

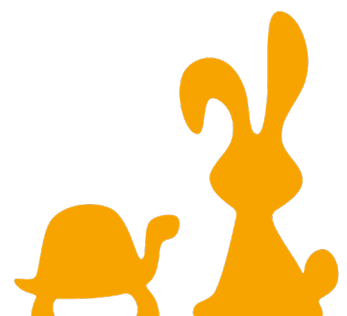
# FACT FILE: TORTOISES

- Tortoises are reptiles that have large shells on their back for protection. They can hide inside their shells from predators.
- Tortoises almost always live on land, whilst most turtles are aquatic, meaning they live in water.
- Tortoises can live in many different habitats depending on the species. Some live in forests or rainforests, some in deserts, and others in grasslands.
- Some tortoise species are very small, with shells that are less than 10cm long. There are other tortoises, such as the Galápagos giant tortoise, which can grow to be over 1.2 metres in length!
- Tortoises are generally active in the daytime. Many species of tortoise are active in the twilight period but sleep through the night.
- Tortoises are very slow-moving. The average walking speed of a tortoise is 0.2-0.5 kilometres per hour.
- Most tortoises are herbivores and will eat grass, leaves, flowers and fruits. There are some tortoises that are omnivores and these will eat insects and worms.
- Tortoises are the longest living land animal in the world. Most tortoise species have a lifespan of about 80-150 years, but some can live for over 200 years!
- Tortoises have existed for over 55 million years.
- Tortoises lay eggs and females will bury their eggs to keep them safe from predators.
- Tortoises have very small brains.
- A group of tortoises is called a creep.



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- **Ancient Creatures:** Tortoises are some of the oldest living reptiles on Earth, with a lineage dating back over 200 million years.
- **Shell Structure:** Tortoises have a protective shell made of bone covered by a layer of keratin. It's a part of their body and cannot be removed. They retract their head and legs into their shell for protection.
- **Slow Movers:** Tortoises are known for their slow pace, and some species can move at just 0.2 miles per hour (0.3 kilometers per hour). Their slow movement helps conserve energy.
- **Longevity:** Tortoises are famous for their long lifespans. Some species can live for well over 100 years, and the oldest recorded tortoise lived to be 188 years old.
- **Diverse Species:** There are many different species of tortoises, each with unique characteristics. For example, the giant tortoise found in the Galápagos Islands can weigh over 900 pounds (400 kilograms), while the smallest species, the speckled padloper tortoise, is about the size of an adult human's hand.
- **Herbivores:** Tortoises are herbivorous, meaning they eat plants. Their diet mainly consists of grasses, leaves, and other vegetation.
- **Solitary Animals:** Most tortoise species are solitary and prefer to live on their own, although they might interact during mating season.
- **Burrowers:** Some tortoise species dig burrows in the ground to escape extreme temperatures, both hot and cold, and to find shelter.
- **Conservation:** Many tortoise species are endangered due to habitat destruction and illegal trade. Conservation efforts are in place to protect these iconic animals.
- **Hibernation:** In colder climates, tortoises may hibernate during the winter. They burrow into the ground and remain inactive until the weather becomes warmer.
- **Hearing and Smelling:** While tortoises have limited hearing, they have a keen sense of smell and can detect scents from a distance.
- **Unique Species:** Share information about specific tortoise species, such as the Aldabra giant tortoise, the desert tortoise, or the radiated tortoise, each with its own distinctive characteristics and habitat.



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## **A year in the life of a real tortoise**

How does a real tortoise spend its year? For the ploughshare tortoises of Baly Bay, in northern Madagascar, a year looks something like this...

### **Rain and romance: January - March**

Life blossoms in the rain. After many dry and difficult months, Baly Bay's plantlife can finally flourish - making it much easier for the ploughshare tortoises to find food. Fueled up, the males charge about, looking for fights with other boys... Strangely, these battles seem to get them in the mood for love! Ploughshares only breed after the boys have first fought each other. Females go exploring too - looking for suitable spots for nests.

