

THE NATURE OF STRENGTHS



DIGITAL VERSION



St Luke's  
**Innovative**  
Resources

w: [innovativeresources.org](http://innovativeresources.org)



### *Dainty Green Tree Frog*

*Frogs are our planet's 'pollution barometers'.  
They are vulnerable to pollutants while in  
water during their egg and tadpole stages,  
and on land as adults because they breathe  
primarily through their sensitive, moist skin.*

*Litoria gracilentia*

# **BEING GREEN**



## *Platypus*

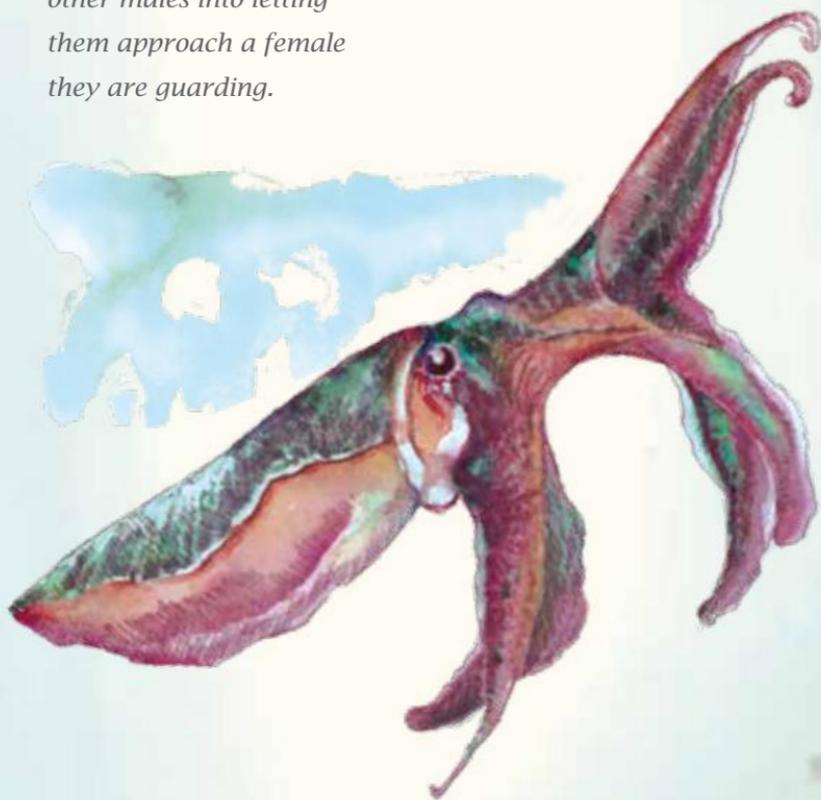
*This burrowing, swimming, egg-laying mammal with webbed feet, a rubbery snout, and venomous ankle spurs so baffled early Europeans that many considered it an elaborate fraud. The unique features of the platypus make it a much-loved icon of Australia.*

*Ornithorhynchus anatinus*

# BEING ME

## *Australian Giant Cuttlefish*

*Using spectacular reds, yellows, whites, and iridescent blues, the giant cuttlefish changes colour instantaneously to signal shifts in mood or blend in with background textures. Males can also mimic female characteristics to fool other males into letting them approach a female they are guarding.*



*Sepia apama*

# **BLENDING IN**



### *Sunflower*

*In a process called 'heliotropism', the leaves and buds of sunflowers turn to track the sun. The flower petals create patterns of interconnected spirals; typically thirty-four in one direction and fifty-five in the other—successive Fibonacci numbers, and a very efficient way to pack the seeds.*

*Helianthus annuus*

# CHANGING DIRECTION

## Walrus

*By inflating two air sacs in its throat, a walrus can sleep while bobbing around in the water. Using its tusks, it can literally 'hang out' in the sea by suspending itself from the edges of ice floes, or haul itself onto land to rest and sunbathe.*



