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Communication, Intelligence, Diet and Feeding of Turtle

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Opinion Article

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ABOUT THE STUDY

Turtles are an order of reptiles known as Testudines, characterized by a special shell developed mainly from their ribs. Modern turtles are divided into two major groups, the Pleurodira (side necked turtles) and Cryptodira (hidden necked turtles), which differ in the way the head retracts. There are 360 living and recently extinct species of turtles, including land-dwelling tortoises and freshwater terrapins. They are found on most continents, some islands and, in the case of sea turtles, much of the ocean. Like other amniotes (reptiles, birds, and mammals) they breathe air and do not lay eggs underwater, although many species live in or around water

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The upper part is the domed carapace, while the underside is the flatter plastron or belly-plate. Its outer surface is covered in scales made of keratin, the material of hair, horns, and claws. The carapace bones develop from ribs that grow sideways and develop into broad flat plates that join up to cover the body. Turtles are ectotherms or "cold-blooded", meaning that their internal temperature varies with their direct environment. They are generally opportunistic omnivores and mainly feed on plants and animals with limited movements. Many turtles migrate short distances seasonally. Sea turtles are the only reptiles that migrate long distances to lay their eggs on a favored beach.

Turtles have appeared in myths and folktales around the world. Some terrestrial and freshwater species are widely kept as pets. Turtles have been hunted for their meat, for use in traditional medicine, and for their shells. Sea

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turtles are often killed accidentally as bycatch in fishing nets. Turtle habitats around the world are being destroyed. As a result of these pressures, many species are extinct or threatened with extinction.

The word turtle is borrowed from the French word tortue or tortre 'turtle, tortoise'. It is a common name and may be used without knowledge of taxonomic distinctions. In North America, it may denote the order as a whole. In Britain, the name is used for sea turtles as opposed to freshwater terrapins and land-dwelling tortoises. In Australia, which lacks true tortoises (family Testudinidae), non-marine turtles were traditionally called tortoises, but more recently turtle has been used for the entire group.

Diet and feeding

Most turtle species are opportunistic omnivores; land-dwelling species are more herbivorous and aquatic ones more carnivorous. Generally lacking speed and agility, most turtles feed either on plant material or on animals with limited movements like mollusks, worms, and insect larvae. Some species, such as the African helmeted turtle and snapping turtles, eat fish, amphibians, reptiles (including other turtles), birds, and mammals. They may take them by ambush but also scavenge. The alligator snapping turtle has a worm-like appendage on its tongue that it uses to lure fish into its mouth. Tortoises are the most herbivorous group, consuming grasses, leaves, and fruits. Many turtle species, including tortoises, supplement their diet with eggshells, animal bones, hair, and droppings for extra nutrients. Turtles generally eat their food in a straightforward way, though some species have special feeding techniques. The yellow-spotted river turtle and the painted turtle may filter feed by skimming the water surface with their mouth and throat open to collect particles of food. When the mouth closes, the throat constricts and water is pushed out through the nostrils and the gap in between the jaws. Some species employ a "gape-and-suck method" where the turtle opens its jaws and expands its throat widely, sucking the prey in

The diet of an individual within a species may change with age, sex, and season, and may also differ between populations. In many species, juveniles are generally carnivorous but become more herbivorous as adults. With Barbour's map turtle, the larger female mainly eats mollusks while the male usually eats arthropods. Blanding's turtle may feed mainly on snails or crayfish depending on the population. The European pond turtle has been recorded as being mostly carnivorous much of the year but switching to water lilies during the summer. Some species have developed specialized diets such as the hawksbill, which eats sponges, the leatherback, which feeds on jellyfish, and the Mekong snail-eating turtle.

Communication and intelligence

While popularly thought of as mute, turtles make various sounds to communicate. One study which recorded 53 species found that all of them vocalized. Tortoises may bellow when courting and mating. Various species of both freshwater and sea turtles emit short, low-frequency calls from the time they are in the egg to when they are adults. These vocalizations may serve to create group cohesion when migrating The oblong turtle has a particularly large vocal range; producing sounds described as clacks, clicks, squawks, hoots, various kinds of chirps, wails, hooos, grunts, growls, blow bursts, howls, and drum rolls.

Play behavior has been documented in some turtle species. In the laboratory, Florida red-bellied cooters can learn novel tasks and have demonstrated a long-term memory of at least 7.5 months. Similarly, giant tortoises can learn and remember tasks, and master lessons much faster when trained in groups. Tortoises appear to be able to retain operant conditioning nine years after their initial training. Studies have shown that turtles can navigate the environment using landmarks and a map-like system resulting in accurate direct routes towards a goal. Navigation in turtles have been correlated to high cognition function in the medial cortex region of the brain.