### **A time for eggs: April - May**

Pregnant females are busy digging nests in the sand. They lay up to seven precious eggs in those nests, then carefully cover them up again, to keep them safe. Each egg is the size and shape of a ping-pong ball and offers hope for a species that has been pushed dangerously close to extinction. Above ground, rain is becoming rarer, and temperatures are dropping.

### **The hard times: June - September**

Rain becomes a distant memory. Baly Bay's sandy landscapes are becoming dryer and dryer, and there's nothing to eat but the driest dead leaves. Adult tortoises become much less active, and youngsters stop altogether - sleeping right through the cool dry months.

### **Still waiting for water: October - November**

Food has been hard to find for months now. Surely this dry spell has to end soon? Historically, these would be the last few weeks of the dry season - but in recent years, Baly Bay's dry season seems to have become longer. The tortoises are kept waiting.

### **Here comes the rain again: December**

There's something in the air. The sky has filled with enormous, thundering castles of cloud. And then, after months and months of waiting, the rain begins to fall.

As the water hits the sand, something stirs. The eggs are beginning to hatch! The emerging baby tortoises use their tiny claws to dig themselves out of the sand. New lives, which could last for a century or more, have begun.

Rain revives the plants, too. Fresh leaves burst from their buds and the landscape fills with tasty food for tortoises. The newly-hatched babies can have a feast, and youngsters that had snoozed through the dry months can wake up at last. And once again, the adults can start to think about fighting - and mating. Our planet starts to repeat its cycle around the sun - and the planet's rarest tortoises repeat their annual cycle, too.



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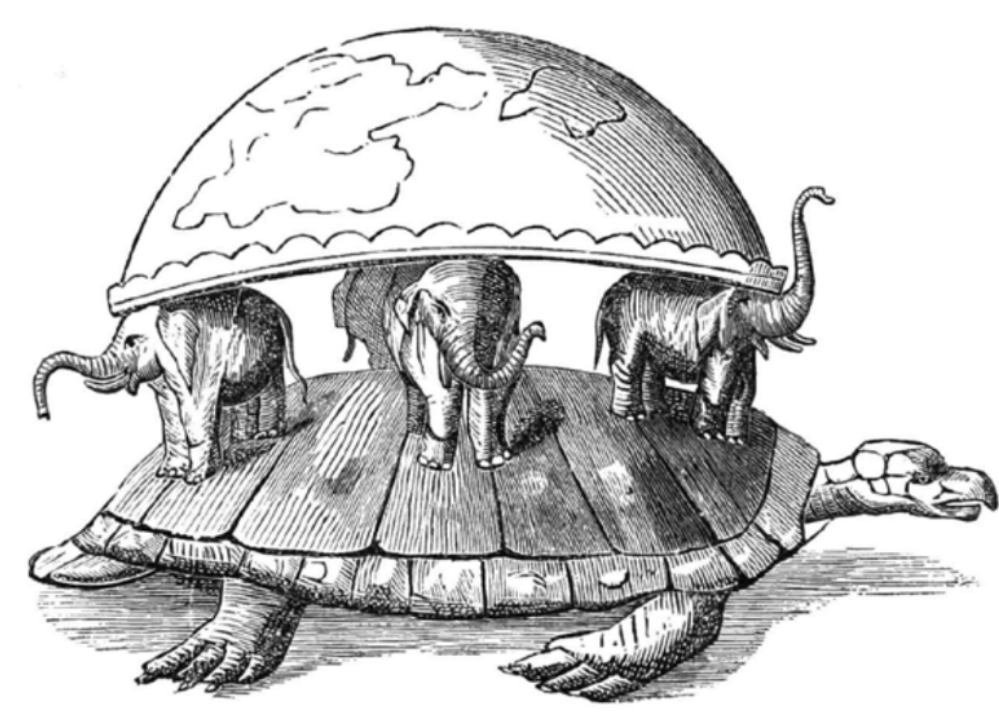
## Cultural and historical notes on tortoises

Tortoises have (slowly) plodded their way into our stories throughout history. In ancient Greece, Aesop's Tortoise and the hare fable established the tortoise as a metaphor for the (eventual) victory of persistent diligence over hubris. More recently, Roald Dahl's *Esio Trot* cast a succession of increasingly large tortoises as unwitting matchmakers to the slow-burning but heartfelt romance between two neighbours of a certain age.

