



A Guide to the **Reptiles and Amphibians** of Barrow Island



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Gorgon Project

Operated by Chevron Australia
in joint venture with
ExxonMobil 
Osaka Gas | Tokyo Gas | Chubu Electric Power

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Chevron's Policy on Working in Sensitive Areas

Protecting the safety and health of people and the environment is a Chevron core value. Therefore, we:

- Strive to design our facilities and conduct our operations to avoid adverse impacts to human health and to operate in an environmentally sound, reliable and efficient manner.
- Conduct our operations responsibly in all areas, including environments with sensitive biological characteristics.

Chevron strives to avoid or reduce significant risks and impacts our projects and operations may pose to sensitive species, habitats and ecosystems. This means that we:

- Integrate biodiversity into our business decision-making and management through our Operational Excellence (OE) management system.
- Drive and assess our performance relating to biodiversity through key OE expectations, such as Environmental Stewardship, and processes, including HES Due Diligence for Property Transfers; Environmental, Social and Health Impact Assessment; and Risk Management.
- Understand that humans and the natural environment are interdependent and interact with each other in various ways. In managing our impacts we consider those interrelationships and the functions ecosystems perform in supporting sustainable economic development.

Chevron recognises that our activities could affect particularly sensitive or valuable biodiversity inside or outside of legally-designated protected areas. Therefore we:

- Decide whether and how to operate in a protected or sensitive area, based on consideration of the specific circumstances of the area and operation involved.
- Operate in such areas only with government legal authorisation, and where we are confident we can comply with all regulatory requirements and use operating practices appropriately protective of the area.
- Use our OE processes to avoid or minimise potential risks of our operations to sensitive biological resources and seek ways to make positive contributions to biodiversity conservation in the area.

Chevron undertakes activities to raise internal and external awareness of the importance of conserving biodiversity and how the company is addressing it. This includes:

- Communicating about our biodiversity-related activities to employees and outside audiences, such as through our Corporate Responsibility report.
- Engaging with government, local communities and others to understand and work to address significant biodiversity issues in areas where we operate.
- Participating in industry associations and other forums to share and promote best practices for biodiversity conservation.
- Seeking to understand and, where appropriate, participating in development of external policy-making activities that affect our operations, such as those adopted under the UN Convention on Biological Diversity and national, regional and local biodiversity policies and plans.
- Working with a variety of external organisations to make positive contributions to biodiversity conservation in areas where we operate and globally.

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Barrow Island is the home of the Gorgon Project - one of the world's largest natural gas projects and the largest single resource project in Australia's history. The Gorgon Project will develop the Greater Gorgon Area gas fields, located about 130 kilometres off the north-west coast of Western Australia.

The Chevron-operated Gorgon Project is a joint venture between the Australian subsidiaries of Chevron (approximately 47 percent), ExxonMobil (25 percent), Shell (25 percent), Osaka Gas (1.25 percent), Tokyo Gas (1 percent) and Chubu Electric Power (0.417 percent).

Introduction

About Barrow Island

Barrow Island is a nature reserve located approximately 70 kilometres off the north-west coast of Western Australia. It is Western Australia's second largest island. The nature reserve is approximately 25 km long by 10 km wide and totals approximately 23,400 hectares above the high-tide mark; however, the reserve's area is much greater as it also extends into the intertidal zone.

Over geological time, the land mass that became Barrow Island experienced several sea level changes connecting and separating the flora and fauna from the nearby Australian mainland. More recently, 8,000 to 10,000 years ago, rising sea levels once again separated Barrow Island from the mainland.





Barrow Island has a special place in Western Australia's history, geography and environmental management. In 1910, Barrow Island was designated as a Class 'A' status Nature Reserve reflecting its importance as a refuge for wildlife species, some of which are native to Barrow Island and some of which have vulnerable and/or threatened populations on the mainland.

While Barrow Island is an important island from an environmental perspective, it also hosts one of Australia's largest onshore oilfields, and is now home to the Gorgon Project.

Barrow Island is vested in the Conservation Commission of Western Australia and is a model for environmental management. After oil was discovered on Barrow Island in 1964, the island was actively managed by West Australian Petroleum up to 2000, and since then by Chevron Australia. This management has ensured the nature conservation values and production values on the island are



balanced between oil extraction, wildlife and landscape conservation, and the study and preservation of features of archaeological, historic and scientific interest.

Almost 2600 species of terrestrial and subterranean plants and animals have been regularly recorded on Barrow Island. These include 378 native plants, 13 mammal species (including two species of bats), at least 119 types of terrestrial and migratory birds, 43 species of terrestrial reptiles, three subterranean vertebrates (an eel, a fish and a snake), over 2000 terrestrial invertebrates, and at least 34 species of subterranean invertebrates.

The marine environment is just as diverse, hosting a rich community of coral, seagrass, macroalgae and other benthic invertebrate species. Four species of marine turtle nest on Barrow Island, with Flatback and Green Turtles being the most common.

The continued survival of many of these species on Barrow Island is a direct result of the absence of introduced predators (foxes, cats)



and competitors (rabbits, goats) that have contributed to their decline on the mainland; the maintenance of environmental processes on the island; and the resilience of species that have evolved in an environment which experiences natural dynamic climatic change over time.

Chevron Australia's key environmental objective is to protect the conservation and biodiversity values of Barrow Island. This means ensuring the survival of the wildlife habitats upon which they depend. Protection of the island's conservation values focuses on four key areas: quarantine management to ensure non-indigenous species do not enter the island; workforce education on the environmental values of Barrow Island; progressive rehabilitation to reinstate disused production areas; and careful planning to maintain the ecosystem functions. Over the past 40 years, a strict environmental management plan has enabled petroleum activities to successfully coexist with Barrow Island's unique flora and fauna.