*Odobenus rosmarus*

# CHILLING OUT

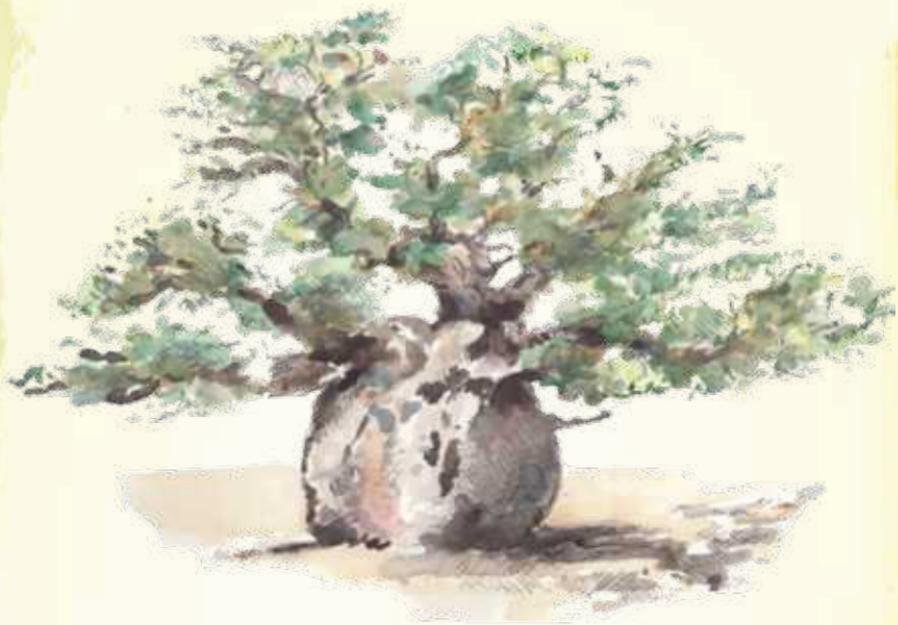


## *Flamingo*

*Using beaks that can separate out silt, flamingos filter-feed on brine shrimp and blue-green algae. The female chooses a suitable nesting spot and both parents produce crop milk for nursing their chick. Chicks join small groups which eventually merge to include thousands of juveniles.*

*Phoenicopterus ruber*

# **CHOOSING WISELY**



### *Boab Tree*

*Boab trees can store up to one hundred thousand litres of water within the soft wood of their swollen trunks. As well as using these trees for moisture, Indigenous Australians also ate the seeds, carved the nuts, made nets from the fibres and used the trunks for storage.*

*Adansonia gregorii*

## **FILLING UP**

## *Honeybee*

*Honeybees can locate food by interpreting the dance moves of bee scouts. If the food is nearby, the scout performs a 'round dance' with loops; if far away, it's a 'waggle dance' using their abdomen. The curves, straight lines, angles and speed of the movements indicate the direction, distance and quality of the food.*



*Apis mellifera*

# **FINDING A WAY**



### *Hermit Crab*

*Hermit Crabs find suitable shelter by moving successively into empty shells as they grow. Several species use 'vacancy chains' where the largest crab moves into a new shell, the second biggest crab moves into the newly vacated shell, and so on.*

*Pagurus bernhardus*

## **FINDING SHELTER**



### *Passionfruit*

*This vigorously growing vine produces beautiful flowers with cross-shaped stamens (named after the Passion of Christ). Its tangy fruit, with abundant small seeds, can be eaten alone or used in jams, juices, creams and liqueurs. Even the young vine shoots can be eaten in salads and curries.*

