from their bodies and they emerge to find food in the cool of the night. Due to their big ears they are sometimes called the rabbit-eared bandicoot. Their amazing sense of smell and hearing is important for finding food and detecting predators over large distances. Their ears are exceptionally manoeuvrable and can be rotated, flattened against their body, positioned at right angles or even folded in half.

Bilbies are part of a unique group of mammals called marsupials. That means they give birth to live young at a very early stage of their development and the young develop while attached to a teat in a pouch. Bilbies are even more unusual because they have a backwards facing pouch. This is a very useful adaptation because it means that when a female is digging away soil to hunt for food or build a burrow, the soil does not fill up the pouch. Bilbies can give birth up to four times per year, as long as there is sufficient rainfall and food is available to them. They have the smallest gestation period of all mammals, only 12-14 days. They can have up to three young per litter and the infant bilbies remain in the pouch for nearly 80 days. Once they are ready to leave the pouch they stay in their mother's burrow for another two weeks until they become independent.

In recent times, Australians have begun a trend of using the bilby as the symbol of Easter, replacing the rabbit which has caused so much damage to the Australian environment. The now popularised Easter Bilby has raised further awareness of its plight in the wild as well as funds to support conservation efforts.

QUICK FUN FACTS

- **Bilbies are the largest species in the bandicoot family**
- **Bilbie's burrows can be up to 3 metres deep**
- **Their huge ars are so maneuverable they can be folded in half**
- **Bilbies have a backward facing pouch**

Why are Bilbies so important?

Bilbies are very important "ecosystem engineers" in the iconic Australian bush. They create disturbances in the form of nose pokes, scratching, shallow and deep digs, long bull-dozing tracts and complex subterranean burrows. They might be small but these mammals punch above their weight, shifting up to 3.6 tonnes of soil per kilogram of body mass in a year. In doing this, they improve the soil health by turning over and mixing organic matter. Soil turnover brings deep soils and their nutrients to the surface. Their diggings also trap organic matter and other materials, increasing nutrient availability for the plants.

The soil in the harsh Australian bush can sometimes be very hard and dry. Bilbies can break through these hard soils, which would otherwise be impenetrable to plant seedlings. By breaking through this hard soil, water can infiltrate which increases soil moisture. These digging sites can be the only site of water infiltration in otherwise water-repellent soils. They can also reduce the amount of combustible plant material within a landscape, possibly preventing a bush fire!

Another important job the bilbies are responsible for is the spread of mycorrhizal fungi across the landscape. These fungi help plants absorb nutrients and survive in the nutrient-poor Australian soils. Many of these

important symbiotic fungi rely on bilbies and other fungus eating animals to distribute their spores across the landscape.

What do Bilbies need to thrive in the wild?

Bilbies have an amazing ability to survive in a wide range of habits and were once found over 70 % of the Australian mainland. They can survive anywhere from arid rocky soils with little ground cover to semi arid scrublands and woodlands. They particularly love spinifex and tussock grasslands and acacia scrublands. They are able to get most of their water requirements from food rather than from drinking, which means they can survive in habitats without access to free standing water.

Unfortunately, bilbies are currently classified as vulnerable on the IUCN Red List of threatened species and listed as a threatened species under Australian law. The main threats to their survival are loss of habitat, competition with introduced species and predation, particularly by cats, foxes and dingoes. Rabbits, cattle and other hoofed animals compete with bilbies for food and habitat, as agricultural activities now extend over most of Australia's fertile regions. Tree clearing, crop planting and domestic stock grazing are making these areas unsuitable for bilbies. Altered fire patterns have also changed the types and abundance of food plants available to bilbies and road mortalities are increasing.

Today the remaining wild populations of bilbies are found in fragmented and patchy areas in the Tanami Desert of the Northern Territory, the Great Sandy Desert, the Pilbara and Kimberley regions of Western Australia and an isolated population lives in south-western Queensland. Bilbies need us to protect important remaining natural habitat and restore greater areas of land to its natural, pest-free conditions in order to thrive in the wild.

What is Taronga doing to help Bilbies thrive in the wild?

Taronga has an established partnership with 'Save the Bilby Fund' to support a Population and Habitat Viability Assessment to build a science-based conservation action plan for the bilby in Queensland. The assessment will set the direction for Bilby conservation and management for the next 5-10 years and will form the basis of a new National Recovery Plan for the Greater Bilby.

Taronga also partners with the Australian Wildlife Conservancy to support multiple recovery projects aimed at maintaining feral-free areas and implementing fox and feral cat controls. This partnership ensures the protection of almost 15 % of the global population of bilbies and secures an important source population for reintroductions to regions where the species has become regionally extinct.

Taronga is also part of a breeding program and in 2012 Taronga acquired a new pair of bilbies from Zoos South Australia to support the program. These animals are on display in the Australian Nightlife exhibit.

How you can help secure the Bilby's future in the wild

Taronga is committed to bilby conservation but it is you who can make the greatest difference to wildlife and habitats. There are many things you can do including being a responsible pet owner and keeping cats indoors at night as well as planting native seeds in your garden. During Easter you can even purchase chocolate bilbies from manufacturers that contribute to bilby conservation.

OUR CENTENARY COMMITMENT TO THE GREATER BILBY

Taronga funded the development of the National Bilby Recovery Plan in 2015. We are now working with wild sanctuaries and other zoos to breed, release and protect this threatened species. Taronga is extending its Greater Bilby breeding program to Dubbo so more bilbies can be bred and released each year.