

Fact Sheet: Oustalet's Chameleon

Furcifer oustaleti

Description:

- Size:
 - Males: 2.5 ft (68.5 cm) long
 - Females: 1 ft 3 in (40 cm) long
- Weight: 14-17 oz (400-500g) Hatchlings: 0.8 grams
- Sexual Dimorphism: Females are smaller than the males; Males have more pronounced head crests and ridge spines.
- Physical Description: Large bodied lizard with long tail. Large, conical eyes with fused eyelids. Oustalet's chameleons can be distinguished from other chameleons by the ridges and plates on their head. They have ridges from the tip of the snout to both eyes, and a smaller ridge from the eye to the back of the neck. They have a large plate on top of their heads that curves to a point towards the back of the skull. They also have a ridge of triangular spines along the top of their back from the neck to the tail.
- Coloration is variable and ranges from brown to green to blue.

In the Wild

Habitat and Range:

- Geographic range: Found in Madagascar. Introduced population to southern Florida from the pet trade.
- Preferred Habitat: Widely tolerant. Can survive in degraded habitats, agricultural land and human settlements, but also occurs in undisturbed dry forest, savannah and, rarely, in tropical rainforest.

Diet:

- Mostly carnivorous. Primarily eats invertebrates but sometimes eats fruit of certain shrubs found in Madagascar.
- Has been known to occasionally eat small birds and reptiles.

Adaptations:

- Chameleon Tongues
 - Chameleons have a long muscular tongue that can be extended longer than the entire length of their body at incredible speeds to reach insects.
 - The tongues are shot out of their mouth by a ballistic mechanism. The tongue can accelerate faster than muscles can possibly move.
 - For many years scientists could not figure out how this was possible. Research was conducted that showed that energy to shoot the tongue is stored in a unique elastic collagen fiber attached to a bone at the base of the tongue. Muscle energy is stored in these fibers like a spring. When the energy is released, the tongue is shot out of the mouth at incredible speed.
 - The tongue is covered in a sticky substance and has a suction cup –like tip. That is

how it captures its prey.

- Chameleon Vision
 - Independent eye movement allows broad field a view with little body movement. This allows them to remain still and track both predators and prey simultaneously.
 - They have very sharp eyesight for a reptile. They can track gnats with precision out to 10 meters.
 - They can see a broader variety of light than we can- they can see into the ultraviolet range.
- Chameleons have a prehensile tail which helps in grasping and climbing.
- Chameleons have special toes called zygodactyl toes. Their toes are fused together and grow in two sets on opposite sides of the foot, instead of the tip of the foot. This adaptation useful in grasping tree branches.
- Color change
 - Chameleons are capable of changing their skin color. They can be various colors and patterns. They can even become colors that can only be seen in the ultraviolet spectrum.
 - Social signaling
 - The primary use of their color changing ability is to communicate with other chameleons.
 - They use colors and patterns to defend territory, as mating displays and in other types of signaling.
 - Camouflage
 - A secondary use of the color changing ability is camouflage. They can often blend in quite well with their backgrounds.
 - This aids in both hunting and avoiding predators.
 - Thermoregulation
 - Some species of chameleons, especially those that live in desert climates, use their ability to change colors to aid in thermoregulation.
 - Darker colors allow them to warm up quickly and light colors to reflect more heat in the hot parts of the day.
- Chameleons, as reptiles, are cold blooded. Although external heat is required to maintain body temperature, their cellular respiration rates are more efficient, meaning the chameleon needs less food than a comparably sized warm blooded creature.

Lifespan:

- Unknown in captivity. Up to 10 years in the wild.

Ecosystem relationships:

- Predators: Snakes and birds of prey are the primary predators of chameleons. Specific examples can include boomslang and vine snakes, as well as cuckoo hawks, shrikes, coucals and hornbills.
- Interspecies competitors: Other arboreal insectivores (tree-dwelling insect eaters)
- Parasitism- parasitized by nematode worms including threadworms and roundworms, Protozoa such as *Trypanosoma*, *Plasmodium*, and *Leishmania*
- Role/ Niche-

- Occupy degraded habitats that are not as habitable to other species. Highly adaptable. Can occupy agricultural or human settlement habitats.
- Recent studies have indicated that chameleons occupy a “thermal niche” that other reptiles do not, thanks to their long, ballistic tongues. The tongue’s mechanism enables them to hunt earlier in the morning. Other reptiles have to wait for their bodies to warm up more before becoming active enough to hunt.

Reproduction:

- Behavior: Males have been known turn a blue color during courtship rituals.
- Incubation period: 40 days in egg
- Clutch/litter size: large numbers, 60+ eggs, 1-2 clutches in a lifetime.
- Maturation age: 1 year after hatching.

Social Structure:

- Solitary

Activity:

- Diurnal

Other “fun facts”:

- Chameleons have a third eye in the center of their foreheads. It is a rudimentary eye that is essentially a spot of pigment connected to the pineal gland by a nerve. It helps in determining light from darkness, and is able to detect varying levels of ultraviolet light.
- The chameleon has exceptional eyesight for a reptile. The structure of the chameleon's eye allows the chameleon to have a nearly 360° field of vision without moving their heads. They can also independently focus on 2 separate objects at once, which is useful for spotting both prey and predators.

Conservation Status and Threats:

- Listed on the IUCN Red List as “Least Concern”
- CITES: This species is listed on CITES Appendix II.
- There is some debate on the taxonomy and classification of Oustalet’s chameleon. More research is needed to determine if different subspecies and other species in *Furcifer* are actually the same species or not.
- Captivity: Oustalet’s chameleons are sometimes captured from the wild and sold in the pet trade. There is not enough current research to determine whether or not this specific species is being impacted by the pet trade, but historically reptiles have been affected by it. In addition, released pets have a history of becoming an invasive species, such as boa constrictors in the everglades.
 - Invasive species are non-native species that have been introduced into the wild by humans. Since invasive species often lack the limiting factors of their native environment in their new home, they can outcompete native wildlife for limited resources and can seriously disrupt the ecosystem.
- Conservation efforts: although little is known about the conservation of this species in

the wild, Madagascar is a place of high conservation interest.

- Political unrest in Madagascar has created conservation challenges for all Malagasy species. Bans on illegal hunting and logging in protected areas are increasingly difficult to enforce and many international aid organizations have withdrawn support due to the unconstitutional change of power that happened in 2009.

At the Zoo

- The Maryland Zoo in Baltimore has 3 Oustalet's chameleons that were collected from an introduced population in Florida.
- There are two females and one male and they are approximately 1 year old as of July 2014

What We Can Do

- Make environmentally responsible lifestyle decisions to help conserve habitat – conserve energy and resources, reduce litter and pollution
- Support the conservation efforts of local organizations like The Maryland Zoo as well as organizations working in the field to protect wildlife and conserve habitat
- Be a responsible pet owner – not all animals make good pets for everyone, make sure that you know how to properly care for an animal before getting it as a pet.
 - If you can no longer care for a pet, do not release it to the wild. Not only will that captive animal struggle to survive in a wild environment, it can negatively affect native wildlife and possibly spread captive diseases to the wild population.
- If you decide that you want an exotic pet, make sure that you acquire it from a responsible breeder – don't support the wildlife pet trade
- Consider donating or providing support to organizations working to protect Madagascar's wildlife (like The Zoo). Many other organizations are also working both here in the US and in the field to understand and protect Madagascar's wildlife. Here are a few suggestions:
 - The Madagascar Fauna Group
 - Conservation International
 - World Wildlife Fund

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