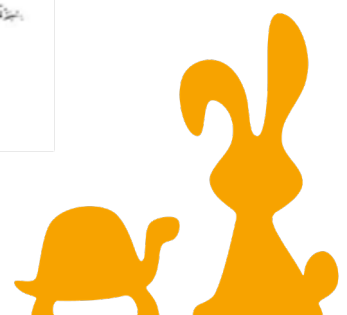
Greek mythology asserts that the very first Lyre was crafted by the god Hermes out of a tortoiseshell and a few strings of cattle-gut (which had been stolen from Apollo, the god of music). Lyres are a traditional stringed instrument, significant in the classical cultures of Greece and the Middle East; tortoise and turtle shells frequently served as resonators for these instruments. The British Museum currently holds a tortoiseshell Lyre that dates to the 4th or 5th century BC.

Tortoises also have significant roles in other world cultures; a notable example being that a tortoise is one of the 10 incarnations of Vishnu in Hindu culture.

You might like to find out about the native American story of how the Earth was created - 'The Earth on Turtle's Back'.



An 1877 drawing of the world supported on the backs of four elephants, themselves resting on the back of a turtle.



## Charles Darwin's letter, calling for tortoise protection

*In April 1874, Charles Darwin and other leading scientists wrote to the colonial authorities in charge of Aldabra, asking them to protect the giant tortoises that lived there. Here is what they wrote:*

To His Excellency The Honorable Sir Arthur Hamilton Gordon, K.C.M.G., Governor and Commander in Chief of Mauritius and its Dependencies.

We the undersigned respectfully beg to call the attention of the Colonial Government of Mauritius to the imminent extermination of the Gigantic Land Tortoises of the Mascarene islands.

These animals were formerly abundant in the Mauritius, Reunion, Rodrigues and other islands of the Western part of the Indian Ocean. Being highly esteemed as food, easy of capture and transport, they formed for many years, a staple supply to ships touching at those islands for refreshment.

No means being taken for their protection they have become extinct in nearly all these islands, and Aldabra is now the only locality where the last remains of this animal form are known to exist in a state of nature.

We have been informed that the Government of Mauritius have granted a concession of Aldabra to parties who intend to cut the timber on this island. If this project be carried out, or if otherwise the island be occupied, it is to be feared, nay certain, that all the Tortoises remaining in this limited area will be destroyed by the workmen employed.

We would, therefore, earnestly submit it to the consideration of Your Excellency whether it would not be practicable that the Government of Mauritius should cause as many of these animals as possible to be collected before the wood cutting parties or others land with the view of their being transferred to the Mauritius or the Seychelle Islands, where they might be deposited in some enclosed ground or park belonging to the Government, and protected as property of the Colony.

The rescue and protection of these animals is recommended to the Colonial Government less on account of their utility (which now-a-days might be questioned in consideration of their diminished number, reduced size and slow growth, and of the greatly improved system of provisioning ships which renders the crews independent of such casual assistance) than on account of the great scientific interest attached to them.

With the exception of a similar tortoise in the Galapagos islands (now also fast disappearing) that of the Mascarenes is the only surviving link reminding us of those still more gigantic forms which once inhabited the Continent of India in a past geological age. It is one of the few remnants of a curious group of animals once existing on a large submerged continent of which the Mascarenes formed the highest points.

It flourished with the Dodo, and whilst it is a matter of lasting regret that not even a few individuals of these curious birds should have had a chance of surviving the lawless and disturbed condition of past centuries, it is confidently hoped that the present Government will find the means of saving the last examples of a contemporary of the Dodo.

London, April 1874.  
(Signed by)

Jos. D. Hooker  
H. B. Frere

Charles Darwin  
Richard Owen

John Kirk  
Alfred Newton

