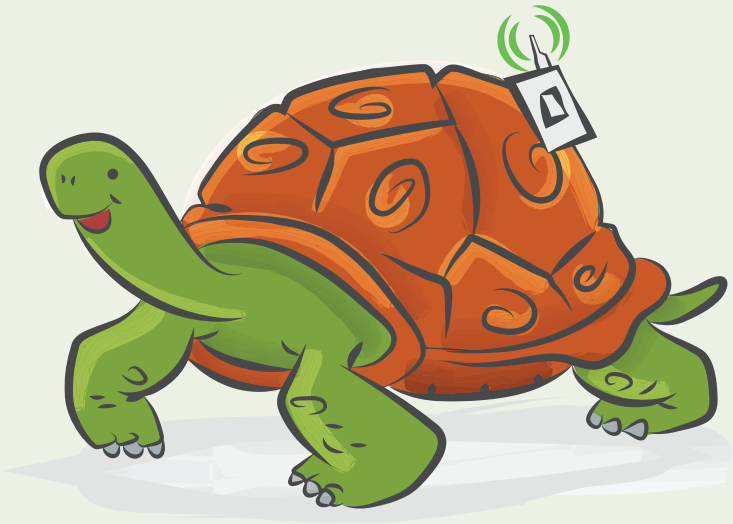
GALAPAGOS GIANT TORTOISE



Common Name: Galapagos giant tortoise

Scientific Name: *Chelonoidis spp.*

Spanish Name: Tortuga gigante de las Galapagos

Size: Up to 1.5m long.

Weight: The largest living species of tortoise on Earth, Galapagos giant tortoises can weigh up to 300kg in the wild and even more in captivity.

Age: They are thought to live for around 100 years in the wild (up to 170 years in captivity).

Animal Class: Reptile

Food: **Herbivore** (grasses, flowers and prickly pear cactus)

Predators: No natural predators, but introduced species of pigs, rats, dogs and fire ants prey upon eggs and hatchlings.

Threats: In addition to introduced predators, habitat destruction is also a threat to tortoises for example, from urban development and from invasive plant species such as the hill raspberry (mora).

Evolution: All the species of Galapagos giant tortoise we see today are likely evolved from a single common ancestor. The different environmental and ecological conditions on each island have led to the evolution of different sizes and shapes of tortoises, each best suited to the conditions in which it lives.

Reproduction: Mating does take place throughout the year, but most often between February and June. Females dig nests in dry, sandy areas and lay up to 16 tennis ball-sized eggs! Hatchlings emerge anytime between four and eight months and measure just six centimetres. Warm nest temperatures lead to the tortoises becoming female, while cool temperatures increase the likelihood that the hatchlings are male.

Colonisation: It is likely that the great buoyancy of giant tortoises helped them float across to the Islands from mainland South America. Strong currents along the South American coast together with a tortoise's ability to survive for long periods without food or fresh water made this possible. The giant tortoises found in Galapagos are thought to be amongst the last survivors of a global species of giant tortoise that were found on all continents except Antarctica. Today, giant tortoises can only be found in the wild in Galapagos and the Seychelles.

Species: There are at least 10 different species of giant tortoise in Galapagos, differing in size, shell shape and geographical distribution.

Shape: There are two different tortoise shell shapes seen among giant tortoise species – domed and saddle-backed.

Population: The number of wild giant tortoises on the Galapagos Islands has varied greatly. Their population was estimated to be around 250,000 in the 1500s when they were first discovered. Tortoises have become extinct on Floreana, Santa Fe and Pinta. They almost became extinct on Espanola and Pinzon. These tortoises, however, have been saved from extinction by captive breeding, and now it is hoped that controlling invasive species (especially rats) will continue to help their populations to survive and grow.

Lifestyle: Galapagos tortoises spend their days feeding (on vegetation such as grasses and cacti), regulating their temperatures (e.g. by basking in the sun) and sleeping - for up to 16 hours each day! They have an extremely slow **metabolism** which means they can survive for up to a year without eating or drinking.

