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Anatomy and Physiology of Giraffes

Giraffes, the scientific name being (*Giraffa camelopardalis*), are African megaherbivores that are well known for their long neck, legs that are spindly and spotted body. The neck of the Giraffe is billed as the longest of any extant animal measuring an average of 2-3 meters in a full-grown male. Similar mammals that have characteristically long necks compared to the size of their bodies include camels and the llama. There are also bird species that have similarly long necks like the ostrich and swans. Apart from the size of the neck, a mature giraffe's height is further increased by the long legs. These physical features contribute to the overall height of the animal with a mature bull measuring up to 5 meters in height (Hopkins and Peter 1379). The difference in body structure from other animals in the wild has made it necessary for the Giraffe to develop physiological and anatomy adaptations for its survival.

The predecessors of the giraffes had necks that were relatively short when compared to the current breed. The earliest records found by archaeologists are diverse, and the primary ancestors were spread across Europe, Asia and Africa. The most recent ancestor had features that resemble the modern-day elf as it is known. The ancestral connection is portrayed through the Giraffe's extant relative, the okapi (*Okapia johnstoni*) (Hopkins and Peter 1380). In comparison to the Giraffe, it is a tiny species, with its first scientific description taking place in 1901. It is

bound to the forest where in the natural habitat there is plenty of vegetation within easy reach. Therefore, having a long neck does not afford it any particular physiological advantages or survival edge. In fact, in a verdant forest environment, having a long neck does not improve survival and maybe a hindrance. The paper is going to look at some of the physical and anatomical characteristics of the Giraffe and how they are used for the survival of the Giraffe. Giraffes are among the tallest terrestrial animals with an enigmatic and unique appearance. Their height and appearance make it hard to believe that they weigh so much. A full-grown male giraffe can weigh up to 2,600 pounds, while females are quite a bit smaller, about 1,800 pounds (Shorrocks 63).

Size

The unique height and features of the Giraffe are the most visible among its physiological characteristics. Their height varies between 15 and 20 feet with the males generally being taller than the females. Their different gender and species are what differentiates them. However, even the smallest of the species is still considerably massive than any other animal. The giraffes portray sexual dimorphism since the males are more significant than the females in body size (Seeber et al. 650).

In comparison to the magnitude of all the other body parts except the neck and legs, the body of the Giraffe is not all that big. It cannot be compared in the magnitude of body size to the like of elephants and hippopotamus. However, the bone structure and characteristics allow the Giraffe to carry the weight of the organs and support the long neck. Females are the smaller individuals in the species with weights ranging between 120 kilograms to 250 kilograms. However, an averagely grown female giraffe will weigh approximately 180 kilograms

(Shorrocks 65). The males have a much higher average of 260 kilograms with their weights varying between 180 kilograms to 440 kilograms (Seeber et al. 650). Another characteristic feature of the size of the Giraffe is its tail. The tail is small and measures between 30 to 40 inches.

Ossicones

The peculiar protrusions that giraffes have on their heads in places where other mammals have horns are known as “ossicones” (Warren 97). The name was given as a means of differentiating them from other similar species that have identical protrusions but bear more horn-like characteristics than those of ossicones. The ossicones are like two knobs that come from ossified cartilage that is approximately 5 inches in length. The cartilages are covered in fur. They are unique features that are used to differentiate between the males and females in a herd (Williams 35). The female ossicones are slim and covered with a lot of furs, while the male ossicones are thick with little or no hair covering them. Extensive research into the anatomy of the giraffes has led to the conclusion that the ossicones are used for thermoregulation as well as supremacy battles between the males (Warren 98). There are different species of the Giraffe where some can be sighted with more than two ossicones. However, it is common among older males that grow calcium deposits on the forehead that might give the impression of a third ossicones.

The circulatory system of the Giraffe is specially adapted to support the unique anatomy of the mammal. For example, the heart is enormous, measuring up to 2 feet long and weighing approximately 25 pounds. The sheer size of the heart enables it to pump up to 20 gallons of blood in a minute (Williams 35). A large amount of blood pumped is meant to ensure that there

are enough blood and oxygen supply to the brain that is far from the location of the heart. The anatomy of the Giraffe is also meant to ensure that there is no excess supply of blood to the head and brain when the head is lowered to eat or drink water.

Works Cited

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