Herpetofauna of Barrow Island

Barrow Island hosts 43 species of terrestrial reptiles comprising dragons (three species), legless lizards (five species), geckos (five species), skinks (19 species), blind snakes (three species), monitors (three species), venomous and non-venomous snakes (five species) and one frog species. Most of these species, or their habitats, are widely distributed on Barrow Island.

Reptiles occupy all habitats across Barrow Island, a sign of their adaptation to the island environment. Barrow Island has important beach habitat for nesting marine turtles, and foraging marine (intertidal and subtidal) habitat for reptiles such as marine turtles and sea snakes. Other habitats occupied by reptiles include rocky outcrops (favoured by dragon lizards), *Triodia* bushes (almost exclusively favoured by skinks, geckos and legless lizards), and termite mounds.



The Perentie is ecologically significant on the island as it is a top-level predator with few natural enemies; it is both a carnivore and a scavenger. Perenties are often seen basking outside buildings or on roads.

Only one species of frog survives on the island - a water-holding frog that burrows into the ground and goes into a deep sleep (torpor) during dry periods, awakening after the first heavy rains to breed during these wet periods.

Of the six marine turtle species documented in Australia, only Green, and Flatback Turtles are typically found nesting at Barrow Island, though rarely, Hawksbill and Loggerhead Turtles. The estimated size of the Hawksbill Turtle reproductive population at Barrow Island is 100 per year. Hawksbill Turtle nesting on Barrow Island occurs on many beaches, particularly small, shallow beaches typically characterised by coarse-grained sand or coral grit interspersed with rocks and beach wrack.



Track counts estimate that the total Green Turtle reproductive population size at Barrow Island is about 20,000 females, with a similar level of nesting in the Montebello Group. Green Turtles favour the west and north-east coasts of Barrow Island, which are characterised by high-energy beaches with a steeply sloped, sandy and unobstructed foreshore approach. Substantial aggregations of courting male and female turtles occur along the west coast beaches of Barrow Island, where these turtles are known to nest.

The size of the nesting female Flatback Turtle population of Barrow Island has been estimated at 3600, with about half of them nesting each year at Barrow Island. Flatback Turtle nesting is concentrated on the east coast of Barrow Island on deep sandy, low energy beaches with wide shallow intertidal zones. Recent satellite tracking data shows that females will nest up to three times each season, and some move between Barrow Island and the mainland during this time. Outside of the nesting season, females have been shown to migrate as far north as the Kimberley before returning south to nest.



This booklet on reptiles is part of a series of Barrow Island nature books, created to help Chevron Australia personnel and visitors to the island understand the diverse and interesting wildlife that exists on Barrow Island. All wildlife is protected on the island so when visiting please ensure that you do not touch or handle flora or fauna without a valid licence or permit. If you would like further information about the reptiles on the island, do not hesitate to contact one of the environmental specialists on-site, or in the Australasia Strategic Business Unit. Scientific names of herpetofauna follow the taxonomy of the Western Australian Museum.

Enjoy reading about reptiles on Barrow Island and please look out for additional booklets in this series.

Perentie

(*Varanus giganteus*)

Description: The Perentie is Australia's largest lizard and has been recorded to weigh up to 6 kg on Barrow Island and reach a length of almost 2 m. Individuals have unique spot patterns on their neck enabling individual recognition.

Distribution: The Perentie occurs over a large area of the interior of Australia. On Barrow Island, it is common island wide. It is found on the beaches during the turtle season.

Preferred Habitat: The Perentie is active in all areas of Barrow Island. It uses burrows and rock shelters during the night and in the middle of the day, and basks in the sun during the early morning and late afternoon.

Behaviour and Breeding: Perenties are known to contain venom. They are carnivores and scavengers, and their diet consists of a range of small to medium-sized mammals, birds, small reptiles, invertebrates and insects. Studies to track the movements of Perenties have shown some move towards the coast in the summer months to consume turtle eggs and hatchlings during the turtle nesting season. They are also known to cannibalise their own species.

Perenties are more active in the warmer summer months than in the winter months. They breed in spring to early summer and have only one clutch of eight to 11 eggs per year.

On very hot days, Perenties will climb termite mounds or shrubs to get off the hot ground, or shelter in the shade of thickets.

Conservation Status: All reptiles are protected on Barrow Island. The Perentie is not listed on the *Wildlife Conservation Act 1950* (WA), the *2008 International Union for Conservation of Nature Red List* nor the *Environment Protection and Biodiversity Conservation Act*. However, it is recognised as having significant ecological importance on Barrow Island due to its top predator status.



Photo - Dorian Moro

Short-tailed Pygmy Monitor

(*Varanus brevicauda*)

Description: The Short-tailed Pygmy Monitor is the smallest of the monitor lizards, with a maximum length of about 25 cm. It is a pale yellow to pinkish brown colour with dark brown flecks scattered on its body. It has a white underbelly.

Distribution: The Short-tailed Pygmy Monitor can be found in the arid regions of northern Western Australia and into the southern parts of the Northern Territory and Queensland. Records show it is restricted to the northern part of Barrow Island.

Preferred Habitat: Sandy arid areas that are dominated by spinifex, which they burrow beneath for shelter.

Behaviour and Breeding: The Short-tailed Pygmy Monitor is carnivorous and forages on a range of prey including insects, arthropods, smaller lizards and their eggs and carrion.

The species can produce up to five eggs in a clutch and up to three clutches in a six-month period. The young reach maturity within 12 to 18 months.

Conservation Status: All reptiles are protected on Barrow Island. The Short-tailed Pygmy Monitor is not listed on the *Wildlife Conservation Act 1950 (WA)*, the *2008 International Union for Conservation of Nature Red List* nor the *Environment Protection and Biodiversity Conservation Act*.