*Passiflora edulis*

# **GIVING GENEROUSLY**



### *Bottlenose Dolphin*

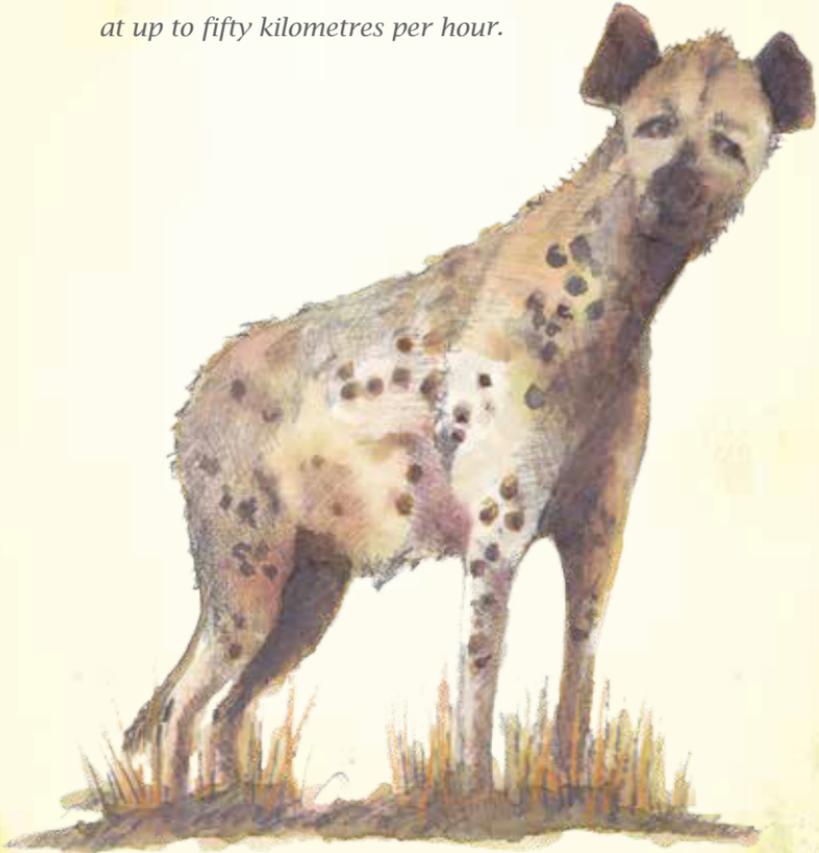
*Play is an important part of dolphin culture. They play with seaweed, play-fight with other dolphins and tease other creatures like sea birds and turtles. Dolphins are enthusiastic surfers of coastal swells and the bow waves of boats. They have also been observed blowing and playing with bubble rings.*

*Tursiops truncatus*

## **HAVING FUN**

## *Spotted Hyena*

*Hyenas are the endurance athletes of the animal kingdom. Their large hearts allow them to run at about ten kilometres per hour for more than three hours at a stretch, and sprint at up to fifty kilometres per hour.*

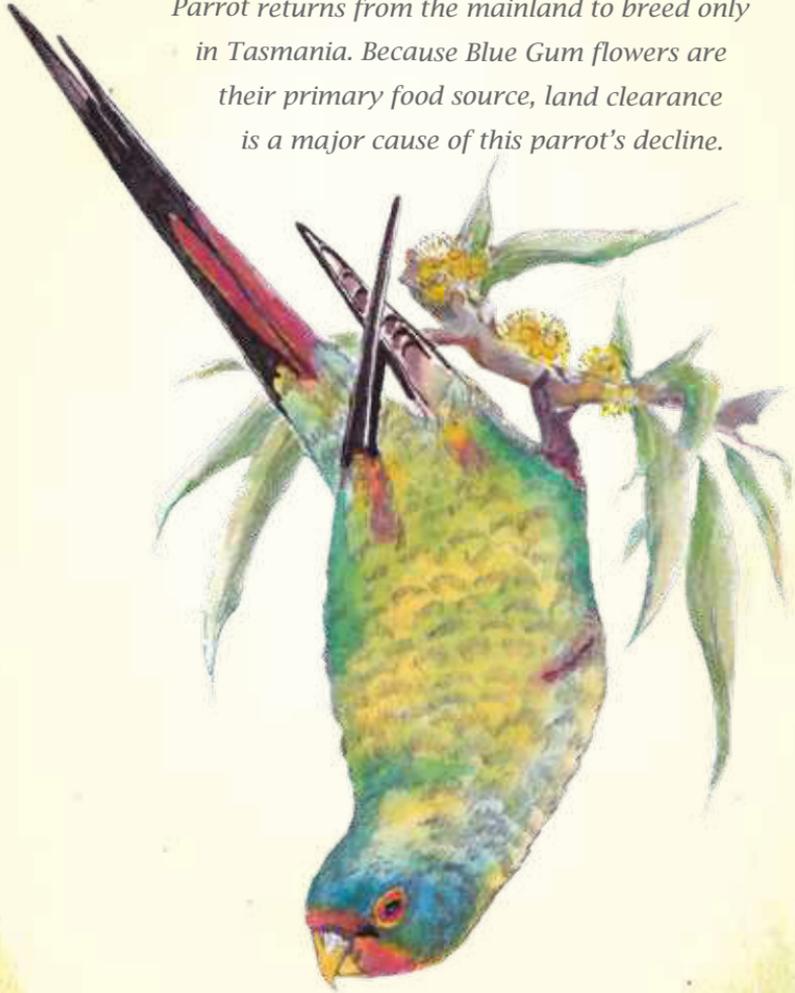


*Crocota crocuta*

# **HAVING HEART**

## Swift Parrot

*An endangered species with perhaps less than one thousand breeding pairs in Australia, the Swift Parrot returns from the mainland to breed only in Tasmania. Because Blue Gum flowers are their primary food source, land clearance is a major cause of this parrot's decline.*



