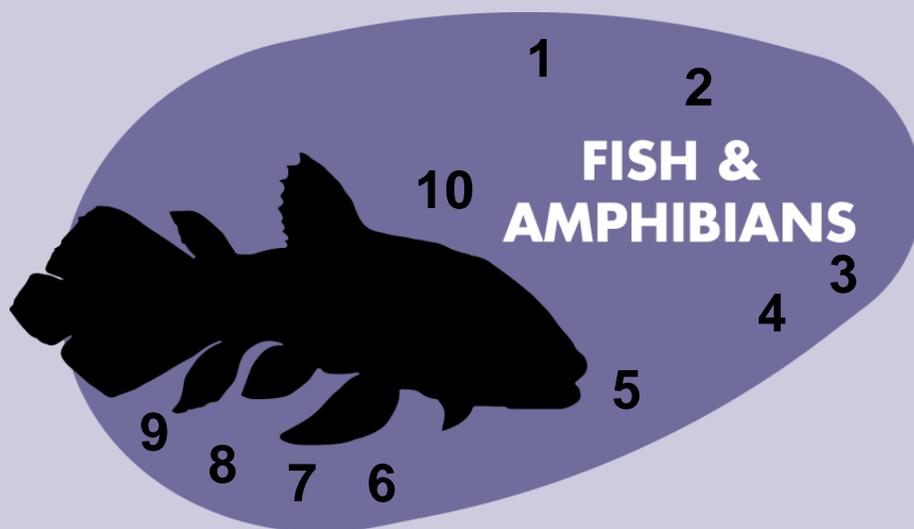




SCULPTURE LEARNING PLAZA



- 1 Seahorse (Genus *Hippocampus*) **20x**
- 2 Freshwater eel (Family Anguillidae)
- 3 Hammerhead shark (*Sphyrna* sp.)
- 4 Piranha (Subfamily Serrasalminae)
- 5 Mudskipper (Subfamily Oxudercinae)
- 6 Goliath frog (*Conraua goliath*)
- 7 Horned marsupial frog (*Gastrotheca cornuta*)
- 8 Hellbender (*Cryptobranchus alleganiensis*)
- 9 Caecilian (Order Gymnophiona)
- 10 Coelacanth (Genus *Latimeria*)

*Sculptures are **true to size** except where scale is noted in red text.*



Seahorse

Genus *Hippocampus*

Habitat/diet: Seahorses anchor themselves to sea grasses and corals with their prehensile tails. They lack teeth, sucking in small animals through their snout like a straw. They can eat up to 3,000 crustaceans, fish, and zooplankton a day!

Status: Cape Seahorse: Endangered – IUCN 2012; all other species Data Deficient or Vulnerable.

Range: Shallow tropical and temperate waters throughout the world.

Fascinating facts:

- These fish are monogamous, and some species mate for life.
- The genus name comes from ancient Greek; *hippos* meaning "horse" and *kamos* meaning "sea monster."
- Seahorses have excellent eyesight and their eyes are able to work independently on either side of their head.
- Females deposit eggs into the male's kangaroo-like pouch where he fertilizes and then incubates them until they hatch.
- They can change colors to blend in with their surroundings.

Can you find?...

- Another animal with a special pouch for their eggs?
- Another animal with a prehensile tail?
- Another animal that changes colors?



Sculpture Photo by Blair Bazdarich





Freshwater eel

Family Anguillidae

Habitat/diet: Freshwater rivers, lakes, or estuaries for the majority of their lives, swimming out to open ocean to spawn. Young eels consume “marine snow” (organic detritus), while adults eat crustaceans, fish, amphibians, and occasionally small birds.

Status: Near Threatened through Endangered depending on species – IUCN 2014

Range: Freshwater lakes, rivers, and streams worldwide, dependent on species.

Fascinating facts:

- These eels are catadromous meaning they begin their life in saltwater and move to freshwater for adulthood.
- They are terminal breeders; they die after spawning.
- During the winter they burrow into the mud and enter a state of torpor (hibernation).
- These eels are commonly used for “unagi” in Japanese food, and all types are listed as “avoid” by Seafood Watch.

Can you find?...

- Another animal without arms or legs?
- Another animal that lives in a river?
- Another animal that eats insects?





Hammerhead shark

Genus *Sphyrna*

Habitat/diet: Temperate and tropical waters worldwide, in both deep and shallow habitats. Diet includes fish, other sharks, stingrays and skates, crustaceans and cephalopods.