Photos - Top: Mike Bamford, Bottom: Alayna Beattie

Ring-tailed Dragon

(*Ctenophorus caudicinctus caudicinctus*)

Description: The colouring of the Ring-tailed Dragon can vary significantly depending on the region of its body, ranging from pale fawn to orange or brown. The dragon has distinctive dark brown or black rings on its tail. It has a white to yellow underbelly, with males also having dark patches on the throat and chest.

Distribution: The Ring-tailed Dragon is distributed throughout the north-western coastal region of Western Australia, ranging from the Gascoyne region through to the Pilbara and the Great Sandy Desert as well as several offshore islands, including Barrow Island.

Preferred Habitat: Open rock slopes with large rocks and boulders. Rock crevices are used to shelter from predators or from the heat during summer.

Behaviour and Breeding: The Ring-tailed Dragon mainly feeds on insects. It relies on the sun to warm it in the mornings and so can often be found basking in the sun on bare rock, or vertically on shrubs or branches. It is a summer breeding species and is influenced by the presence of cyclonic rains.

Conservation Status: All reptiles are protected on Barrow Island. The Ring-tailed Dragon is not listed on the *Wildlife Conservation Act 1950 (WA)*, the *2008 International Union for Conservation of Nature Red List* nor the *Environment Protection and Biodiversity Conservation Act*.



Photos - Top: Russell Lagdon, Bottom: Alayna Beattie

Dwarf (Western) Bearded Dragon

(Pogona minor minor)

Description: The Dwarf Bearded Dragon's colour can range from pale grey to fawn or reddish-brown. It has two rows of lighter blotches on either side of its body between the neck and tail, and a lighter row down the spine. The dragon's rounded and robust head has a row of spines across the back and spines at the rear edges of the jaw look like a beard. Its length is 40 cm, including tail.

Distribution: The Dwarf Bearded Dragon occupies a large proportion of Western Australia as well as the western area of South Australia and the lower, south-western region of the Northern Territory. It also occurs on some offshore islands.

Preferred Habitat: Coastal dunes to inland spinifex regions.

Behaviour and Breeding: The Dwarf Bearded Dragon's diet is made up mostly of insects and other invertebrates, but can also include flowers, seeds and sometimes small mammals.

The female lizards lay up to 12 eggs in a nesting chamber dug into the ground. During a good season, she can produce two or more clutches.

These dragons can climb and are often found sunning themselves on top of termite mounds and shrubs.

When threatened or intimidated, the dragon may slightly change in colour, or will flatten its body and open its mouth to reveal a bright colour to make it look larger and threatening.

Conservation Status: All reptiles are protected on Barrow Island. The Dwarf Bearded Dragon is not listed on the *Wildlife Conservation Act 1950* (WA). It is also not listed in the *2008 International Union for Conservation of Nature Red List* nor the *Environment Protection and Biodiversity Conservation Act*.



Photos - Top: Kathie Atkinson, Bottom: Steve Mossop

Rusty-topped Delma

(*Delma borea*)

Description: The Rusty-topped Delma is a legless lizard that has distinctive bands on its head, a pattern which fades as it matures. The body is usually brown or grey-brown above and whitish underneath. It can reach up to 40 cm in length.

It can be distinguished from snakes by the presence of ear openings, a broad (not flat) tongue, long tail, and the presence of leg flaps.

Distribution: The Rusty-topped Delma occurs across the northern part of Australia; from Western Australia, including several offshore islands, to the north-western regions of Queensland. They are known in various locations across Barrow Island.

Preferred Habitat: Spinifex grasslands on rocky soils and under rocks and logs.

Behaviour and Breeding: The Rusty-topped Delma generally feeds on insects. When threatened, the tail can be broken off but grows back fairly rapidly. It usually lays two eggs in a clutch.

Conservation Status: All reptiles are protected on Barrow Island. The Rusty-topped Delma is not listed on the *Wildlife Conservation Act 1950 (WA)*. It is also not listed in the *2008 International Union for Conservation of Nature Red List* nor the *Environment Protection and Biodiversity Conservation Act*.



Photos - Nathan Waugh

Excitable Delma

(Delma tincta)

Description: The Excitable Delma is a legless lizard. It is coloured brown or grey-brown above and white underneath. It has four dark bands on the head and neck. It gets its name from its reaction when it is disturbed, as it loses its tail which then continues to wriggle excitably. The Excitable Delma can be up to 35 cm long.

It can be distinguished from snakes by the presence of ear openings and a broad (not flat) tongue, long tail, and the presence of leg flaps.

Distribution: The Excitable Delma is widely distributed over the northern half of Australia.

Preferred Habitat: On Barrow Island it can usually be found hidden under rocks, logs or ground debris and vegetation.

Behaviour and Breeding: The diet of the Excitable Delma consists of a range of insects. It is active during the day and in the early evening. Its tail can be readily broken when threatened; regrowth of the tail is rapid. It lays two eggs in a clutch.

Conservation Status: All reptiles are protected on Barrow Island. The Excitable Delma is not listed on the *Wildlife Conservation Act 1950 (WA)*. It is also not listed in the *2008 International Union for Conservation of Nature Red List* nor the *Environment Protection and Biodiversity Conservation Act*.



Photos - Kathie Atkinson

Burton's Legless Lizard

(*Lialis burtonis*)

Description: The Burton's Legless Lizard is a moderately large legless lizard (up to 59 cm long) with a distinctive long, flat and wedge-shaped snout. Its body colour varies considerably from grey to brown to cream and black. Stripes or spots may also be present, often as a dark stripe bordered by two narrow cream stripes. It can be distinguished from snakes by the presence of ear openings and a broad (not flat) tongue.

Distribution: The Burton's Legless Lizard is widely distributed around Australia and some offshore islands, including the islands of Torres Strait. It is found across Barrow Island.