*Lathamus discolor*

# HOLDING ON



### *Australian Teak Fruit Capsules*

*Australian Teak is a rainforest tree from New South Wales and Queensland in Australia. It grows up to forty metres tall and has white flowers during spring. These are followed by woody fruit capsules which split open in a beautiful five-star pattern releasing the winged seeds.*

*Flindersia australis*

# LETTING GO

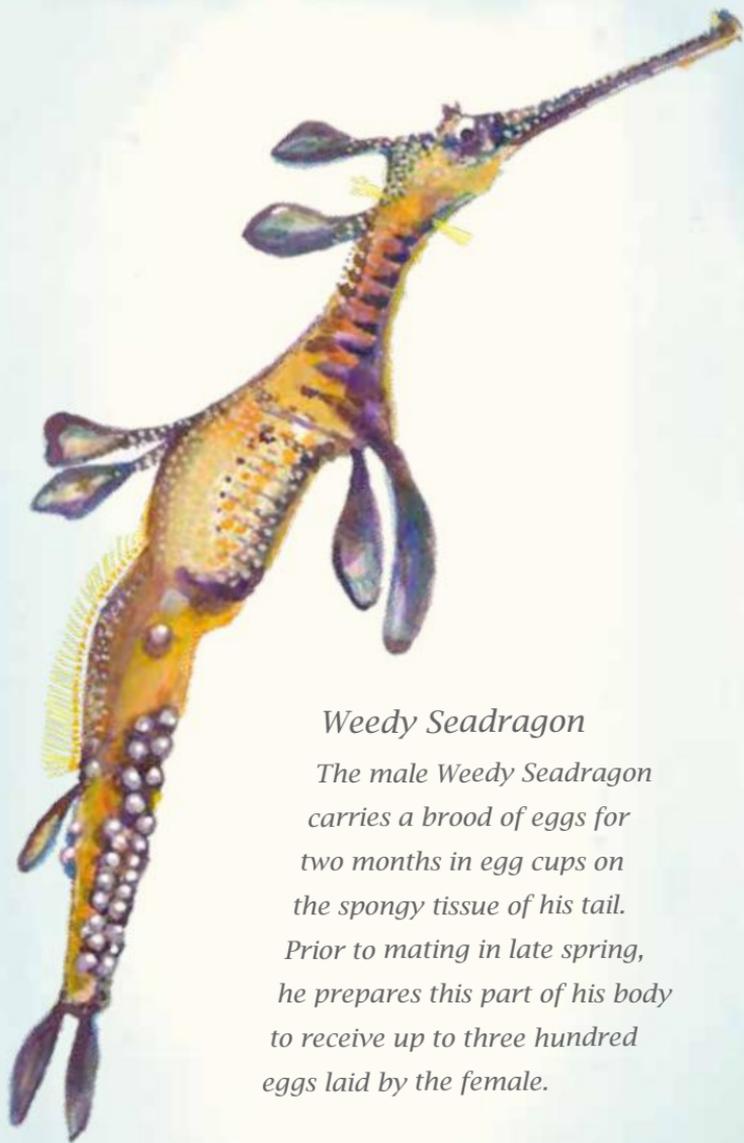


### *Lyrebird*

*Lyrebirds are capable of imitating not only the sounds of other birds and animals but also chainsaws, engines, alarms, barking dogs, crying babies, music and even the human voice. It takes young birds about a year to perfect their repertoire.*

*Menura novaehollandiae*

# LISTENING WELL



*Phyllopteryx taeniolatus*

### *Weedy Seadragon*

*The male Weedy Seadragon carries a brood of eggs for two months in egg cups on the spongy tissue of his tail. Prior to mating in late spring, he prepares this part of his body to receive up to three hundred eggs laid by the female.*