Status: Near Threatened, Vulnerable, or Endangered, depending on species – IUCN 2004-2007

Range: Worldwide in warmer waters along coastlines and continental shelves.

Fascinating facts:

- Unlike most sharks, hammerheads usually swim in schools during the day, and are solitary hunters at night.
- The special shape of their head increases their ability to sense electrical fields created by potential prey.
- Their head shape is also used to pin stingrays to the ocean floor.
- Hammerheads are viviparous with an internal yolk sac.
- All hammerhead species are vulnerable to bycatch and sport fishing, as well as finning.
- California banned possession and sale of shark fins in 2011.

Can you find?...

- Another predator?
- Another animal susceptible to bycatch?
- Another animal with a special sense?



Sculpture Photo by Marianne Hale





Piranha

Subfamily Serrasalminae

Habitat/diet: Piranhas are omnivorous freshwater fish that move in schools. Despite their vicious reputation, these fish school for protection, not cooperative attack. They will feed on any young or injured land animal that ventures into the water, as well as aquatic animals of any size.

Status: Not Evaluated (NE) by IUCN

Range: Native to South American Rivers. They have also been spotted in China and Bangladesh, most likely introduced.

Fascinating facts:

- Their name comes from the Portuguese *piro* for "fish," and *sainha* for "tooth."
- They most likely got their grizzly reputation from Theodore Roosevelt's book *Through the Brazilian Wilderness*.
- They have a single row of sharp, triangular, interlocking teeth, that are replaced as they are lost.
- Piranha predators include caimans, water snakes, turtles, birds, otters and people.
- Piranha parents patrol their nest site to protect their offspring.

Can you find?...

- Another omnivore?
- Another animal with a bad reputation?



Sculpture Photo by Marianne Hale



Mudskipper

Subfamily Oxudercinae



Habitat/diet: Swamps, lagoons, mud flats, and estuaries, spending three-quarters of their time on land perched on mangrove roots and rocks. When submerged in their burrows they maintain an air pocket in case of low oxygen concentration in the water. Mudskippers eat insects, sandworms, and small crustaceans.

Status: Least Concern – IUCN 2014

Range: Indo-pacific, West Africa, Japanese coasts, Australia, Philippines and the Polynesian islands.



Fascinating facts:

- Mudskippers are so named for their ability to walk, climb, and “skip” out of water.
- Their large pectoral fins are shaped like legs to help them move.
- Out of water, they breathe air through their gill chambers while keeping them wet by wiping them with their fins.
- They also breathe through their skin, like amphibians.
- Their eyes move independently and can see on land and in water.
- Mudskippers dig their burrows by scooping out mud with their mouths, creating a surrounding wall for protection as they spit out.

Can you find?...

- Another animal that spends time on land and in water?
- Another animal with fins?
- Another animal that can breathe through its skin?





Goliath frog

Conraua goliath

Habitat/diet: Fast-flowing rivers and cascades, with sandy or rocky bottoms. Goliath frog tadpoles are picky eaters and only eat a specific plant endemic to their own small geographic range. Adults eat insects, crustaceans, fish, and other amphibians, but will occasionally eat small mammals, birds, or even bats!

Status: Endangered – IUCN 2004

Range: Rainforests at the equator of western Africa, near swift-moving rivers and waterfalls.

Fascinating facts:

- As the largest frog, they can be 12 inches long and weigh 7 pounds!
- Goliath frog tadpoles are the same size as any other frog, they just keep growing!
- Mainly endangered due to extensive hunting by humans for food, but they are also affected by deforestation and dam construction.
- Approximately 300 goliath frogs are sent to the US every year for races and frog jumping competitions.
- They lack a vocal sac, and cannot therefore make mating calls.

Can you find?...

- Another frog?
- Another animal that is very large?
- Another animal that can breathe through its skin?





Horned marsupial frog

Gastrotheca cornuta

Habitat/diet: Lowland, humid forests lacking disturbance, with occasional reports in palm oil plantations. They are nocturnal carnivores, feeding mostly on insects and other small invertebrates.

Status: Endangered – IUCN 2008

Range: South America, specifically: Costa Rica, Panama, Colombia, and Ecuador.