Preferred Habitat: Low vegetation or ground debris, rocks and logs.

Behaviour and Breeding: The Burton's Legless Lizard mainly feeds on small lizards, such as skinks, as well as small snakes, geckos, and insects. Like snakes, it can unhinge its jaws to eat large lizards. It is mostly active during the day. It produces two eggs per clutch.

Conservation Status: All reptiles are protected on Barrow Island. The Burton's Legless Lizard is not listed on the *Wildlife Conservation Act 1950 (WA)*, *2008 International Union for Conservation of Nature Red List* nor the *Environment Protection and Biodiversity Conservation Act*.



Photos - Top: Chevron Australia, Bottom: Alayna Beattie

Western Hooded Scaly-foot

(*Pygopus nigriceps*)

Description: The Western Hooded Scaly-foot is a snake-like lizard with no front limbs and hind limbs that are reduced to small scaly flaps. It has a black band on its head and red stripes along its body. Often the tail has a slightly different pattern, indicating that it has fallen off and regenerated.

Distribution: The Western Hooded Scaly-foot is found throughout Australia, except for the wetter south and south-east coasts and ranges. It occurs across Barrow Island.

Preferred Habitat: Wide range of habitats, including *Triodia* tussocks (spinifex) in the interior of the island.

Behaviour and Breeding: The Western Hooded Scaly-foot feeds on arthropods and is specifically known for being able to eat scorpions.

Mating generally occurs in spring and the eggs, normally a clutch of two, are laid in summer. The incubation time for the eggs ranges from 66 to 77 days.

Conservation Status: All reptiles are protected on Barrow Island. The Western Hooded Scaly-foot is not listed on the *Wildlife Conservation Act 1950 (WA)*, *2008 International Union for Conservation of Nature Red List* nor the *Environment Protection and Biodiversity Conservation Act*.



Photos - Kathie Atkinson

Variegated Dtella

(*Gehyra variegata*)

Description: The Variegated Dtella is a small, well-patterned gecko. It is grey to dark brown above with numerous irregular blackish marblings or patches, and has a white underbelly. Its snout-to-vent length is 21 to 54 mm.

Distribution: The Variegated Dtella occurs throughout most of the arid and semi-arid zones of central Australia. It is also found on many islands off the west coast as well as in the drier and warmer forest and woodlands of eastern Australia. It has a widespread distribution on Barrow Island.

Preferred Habitat: Trees and shrubs but can also be found in rock crevices.

Behaviour and Breeding: The Variegated Dtella will forage under cover during the day but is strongly nocturnal, carrying out most of its activity at night. It eats insects, spiders and other arthropods. The female produces a single egg in a clutch and may produce two clutches per year, often sharing a nesting site with other females.

Conservation Status: All reptiles are protected on Barrow Island. The Variegated Dtella is not listed on the *Wildlife Conservation Act 1950 (WA)*, *2008 International Union for Conservation of Nature Red List* nor the *Environment Protection and Biodiversity Conservation Act*.



Photos - Russell Lagdon

Bynoe's Gecko

(*Heteronotia binoei*)

Description: The Bynoe's Gecko is highly variable in colour and pattern, ranging from grey to brown, red and black. It often has spots and blotches irregularly distributed over its tail. Its snout-to-vent length is 19 to 54 mm.

Distribution: The Bynoe's Gecko is widely distributed throughout most parts of Australia, except the more humid areas of the south-east and south-west. Its distribution also includes many islands off the west coast. It has a widespread distribution on Barrow Island.

Preferred Habitat: Shelters under ground debris and leaf litter, spinifex, logs and stones.

Behaviour and Breeding: Most of the foraging done by the Bynoe's Gecko is at night, especially from dusk until midnight. It is a generalist predator consuming a range of insects and their larvae, arthropods and occasionally vegetation and other lizards.

It is likely that all individuals on Barrow Island are females and reproduce by parthenogenesis, a form of asexual reproduction where growth and development of embryos occurs without fertilisation by a male.

The female can produce a maximum of two brittle-shelled eggs per clutch and lays only one clutch per year. The eggs are laid in nests in the ground covered with organic matter. The young geckos become sexually mature within one to three years.

Conservation Status: All reptiles are protected on Barrow Island. The Bynoe's Gecko is not listed on the *Wildlife Conservation Act 1950 (WA)*, *2008 International Union for Conservation of Nature Red List* nor the *Environment Protection and Biodiversity Conservation Act*.



Photos - Top: Kathie Atkinson, Bottom: Stephan Zozaya

Stony-soil Ctenotus

(*Ctenotus saxatilis*)

Description: The Stony-soil Ctenotus is fawn to olive brown in colour, has a dark brown stripe down its back, and has a speckled pattern on its sides.

Distribution: The Stony-soil Ctenotus is distributed through the northern arid zone of Australia, from the Kimberley in Western Australia to the central region of Queensland. It is also found on many islands off the west coast.

Preferred Habitat: Due to its wide distribution, the Stony-soil Ctenotus is found in a range of habitats, from coastal vegetation to inland rocky slopes.

Behaviour and Breeding: The Stony-soil Ctenotus is an opportunistic feeder on a wide variety of insects. It lays eggs and is thought to be sexually active during the mid to late dry season.

Conservation Status: All reptiles are protected on Barrow Island. The Stony-soil Ctenotus is not listed on the *Wildlife Conservation Act 1950 (WA)*, *2008 International Union for Conservation of Nature Red List* nor the *Environment Protection and Biodiversity Conservation Act*.



Photos - Top: Kathie Atkinson, Bottom: Mark Sanders

Barrow Island Leopard Skink

(Ctenotus pantherinus acripes)

Description: The Barrow Island Leopard Skink is approximately 22 cm long. It is a grey to olive-brown skink with white spots on the back and base of the tail, and with each spot outlined by a black bar. It has a coppery-brown back and sides.

