How to Sex Every Reptile and Amphibian! Is Your Pet Male or Female?-Turtle and Tortoise Edition!

One of the most commonly asked questions, by both new and seasoned pet owners and reptile keepers alike, are the sex or gender of their pets. Unlike mammals, and even many other more familiar groups of animals in which their sexes are much more familiar to us, and can be much more readily distinguishable, reptiles and amphibians have vastly differing anatomies and physiologies, which oftentimes might make determining their sexes more challenging or difficult. Many can be sexually dimorphic in size between males and females, while others can be difficult to determine sex until their sub-adult or adult forms, being very difficult, if not impossible to determine in their younger forms, or as hatchlings or juveniles. Others yet can be parthenogenetic, consisting of primarily one sex, or even, in some cases, the ability to switch sexes depending on environmental and physiological conditions! Sometimes, the deposition of infertile eggs, ova, or other specific health and reproductive cues can also occasionally indirectly point to the likely sex of an animal as well.

While determining the sex of some animals can still be relatively easy once one learns what to look for and recognize, other methods should still be attempted only by veterinarians or other more experienced hobbyists or enthusiasts in order to prevent possible injury and undue stress to the animal. Many also display sexual behaviors characteristic of males or females, although there can often be overlap. Whether one is inquiring into the sex of their animal for the purposes of a new and exciting breeding project, or simply out of curiosity for one's own best knowledge and ability to provide the most tailored care and husbandry as possible, the following document shall be a great starting point for learning more about whether your pet is male, female, or in some cases, both!

Chelonians (Turtles and Tortoises):

-Aquatic Turtles-Aquatic turtles, such as painted turtles, sliders, cooters, map turtles, and other species can be distinguished in several different ways. Firstly, their eggs and incubation are often, but not always, temperature-sex dependent, with higher incubation temperatures more likely to produce females than lower temperatures, producing more likely males. Some species can be sexually dimorphic in size, with females being much larger than males. Males of many species can also have differing structural differences such as concave plastrons (as opposed to flat plastrons in females), and/or longer claws or nails on the fore-limbs or appendages used in mating and copulation. Sometimes, iris color can also differ between males and females, as in box turtles, although this is not always reliable. The length of the tail, and position of the cloaca can also be used, with males often having longer tails and cloacas or vent openings located further towards the tip of the tail than in females.

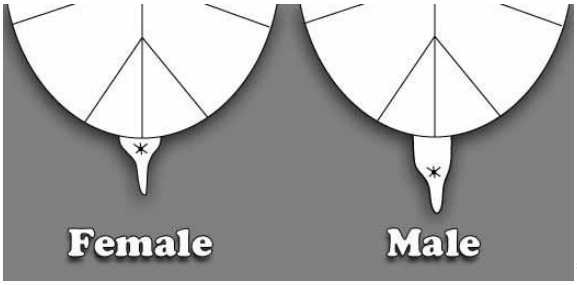

**Figure 1. Comparison of tail lengths and cloaca placement between male and female Turtles or Tortoises. Credited to Bill's Box Turtles.*

-Tortoises, Box Turtles, and Other Terrestrial Turtles-Many of the methods of sex determination for more aquatic turtles, can also be largely applicable to tortoises, box turtles, and other more terrestrial turtles as well. Another difference in some species would be to examine the differences in anal scutes, or notches, of the turtle or tortoise's plastron between males and females. Hatchling turtles and tortoises can otherwise be very difficult to reliably sex.

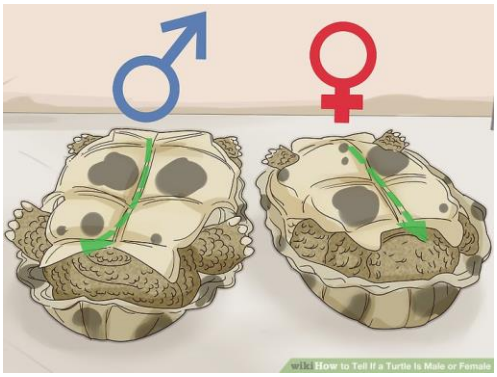

**Figure 2. Comparison of plastrons in Turtles or Tortoises. Male, with concave plastron (left), female with flat plastron (right).*

**Figure 3. Comparison of claws on fore-limbs in Aquatic species of Turtles. Note the much longer claws in males (right) compared to females (left). Credited to Gili Shark Conservation.*