## **NURTURING OTHERS**

## *Australian Garden Orb Weaver Spider*

*This spider reaches out across surprisingly wide gaps by releasing a fine silk thread from its spinnerets. The sticky thread drifts on the slightest breeze until it adheres to a surface across the gap. The spider then constructs its orb-shaped web.*



*Eriophora transmarina*

# REACHING OUT

## *Indian Chameleon*

*Chameleons can change colour rapidly to communicate shifts in mood such as fear or aggression.*

*When they sense changing temperatures in the environment, they can lighten or darken their colour, allowing them to absorb or reflect heat as needed.*



*Chamaeleo zeylanicus*

# **SENSING CHANGE**



### *Praying Mantis*

*The mantis is a skilled hunter of many insects, including its own kind. But this predatory strength can be shared to great advantage; gardeners use mantises for pest control, purchasing thousands of egg cases each year.*

*Mantis religiosa*

# SHARING STRENGTHS



### *Kookaburra*

*No sound conjures up the Australian bush like the kookaburra's chorus of loud laughter. According to Aboriginal legend, the early morning cacophony tells the sky people to light the daily fire that illumines the earth. Science has it that the kookaburra's raucous call signals its territory.*

*Dacelo novaeguineae*

## **SPEAKING UP**



### *Golden Pheasant*

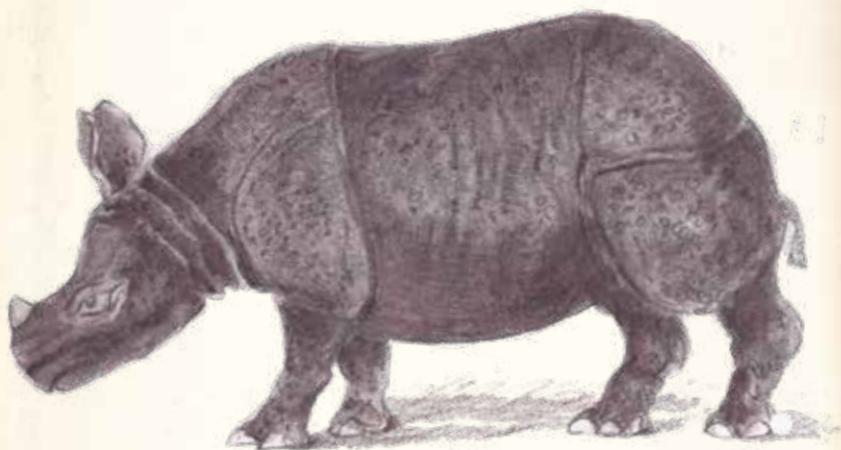
*With his golden crest, scarlet body, iridescent green upper back and cinnamon-spotted tail feathers, the male is much admired for his showy plumage. His deep orange 'cape' can be spread in display, creating a spectacular fan of alternating black and orange.*