Distribution: The Barrow Island subspecies of Leopard Skink appears to be endemic (restricted) to Barrow Island, although other subspecies are distributed in the Northern Territory and Queensland.

Preferred Habitat: Wide range of habitats across Barrow Island.

Behaviour and Breeding: Little is known of its breeding and behaviour. The Barrow Island Leopard Skink moves swiftly on warm days, if disturbed.

Conservation Status: All reptiles are protected on Barrow Island. In Western Australia this taxon is only known from Barrow Island. The Barrow Island Leopard Skink is not listed on the *Wildlife Conservation Act 1950 (WA)*, *2008 International Union for Conservation of Nature Red List* nor the *Environment Protection and Biodiversity Conservation Act*.



Photos - Kathie Atkinson

Exquisite Fire-tail Skink

(*Morethia ruficauda exquisita*)

Description: The Exquisite Fire-tail Skink has a glossy black head, sides and back, white-gold stripes running along the length of its body, and a distinctive red tail and red hind legs. It can reach up to nine centimetres in length.

Distribution: The Exquisite Fire-tail Skink is found across the Pilbara region of Western Australia, including Barrow Island.

Preferred Habitat: Not much is known about this species. Records from Barrow Island show the Exquisite Fire-tail Skink occurs on coastal areas with sandy soils, and among rocky areas.

Behaviour and Breeding: Not much is known about this species. It is rarely seen or captured during environmental programs on the island.

The Exquisite Fire-tail Skink is known to feed on ants, and to wriggle its tail as a means of attracting insects, which it then catches for food.

Conservation Status: All reptiles are protected on Barrow Island. The Exquisite Fire-tail Skink is not listed on the *Wildlife Conservation Act 1950 (WA)*, *2008 International Union for Conservation of Nature Red List* nor the *Environment Protection and Biodiversity Conservation Act*.



Photo - Alayna Beattie

North-western Sandslider

(*Lerista bipes*)

Description: The North-western Sandslider (a species of skink) is a skink with pale fawn to reddish-brown colouration on top, and two dark stripes on its side from the top of the head to the tail. It has no forelimbs and only has two small back legs.

Distribution: The North-western Sandslider is distributed through the arid interior of Western Australia and the Northern Territory and along the upper west coast of Western Australia.

Preferred Habitat: Usually burrows under loose soil or sand, beneath stones, logs or termite mounds.

Behaviour and Breeding: The North-western Sandslider feeds mostly on ants, termites and other small insects.

Conservation Status: All reptiles are protected on Barrow Island. The North-western Sandslider is not listed on the *Wildlife Conservation Act 1950 (WA)*, *2008 International Union for Conservation of Nature Red List* nor the *Environment Protection and Biodiversity Conservation Act*.



Photos - Top: Kathie Atkinson, Bottom: Dorian Moro

Western Stimson's Python

(*Antaresia stimsoni stimsoni*)

Description: The Western Stimson's Python can grow up to one metre in length. It has red-brown or dark brown patches of colour, surrounded by white or cream areas; its underbelly is white. White stripes run along both sides for about a third of its body.

Distribution: The Western Stimson's Python is distributed across the central western region of Australia. In Western Australia, its distribution extends from the Kimberley region to as far south as the Darling Range near Perth. The snake is present on several islands off the west coast, including Barrow Island.

Preferred Habitat: Wide range of environments including spinifex grassland, termite mounds, logs and rock crevices.

Behaviour and Breeding: The Western Stimson's Python is a nocturnal hunter. It is an ambush predator, preying on small vertebrates such as geckos, mice, and bats in caves. These are captured by waiting outside caves, termite mounds or animal trails and ambushing as the prey enters or exits.

Breeding occurs during late autumn and winter. The female lays up to 20 eggs during the period from August to November.

Conservation Status: All snakes are protected on Barrow Island. The Western Stimson's Python is not listed on the *Wildlife Conservation Act 1950 (WA)*, the *2008 International Union for Conservation of Nature Red List* nor the *Environment Protection and Biodiversity Conservation Act*.



Photos - Top: Marie Lochman, Bottom: Kathie Atkinson

North-western Shovel-nosed Snake

(Brachyurophis approximans)

Description: The North-western Shovel-nosed Snake is brown to reddish-brown above with a broad blackish bar on its head. It has many well-defined dark cross bands, which are wider than the pale interspaces. The average length of the snake is 0.3 m. This snake is venomous but its mouth is too small to bite a person. **VENOMOUS.**

Distribution: The North-western Shovel-nosed Snake is found from Port Hedland south to Shark Bay and inland to Wiluna as well as on Varanus and Barrow Islands.

Preferred Habitat: Arid open woodland, grasslands or shrublands as well as areas with sandy soils such as dunes or sandplains. They are often seen on roads at night.

Behaviour and Breeding: This burrowing snake is nocturnal –it shelters under logs, rocks, loose soil or animal burrows during the day, then forages at night. The North-western Shovel-nosed Snake feeds on lizard and snake eggs found in the soil or in leaf litter.

Little is known about its reproductive behaviour. The female can lay between two and five eggs.

When disturbed, it mimics a looping behaviour by moving its head from side to side as if to strike.

Conservation Status: All snakes are protected on Barrow Island. The North-western Shovel-nosed Snake is not listed on the *Wildlife Conservation Act 1950 (WA)*, the *2008 International Union for Conservation of Nature Red List* nor the *Environment Protection and Biodiversity Conservation Act*.