ZSL LIVING CONSERVATION
Galapagos Conservation Trust
DISCOVERING GALAPAGOS
With thanks to the Woodspring Trust and the Galapagos Tortoise Movement Ecology Programme.
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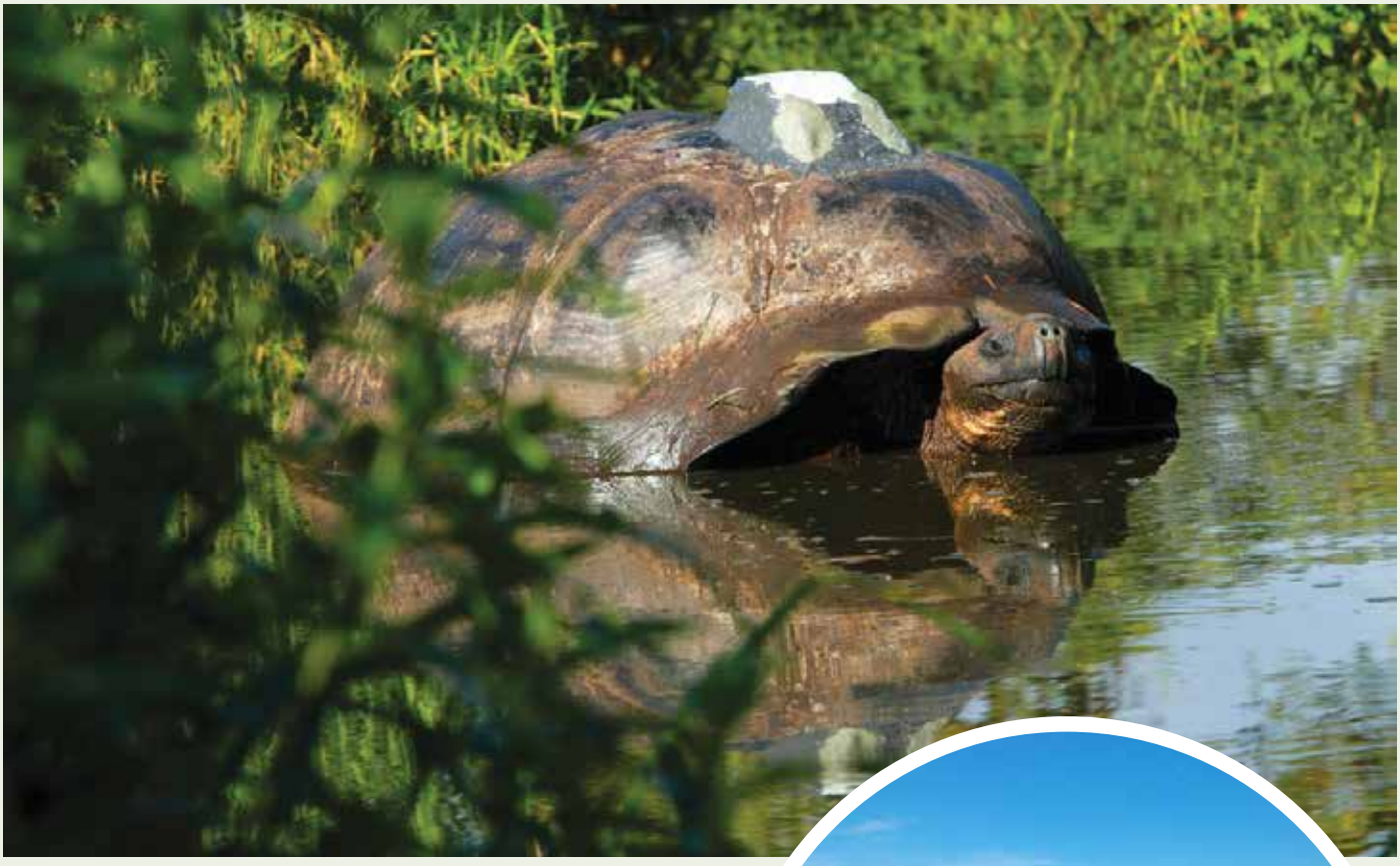