*Chrysolophus pictus*

# STANDING OUT

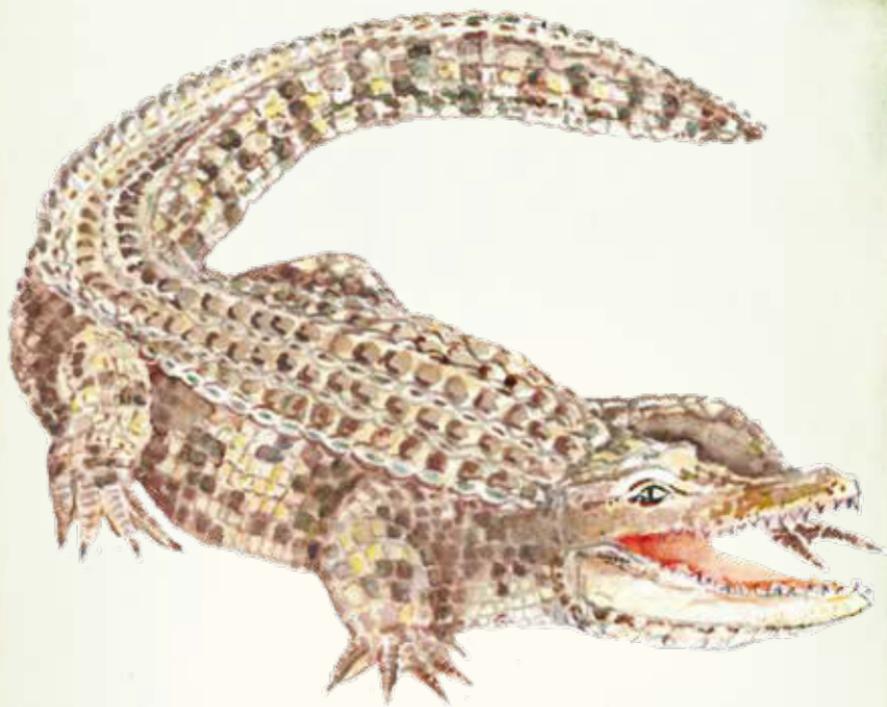
## *Indian Rhinoceros*

*Weighing in at up to three thousand kilograms, the rhinoceros can use the weight of its body to bend a sapling by simply walking over it with its legs on either side—a very effective technique for making foliage available to calves.*



*Rhinoceros unicornis*

# **STANDING SOLID**

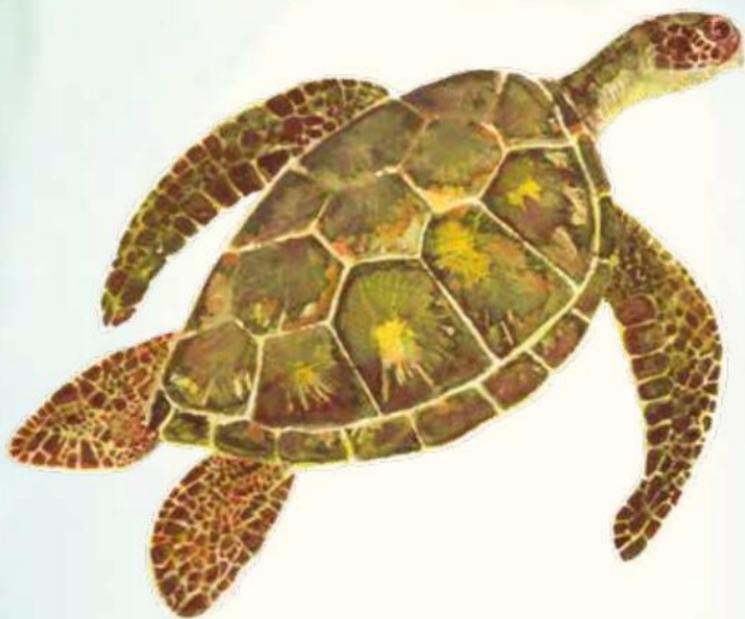


### *Nile Crocodile*

*The female guards her buried eggs for three months while the male often remains close by. At hatching time the parents sometimes roll the eggs between their tongue and upper palate to release the offspring, which the female then carries to the water in her mouth.*

*Crocodylus niloticus*

## **TAKING CARE**



### *Green Sea Turtle*

*Using her hind flippers, the female buries up to two hundred eggs in the sand. After about two months, the hatchlings emerge and scamper across the sand, taking their chances on reaching the ocean as gulls and crabs prey on them.*



*Chelonia mydas*

# TAKING CHANCES



### *Bristlecone Pine*

*Imagine a living tree older than the Egyptian pyramids! A five thousand-year-old Bristle Pine is the world's oldest, single-living organism. Growing at less than 0.01 of an inch in girth per year, these trees have been used to track climate change over ten thousand years.*

*Pinus longaeva*

# TAKING TIME



## *Monarch Butterfly*

*The annual migration  
of the monarch between  
Canada, America and Mexico  
spans thousands of kilometres.*

*How do successive generations find  
the very same place? They navigate by  
tuning into the sun, the earth's magnetic field  
and a circadian 'clock' located in their antennae.*

*Danaus plexippus*

# TUNING IN



### *Basilisk Lizard*

*Nicknamed the 'Jesus Lizard', the Basilisk can sprint across water on its hind legs for up to twenty metres. It runs on pockets of air created by slapping its large feet, equipped with fringed toes, on the surface of the water.*

*Basiliscus basiliscus*

## **WALKING ON AIR**



### *Diamond Python*

*This non-venomous snake hunts for warm-blooded vertebrates primarily at night. The female lays about twenty-five eggs, coiling around them and using muscular contractions to keep them warm. During incubation she leaves her eggs briefly to warm up in the sun.*

*Morelia spilota spilota*

## **WARMING UP**