Photos - Alayna Beattie

Mulga (or King Brown) Snake

(Pseudechis australis)

Description: The Mulga Snake is one of Australia's most venomous snakes. It is coloured copper, reddish-brown or dark olive brown above and cream coloured underneath. The scales have dark edges giving it a reticulated pattern. It can reach up to one metre in length on Barrow Island. **DANGEROUSLY VENOMOUS.**

Distribution: The Mulga Snake is present throughout Australia, except eastern New South Wales, the southern parts of South Australia, the south-western region of Western Australia, Victoria and Tasmania. It is found across Barrow Island.

Preferred Habitat: Logs or burrows dug by goannas or boodies, rock crevices, and in particular, spinifex grasslands.

Behaviour and Breeding: The Mulga Snake is nocturnal during hot weather and feeds on mammals, birds, frogs and other reptiles. It is highly cannibalistic and very aggressive. It will flatten its body and strike quickly, maintaining a chewing grip while injecting its venom. It lays approximately 12 eggs in a clutch.

Conservation Status: All snakes are protected on Barrow Island. The Mulga Snake is not listed on the *Wildlife Conservation Act 1950 (WA)*, *2008 International Union for Conservation of Nature Red List* nor the *Environment Protection and Biodiversity Conservation Act*.



Photos - Top: Kathie Atkinson, Bottom: Alayna Beattie

Moon Snake

(*Furina ornata*)

Description: The Moon Snake is pale brown or pale reddish-brown in colour with an unbroken black patch on its head, behind which lies a wide orange-red bar on the head and neck. The lips and underbelly of the snake are white. It is approximately 0.5 m in length. **VENOMOUS.**

Distribution: The Moon Snake can be found on the mid-western coast of Western Australia, including offshore islands (Barrow Island, Hermite Island, Lachlan Island). It is also known from the Northern Territory, northern South Australia, and northern Queensland.

Preferred Habitat: The Moon Snake occurs in a range of habitats on Barrow Island.

Behaviour and Breeding: The Moon Snake is nocturnal, and feeds mostly on small skinks. Little is known of its breeding or other habits; however, it is known to lay three to six eggs to the clutch. It frequents roads at night, probably using these as a heat source.

Conservation Status: All snakes are protected on Barrow Island. The Moon Snake is not listed on the *Wildlife Conservation Act 1950* (WA), *2008 International Union for Conservation of Nature Red List* nor the *Environment Protection and Biodiversity Conservation Act*.



Photos - Alayna Beattie

Hawksbill Turtle

(Eretmochelys imbricata)

Description: The distinguishing feature of the Hawksbill Turtle is its parrot-like beak. Mature turtles have an olive-green or brown upper shell with reddish-brown, brown or black markings. The underside of the turtle is a cream to yellowish colour. The shell is highly domed and heart shaped, with overlapping scales. The hatchlings are brown to black above with a light colouring underneath, and have a straight shell length of four centimetres.

Distribution: The Hawksbill Turtle has a global distribution. It occurs in tropical, subtropical and temperate waters. In Australia, the major nesting areas occur on multiple islands in Queensland, the Northern Territory and Western Australia, including the Lowendal Islands, where it nests frequently, and Barrow Island, where it nests infrequently.

Preferred Habitat: For their first five to 10 years, Hawksbill Turtles are thought to drift on ocean currents after which they settle and forage in tropical tidal and subtidal coral and rocky reef habitats.



Photos - Top: Kellie Pendoley, Bottom: Catherine Bell

Hawksbill Turtle (continued)

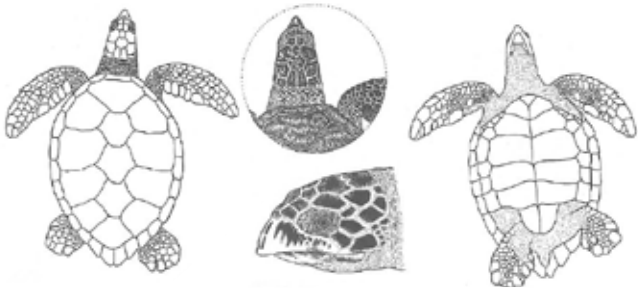
(Eretmochelys imbricata)

Behaviour and Breeding: The Hawksbill Turtle is an omnivore, eating a variety of plants and animals, including sponges, octopus, squid, marine snails, jellyfish, seagrass and algae.

Hawksbill Turtles do not reach breeding age until they are more than 30 years old. Once sexual maturity is reached, breeding males and females move to areas near nesting beaches for mating. Females then come onto the beach over several nights to lay their eggs in a chamber in the sand. The peak season for nesting in Western Australia, including Barrow Island, is between October and November, with less frequent nesting during December and January.

Hawksbill Turtles are migratory and can travel up to 2000 km between foraging areas and nesting areas.

Conservation Status: The Hawksbill Turtle is listed as a vulnerable, marine and migratory species in the *Environment Protection and Biodiversity Conservation Act*. It is listed as critically endangered on the 2008 *International Union for Conservation of Nature Red List* and is listed as threatened on the *Wildlife Conservation Act 1950 (WA)*.



Sketch - Tom McFarland, Photo - Kellie Pendoley

Green Turtle

(Chelonia mydas)

Description: The Green Turtle has an olive green, nearly circular carapace (upper shell) up to one metre in length. Adults have a carapace that is usually reddish-brown and black, and they are white underneath. Adults may weigh up to 130 kg. Hatchlings are only five centimetres long and weigh 25 g. Hatchlings have a black carapace with white markings around the carapace, flippers and on the plastron (lower shell).

Distribution: The Green Turtle has a global distribution. In Australia, it is distributed around the tropical regions and nests, forages and migrates across these areas. There are several important breeding areas around Queensland, the Northern Territory and Western Australia, of which Barrow Island is an important rookery.

Preferred Habitat: The location and activity of juvenile Green Turtles is largely unknown, however, it is thought that they drift on ocean currents. Adult Green Turtles remain in tropical coral reefs or inshore seagrass beds.