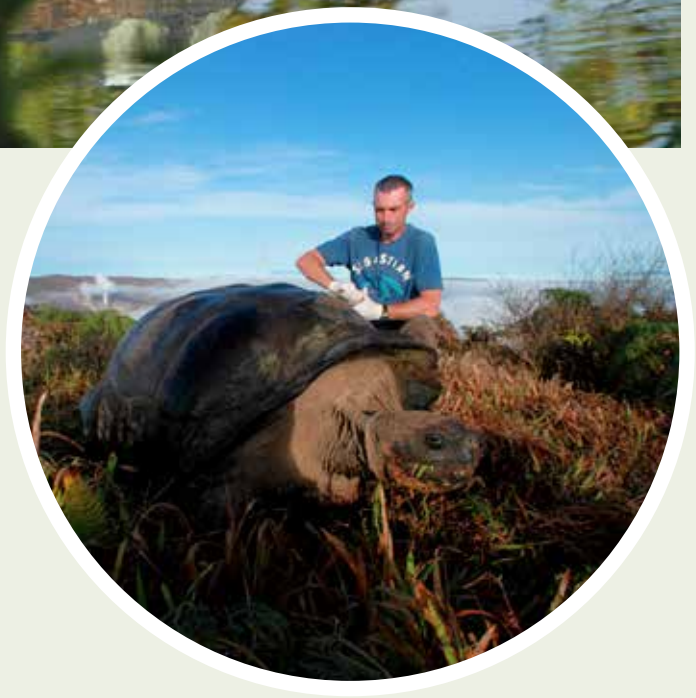

DR. STEVE BLAKE

Steve Blake leads the Galapagos Tortoise Movement **Ecology** Programme and uses GPS technology to track the tortoises in their natural habitats. Having always been interested in wildlife, Steve Blake was working at Howlett's Wildlife Park in Kent as a Gorilla Keeper when he was offered the chance to work with orphan gorilla's in the Congo. This led to a PhD on the movement **ecology** of forest elephants also in the Congo. Having moved to Galapagos in 2007 after his wife, a wildlife vet, was offered a job, Steve was offered a post doctorate position in 2008 working on tracking the migrations of Galapagos giant tortoises.
When not tracking tortoises, Steve enjoys spending time in the beautiful outdoor surroundings of Galapagos with his family.

THE IMPORTANCE OF CAPTIVE BREEDING

Captive breeding is when animals are bred outside of their natural environment in human controlled areas such as zoos, wildlife parks, farms or other controlled settings. Captive breeding of animals can occur for several different reasons including conservation, education and research.

The Charles Darwin Research Station was set up in 1964, and the giant tortoise **repatriation** programme was established a year later in 1965 and continues to this day. Giant tortoise eggs collected from the wild are **incubated** in the station. Once they have hatched, the young tortoises are reared away from the threat of predation from introduced species such as dogs and rats, and are then released on their home islands. Several different subspecies of tortoise have been protected through this scheme including the critically endangered Espanola tortoise that had a population of just 13 individuals in the 1970's. Today, thanks to captive breeding efforts, there are more than 1000 individuals known in the wild.

Captive breeding can provide an excellent opportunity to safeguard vulnerable species while at the same time educating the public about the threats that these animals face and allowing extensive biological and ecological research.

GLOSSARY

- **Herbivore** – an animal that is specialized to eat plant material
- **Migrate** – to move from one area to another according to seasonal conditions
- **Metabolism** – the chemical processes that occur within an organism in order to stay alive
- **Ecology** – the biology of how organisms relate to one another and to their environment
- **Repatriation** – returning something to its place of origin
- **Incubate** – the process of warming eggs throughout development to allow hatching

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