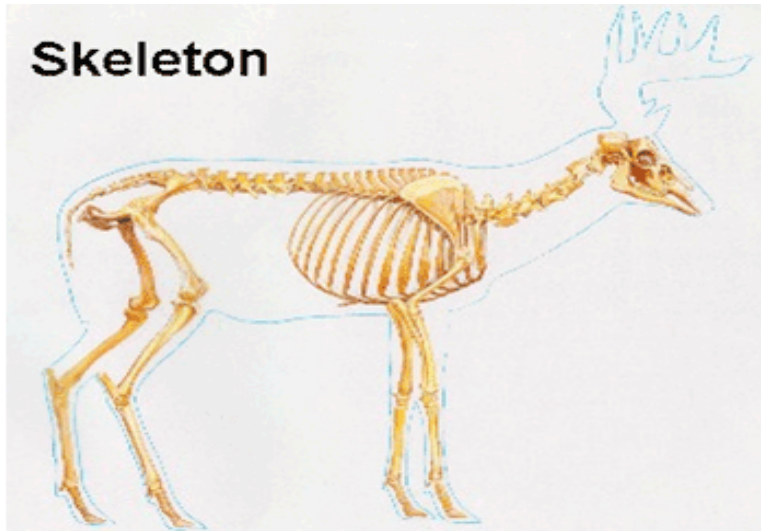


## **THE BONE STRUCTURE OF WHITETAIL DEER**

The White-Tailed Deer is found over most of North and Central America and northern parts of South America. The habitats of the white-tailed deer are deciduous and conifer forest, rainforest, grasslands, farmland, marshes, and deserts. The White-Tailed Deer has long thin legs that aid in its ability to be quite a fast-moving mammal.

Mammals are vertebrates, which mean they have an internal bone support structure to which muscles and ligaments are attached. This is the basic bone structure of all mammal skeletons. The composition of the skeleton is bone. Bone is made of live tissue composed of cells. The deer's bones are the sight of red blood cell production. The bone is also the storage place for calcium. The deer skeleton provides protection. It also gives the deer support, shape, and of course, locomotion <sup>2</sup>. Bone is what makes animals that are classified as vertebrate, different from other animals. The bone is a very extraordinary tissue that has evolved over millions of years. Bone tissue is extremely strong, while also being extremely light <sup>4</sup>. Calcium and phosphorus gives strength to bones while collagen fibers give bone their

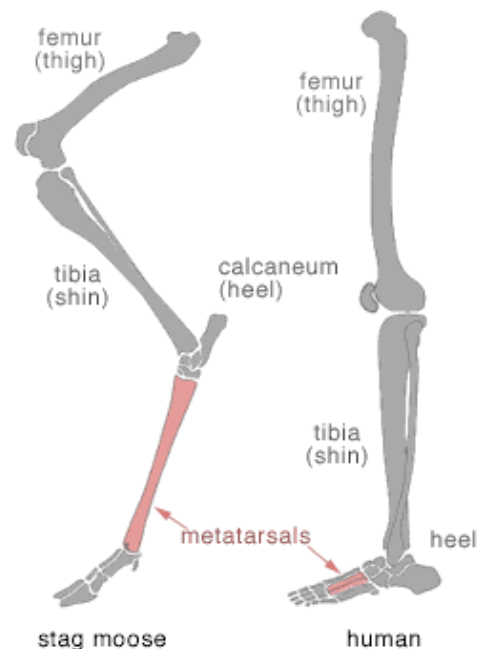
ability to be flexible. The typical bone structure of all mammals, including the deer, is to have a head at one end of the vertebral column. Ribs extend from this column to support the working organs and the limbs for movement. At the other end of the vertebral column is usually a tail. Some



mammal species such as humans do not have tails. White-tailed deer have external glands that are used for communication<sup>8</sup>. Tarsal glands and metatarsal glands are the most recognized.

These glands are located on the deer's legs. The tarsal glands are used to distinguish individuals. They are located on the inner side of the leg. The metatarsal gland helps to regulate the deer's body temperature, and is found on the lower, outside of the leg. The metatarsals are also the longest bones in the legs. White-Tailed Deer are about 3 to 3 1/2 ft. tall at shoulder height. Bucks (males) weight up to 400 lbs., does (females) weigh up to 200 lbs.

Deer are even-toed ungulates. Ungulates are mammals with split hooves. The legs are structured perfectly for running. The strong muscles of a deer's



hind legs provide most of their power for running and jumping. The front legs are perfect for pivoting. This allows a deer to make sharp turns. The deer actually walks on its toenails instead of its toes. This type of foot is effective for fast movement.

Another very interesting part of the deer anatomy is the antlers. Antlers are one of nature's most remarkable achievements. For more information on deer antlers, click below.

#### References:

1. <http://www.mnsu.edu/emuseum/biology/humananatomy/skeletal/skeletalsystem.html>
2. <http://www.bowhunting.net/NAspecies/whitetail2.htm>
3. [http://www.appser.whitetails.com/deer\\_info/deer\\_anatomy.cfm](http://www.appser.whitetails.com/deer_info/deer_anatomy.cfm)
4. <http://mdc.mo.gov/nathis/mammals/deer/bio.html>
5. [www.dnr.state.md.us/wildlife/wtdeerbiology.asp](http://www.dnr.state.md.us/wildlife/wtdeerbiology.asp)
6. <http://www.acnatsci.org/museum/jefferson/images/cervacles-homo-legs.gif>
7. [http://www.gracefwp.org/t-ta/images/deer\\_anatomy.GIF](http://www.gracefwp.org/t-ta/images/deer_anatomy.GIF)
8. [www.acnatsci.org/.../f-cervalces-MT.html](http://www.acnatsci.org/.../f-cervalces-MT.html)