Photos - Top: Dorian Moro, Bottom: Kellie Pendoley

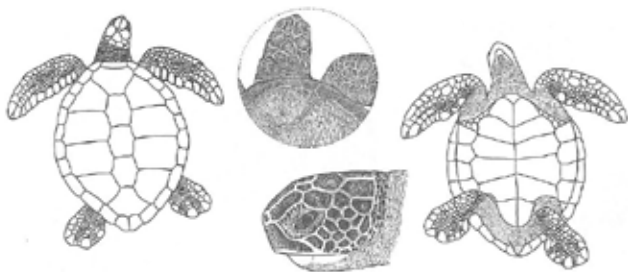
Green Turtle (continued)

(*Chelonia mydas*)

Behaviour and Breeding: The diet of the Green Turtle comprises mainly seagrass and algae, but also jellyfish, mangroves and sponges.

Females reach sexual maturity between 25 and 50 years of age. Breeding males and females move to areas near nesting beaches for mating. On Barrow Island, mating aggregations may commence from October with peak nesting from December to January, however, nesting does occur year round. Females come onto the beach over several nights to lay around 100 eggs in a chamber in the sand. Up to five clutches of eggs can be laid by an individual female each season. It is estimated that 20,000 Green Turtles nest on Barrow Island.

Conservation Status: The Green Turtle is listed as a vulnerable, marine and migratory species in the *Environment Protection and Biodiversity Conservation Act*. It is listed as endangered on the *2008 International Union for Conservation of Nature Red List* and is listed as threatened on the *Wildlife Conservation Act 1950 (WA)*.



Sketch - Tom McFarland, Photo - Kellie Pendoley

Flatback Turtle

(Natator depressus)

Description: The Flatback Turtle has a low domed, fleshy carapace (upper shell) with turned-up edges that is grey-green or olive in colour. Hatchlings are the largest recorded for a turtle species. Their shell scales (scutes) are outlined in black, with a straight carapace length of six centimetres. Males have never been sighted on Barrow Island.

Distribution: Flatback Turtles are only found in Australia, with a distribution across northern Australian waters. Cape Domet, Barrow Island and Mundabullangana are important rookeries for this species in Western Australia. On Barrow Island, Flatback Turtles primarily nest on east coast beaches where there is low wave energy.

Preferred Habitat: Juvenile Flatback Turtles are not thought to have an oceanic dispersal phase like many other turtle species. Adults inhabit the soft bottom regions of the continental shelf of northern Australia.



Photos - Top: Dorian Moro, Bottom: Kellie Pendoley

Flatback Turtle (continued)

(*Natator depressus*)

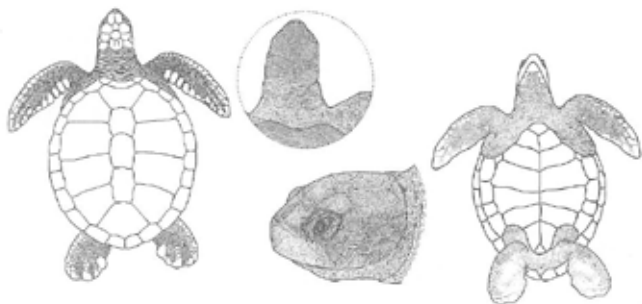
Behaviour and Breeding: Little is known about the diet or foraging habits of the Flatback Turtle. Limited data suggests the turtles may consume hydroids, soft corals, jellyfish and molluscs.

The peak season for nesting in the Western Australian Pilbara region is during the summer months. On Barrow Island, peak nesting occurs from December to January, although lower levels of nesting occur either side of these months. Clutches contain approximately 50 eggs, the fewest of any marine turtle. Females can lay an average of three clutches each season. It is estimated that at least 1500 Flatback Turtles nest on Barrow Island annually.

Satellite telemetry data shows that individuals from Barrow Island migrate towards the Kimberley during the non-nesting season, up to 1500 km away.

Conservation Status:

The Flatback Turtle is listed as a vulnerable, marine and migratory species in the *Environment Protection and Biodiversity Conservation Act*. It is listed as threatened on the *Wildlife Conservation Act 1950* (WA). It is not listed on the *2008 International Union for Conservation of Nature Red List*.



Sketch - Tom McFarland, Photo - Kellie Pendoley

Loggerhead Turtle

(Caretta caretta)

Description: The Loggerhead Turtle has a heart-shaped carapace (upper shell) approximately 90 to 96 cm in length. The carapace is coloured dark brown with red or darker brown patches. Old turtles can develop a very large head, hence their name. Hatchlings are dark brown and measure up to five centimetres in straight carapace length.

Distribution: The Loggerhead Turtle is distributed around the world in tropical, subtropical and temperate waters. In Australia, it can be found along the eastern, northern and western coastlines. It is rarely seen nesting on Barrow Island.

Preferred Habitat: Hatchlings and sub-adult Loggerhead Turtles live in the open ocean and feed on plankton. Once mature, the turtles move into the benthic foraging habitat such as rocky and coral reefs, muddy bays, estuaries and seagrass meadows.



Photos - Top: Tristan Simpson, Bottom: Sabrina Trocini

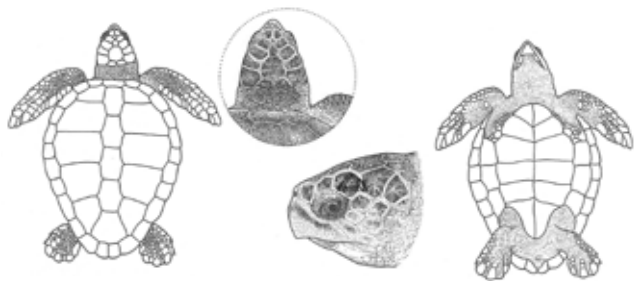
Loggerhead Turtle (continued)

(*Caretta caretta*)

Behaviour and Breeding: Mature individuals are carnivorous and feed on crabs, molluscs, clams, jellyfish, shrimp and corals.