Fascinating facts:

- Females carry eggs in a pouch on her back, and the young hatch as fully developed frogs, skipping the tadpole phase entirely.
- Fertilization is external; development takes 60 to 80 days.
- They have the largest eggs of any amphibian.
- Their upper eyelid has a triangular peak, giving them the “horned” part of their name.
- Chytridiomycosis (an infectious disease) and habitat destruction give this species endangered status.

Can you find?...

- Another animal that takes good care of their young?
- Another animal that lays a big egg?
- Another frog?



Sculpture Photo by Blair Bazarich





Hellbender

Cryptobranchus alleganiensis

Habitat/diet: Hellbenders live in clear, silt-free mountain streams. Adults are extremely territorial, usually chasing off any daytime visitors. They are nocturnal and eat mostly crayfish, supplemented by small fish, other hellbenders, tadpoles, toads and water snakes.

Status: Near Threatened – IUCN 2004

Range: Eastern United States from southern New York down to Alabama.

Fascinating facts:

- As the largest aquatic salamander in the US, they can grow up to 2 ft long (12-15 inches on average).
- Other names include "snot otter", "devil dog", "mud-devil", "grampus", "Allegheny alligator", and "water dog."
- Males prepare nests and attend eggs beneath large flat rocks or submerged logs, protecting and aerating them.
- The greatest threat to hellbenders is pollution of streams or rivers.
- Their entire skin is photosensitive.
- Fossils date them back 160 million years.



Sculpture Photo by Marianne Hale

Can you find?...

- Another animal that lives in mud?
- Another animal with a flat tail?





Caecilian Order Gymnophiona

Habitat/diet: Most are burrowers, living in a network of tunnels underground, but some species are aquatic. They have dozens of needle-like teeth to help them catch worms, insects, mollusks, snakes, frogs, lizards, and other caecilians. All food is swallowed whole.

Status: Kenyan and Mahe Island species Endangered – IUCN 2012; most other species Data Deficient.

Range: Wet, tropical regions of Southeast Asia, India, Bangladesh, Sri Lanka, East and West Africa, the Seychelles Islands in the Indian Ocean, Central America, and in northern and eastern South America.

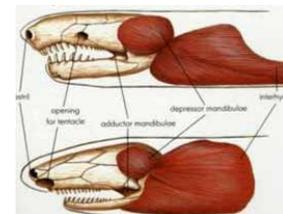
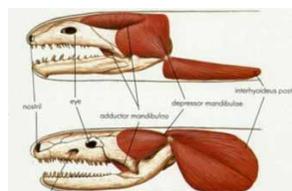


Fascinating facts:

- They range in size by species from 3 inches to over 5 feet!
- Their name comes from the Latin “caecus,” which means blind.
- Some caecilian species are eyeless, others have small eyes hidden under their skin.
- They have short, sensory tentacles located between their eyes and nostrils that help them probe their environment and find prey.
- Young caecilians stay with their mother for several weeks after birth to feed off of her outer layer of skin that is rich in fat and other nutrients. This parental service is called “dermatotrophy.”

Can you find?...

- Another burrowing animal?
- Another animal with tentacles?





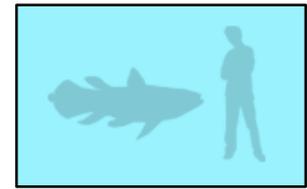
Coelacanth

Genus *Latimeria*

Habitat/diet: Coelacanths are nocturnal hunters, sheltering in caves along rocky coastlines throughout the day and foraging at night on squid and other fish.

Status: African Coelacanth: Critically Endangered – IUCN 2000
Sulawesi Coelacanth: Vulnerable – IUCN 2008

Range: Along the eastern coast of Africa from the Comoros Islands, past the western coast of Madagascar to the South African coastline, and the Celebes Sea, north of Sulawesi in Indonesia.



Fascinating facts:

- South African natives call this fish “gombessa” or “mame.”
- Their name comes from Latin for “hollow spine,” due to their lack of a spinal column; they instead have a fluid-filled notochord.
- Bycatch via shark nets and hook and line fishing is a major threat.
- Coelacanths have an organ in their snouts that is electrosensory.
- Most thought this fish was extinct, until one was caught in 1938.
- They have paired lobe fins that move like legs, misleading scientists into thinking they were a missing link between fish and life on land.
- They can grow as large as 7 ft and 200 lbs!

Can you find?...

- Another nocturnal animal?
- Another animal with a special sense?



Sculpture Photo by Blair Bazdarich

