

Crocodylian Natural History



- Crocodylian species lineage is about 240-280 million years old.
- The current 24 species (which soon may increase to 27 species, including sub-species) of crocodylians on earth currently are about 80 million years old.
- Similar morphological features (such as a large diaphragm) and genetics have shown that the closest living relatives to crocodylians are birds. Both birds and crocodylians descend from a dinosaur lineage that includes Archaeopteryx.
- Crocodylians have the strongest jaw power than any other animal on earth – 3,000 lbs/in²!
- What's the difference between alligators and crocodiles?
 - Alligators have a rounder snout (like a U-shape), whereas crocodiles have a more pointy snout (like a V-shape).
 - Alligators only have integumentary sensory organs (sensory organs that help detect vibration of prey in water) on their jaw, whereas crocodiles have them all over their body.
 - Alligators are not very tolerant of saline water, thus tend to inhabit freshwater or brackish environments. Crocodiles can live in fresh-saline water.
- Crocodylians are the only reptile to show parental care of their young-even up to 3 years!



Crocodylus acutus

Natural History & Conservation of *Crocodylus acutus* and *Crocodylus moreletii* in Belize



Crocodylus moreletii



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About Belizean Crocodiles

- There are two species of crocodiles that live in Belize: *Crocodylus acutus* (American Crocodile) and *Crocodylus moreletii* (Morelet's Crocodile).
- Morelet's inhabit inland freshwater lakes, ponds, & rivers.
- American crocodiles inhabit the islands, cayes, atolls, and coast. However, due to habitat destruction (people destroying their habitat for hotels, homes, resorts, etc), American crocs are starting to move inland.
- American crocodiles are the second largest crocodilian species in the world- 18 ft long! However, because of poaching the average is about 12-13 ft.
- Morelet's reach lengths up to 10ft long.
- American and Morelet's are **NOT** one of the 5 man-eating crocodile species. Belizean crocs prefer fish, crab, and small mammals. However, these species can become aggressive via direct and indirect feeding. Research has proven feeding crocs makes them lose their fear of humans, thus the increase aggressiveness. Illegal feeding of these crocodiles, as well as leaving scraps of fish after cleaning it near the shore, associates you with food. So, if you want to prevent human-crocodile conflict, **DON'T FEED THE CROCS!**
- Prior to European colonization, the local Mayans lived in harmony with Belizean crocodiles. The local indigenous believed that all humans were descended from a great crocodile in the sky, thus everyone had crocodile blood. As a result, the people learned to live with crocodiles and respect them in the environment. Any negative act towards crocs was dishonorable and shameful.

Conservation

"The greatness of a nation can be judged by the way its animals are treated." - Mahatma Gandhi

- Crocodilians are known as eco-landscapers. For example, burrows or holes made by crocs along the banks of rivers are used by other aquatic animals to hid or hibernate. Also, used nest mounds or holes will become watering holes or be used by other animals for nesting. When crocodilians disappear, so do the other wildlife that depend on them.
- Crocodilians are keystone species. This means they keep the environment in a healthy balance. For example, many cultures like living near crocodiles because they keep the fish population healthy by preying upon invasive species that could wipe out fish populations, as well as help stir up sediment in the rivers, which is beneficial for fish nurseries.
- Incorporating crocodilians into eco-tourism has increased local income in communities around the world. Promoting the conservation of crocodilians has proven a more sustainable and continual source of income than negative activities such as poaching. Poaching is an illegal and selfish act. Money only goes to an individual, whereas eco-tourism could help increase the income of a whole community. Report all suspicion of poaching to the Belize Forest Department or to your local authorities.

Can crocodiles and humans live together peacefully?

The answer is **YES!** There are many societies and cultures around the world that share their environment with crocodilians. They know **NOT** to go in the water early morning and evening (that's when crocs are most active), and realize how important crocs are for keeping the local fish population healthy!