Female turtles form breeding aggregations on beaches in Queensland and Western Australia. Mating begins in October and nesting occurs for several months afterwards with a peak in December. Each season the turtles can lay up to three clutches of eggs with approximately 125 eggs per clutch.

Conservation Status: The Loggerhead Turtle is listed as an endangered, marine and migratory species in the *Environment Protection and Biodiversity Conservation Act*. It is listed as endangered on the *2008 International Union for Conservation of Nature Red List* and is listed as threatened on the *Wildlife Conservation Act 1950 (WA)*.



Sketch - Tom McFarland, Photo - Department of Environment & Conservation - Exmouth

Main's Frog

(*Cyclorana maini*)

Description: The Main's Frog is a moderate sized, rotund species that grows to five centimetres. It is grey-olive brown above with darker patches on its back, as well as a light stripe down the spine. The underbelly is whitish. All have a dark stripe from the nostril to the ear. The toes are unwebbed, but the hind feet are shaped like a shovel to assist digging. The front foot on males has a spur to assist with locking onto females during mating.

Distribution: The Main's Frog lives in some of the harshest environments in Australia including the central arid zone of Western Australia, the southern region of the Northern Territory and the north-western region of South Australia. They are reported from various locations across Barrow Island.

Preferred Habitat: Mainly found in seasonal watercourses such as claypan communities and other low-lying areas where water collects. During the dry season, it burrows underground to wait for the next rainfall.

Behaviour and Breeding: The Main's Frog is a burrowing species. It is carnivorous, with a diet consisting mainly of insects. Breeding occurs during summer and autumn, generally after rainfall. Individuals emerge after rainfall and may become dense in number where water pools, taking advantage of the water for breeding. Each female produces between 200 and 1000 eggs per year. The tadpoles develop quickly to take advantage of the temporary pools of water. Prior to the water drying up in a pond, they dig their burrow into the ground and commence to exude a membrane to enclose them to retain body moisture during the dry period.

Conservation Status: All frogs are protected on Barrow Island. The Main's Frog is listed as of least concern on the *International Union for Conservation of Nature Red List (2008)*. The frog is not listed on the *Wildlife Conservation Act 1950 (WA)* or the *Environment Protection and Biodiversity Conservation Act*.



Photo - Kathie Atkinson

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Sighting Records

Species	Date	Locality
Ring-tailed Dragon <i>Ctenophorus caudicinctus</i> <i>caudicinctus</i>		
Dwarf (Western) Bearded Dragon <i>Pogona minor minor</i>		
Rusty-topped Delma <i>Delma borea</i>		
Excitable Delma <i>Delma tincta</i>		
Burton's Legless Lizard <i>Lialis burtonis</i>		
Western Hooded Scaly-foot <i>Pygopus nigriceps</i>		
Tree Dtella <i>Gehyra variegata</i>		
Bynoe's Gecko <i>Heteronotia binoei</i>		
Stony-soil Ctenotus <i>Ctenotus saxatilis</i>		
North-western Sandslider <i>Lerista bipes</i>		
Barrow Island Leopard Skink <i>Ctenotus pantherinus acripes</i>		

Species	Date	Locality
Exquisite Fire-tail Skink <i>Morethia ruficauda exquisite</i>		
Short-tailed Pygmy Monitor <i>Varanus brevicauda</i>		
Perentie <i>Varanus giganteus</i>		
Western Stimson's Python <i>Antaresia stimsoni stimsoni</i>		
North-western Shovel-nosed Snake <i>Brachyuropsis approximans</i>		
Mulga (or King Brown) Snake <i>Pseudechis australis</i>		
Monk Snake <i>Parasuta monachus</i>		
Hawksbill Turtle <i>Eretmochelys imbricata</i>		
Green Turtle <i>Chelonia mydas</i>		
Flatback Turtle <i>Natator depressus</i>		
Loggerhead Turtle <i>Caretta caretta</i>		
Main's Frog <i>Cyclorana maini</i>		

Other Species Recorded

Species	Date	Locality
Agamidae (lizards)		
<i>Lophognathus gilberti gilberti</i>		
Pygopodidae (legless lizards)		
<i>Delma nasuta</i>		
Gekkonidae (geckos)		
<i>Diplodactylus stenodactylus</i>		
<i>Gehyra pilbara</i>		
<i>Strophurus jeanae</i>		



Proablepharus reginae

Species	Date	Locality
Scincidae (skinks)		
<i>Carlia triacantha</i>		
<i>Cryptoblepharus carnabyi</i>		
<i>Ctenotus duricola</i>		
<i>Ctenotus grandis</i>		
<i>Ctenotus hanloni</i>		
<i>Ctenotus serventyi</i>		
<i>Cyclodomorphus melanops melanops</i>		
<i>Eremiascincus richardsonii</i>		



Lophognathus gilberti gilberti

Species	Date	Locality
Scincidae (skinks continued)		
<i>Glaphyromorphus isolepis</i>		
<i>Lerista elegans</i>		
<i>Lerista muelleri</i>		
<i>Menetia greyii</i>		
<i>Morethia lineoocellata</i>		
<i>Notoscincus ornatus ornatus</i>		
<i>Proablepharus reginae</i>		



Species	Date	Locality
Typhlopidae (blind snakes)		
<i>Ramphotyphlops ammodytes</i>		
<i>Ramphotyphlops longissimus</i>		
<i>Ramphotyphlops grypus</i>		
Elapidae (snakes)		
<i>Demansia rufescens</i>		
Varanidae (goannas)		
<i>Varanus acanthurus</i>		





Delma nasuta

Photo - Nathan Waugh