

Some Fascinating Anatomical Etymologies

Etymology means 'the study of the origins of words or parts of words and how they have arrived at their current form and meaning.'¹ The ancient Greeks were the first to systematically study the field of anatomy and to develop a suitable vocabulary. The Romans continued this study, usually adopting the Greek terms which they modified as necessary to fit their alphabet and grammar. Latin then continued as the language of science, the law, and the Church throughout Western Europe until the eighteenth century.² Understanding anatomical words can be challenge and interesting. Below is an alphabetically-arranged list of some fascinating anatomical words, complete with a description of their origins (their etymologies).

Achilles tendon, the name comes indirectly from Greek mythology: After receiving a prophecy that her young son, Achilles, would die in battle, the goddess Thetis dipped him into the magical, protective waters of the river Styx. However, she held him by his heel which was not immersed and thus remained vulnerable. Later, Achilles was fatally wounded



Fig.-1: Thetis dipping Achilles in the river Styx.

Acetabulum, of the pelvic bone, is Latin for "little vinegar cup", deriving from *acetum*, vinegar. Acetabulum was a Roman unit of measurement as well, equal to about 275 ml. Also from *acetum*: acetic acid; Vinegar is a solution of around 4% acetic acid.⁴



Fig.-2: An acetabulum from 'A Dictionary of Greek and Roman Antiquities', by Sir William Smith, 1875.

Ampulla, the expanded, usually terminal region of many anatomical ducts and canals. Named for a fancied similarity to an *ampulla*, the

Latin name for a rounded flask with a narrow neck, used for storage of oils or perfumes. The body's ampullae include the

ampulla of the uterine (fallopian) tube, the ampulla of the ductus (vas) deferens, the ampulla of Vater and the ampullae of the semicircular canals (perhaps so-named because many ampulla flasks have semicircular handles).⁴

Fig.-3: Ampulla of Saint Menas, 650 AD. Made at Alexandria, Egypt.

Amygdala, Greek for almond. A mass of gray matter located within the temporal lobe of the cerebrum; It has the shape and approximate size of an almond kernel.



Fig.-4: Almonds

In humans, tumors in or near the amygdala have been associated with uncontrolled rage. Consider the tragic case of Charles Whitman, who, in 1966, stabbed to death his wife and mother and then climbed to the observation deck

of the University of Texas Tower with a high-power rifle. For 90 minutes he gunned down people below, killing 14 and wounding 19 before being shot and killed by police. In a note found later he wrote about his "unusual and irrational thoughts" and wanted his body to be examined to see if a

physical cause could be found for his "mental anguish". An autopsy was performed and a tumor compressing his amygdala was found.⁴

Arachnoid, spider-like, derives from the Greek words for "spider" (*arachne*) and "like" (*eidos*). In anatomy, however, the word does not mean "like a spider" but rather "like a spider's web". The arachnoid membrane has a network of exceedingly fine filaments attached to its undersurface (traversing the sub-arachnoid space) that resembles the web of a spider. The word ultimately goes back to Arachne, a mythological maiden from Lydia (now western Turkey), who had the audacity to challenge the goddess Athene to a weaving contest. As a result of her brashness, she was killed by Athene and brought back to life as a spider, forever weaving and forever serving as a warning that mere mortals were not to challenge the immortal gods.⁴



Fig.-5: *Arachne, of Lydia (now western Turkey).*

Atlas, the first cervical vertebra and the bone the skull rests upon. It is named after Atlas, the Greek god sentenced by Zeus to hold the earth on his shoulders. The term was not used in anatomy until the era of Vesalius in the 16th century.⁴

Fig.-6: *Sculpture of Atlas, 2nd century A.D; Naples, Italy.*



Carotid artery, gets its name from the Greek *karos*, which means "deep sleep or stupor". The term was already being taught in Roman medical schools early in the first century A.D., and was quite possibly used by the Greeks 300 hundred years earlier as it was Aristotle (384-322 BCE) who first noted that pressure on the both carotid arteries could induce a stupor.⁴

Coccyx, the tail bone, comes from *kokkyx*, Greek for cuckoo. One of the oldest words in anatomy, it was coined around 300 B.C. by Herophilus who apparently was inspired by the cuckoo's bill. The resemblance to the coccyx is apparent when the bill is observed from above (see the cuckoo skull, below).⁴

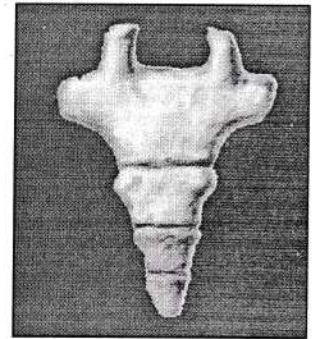
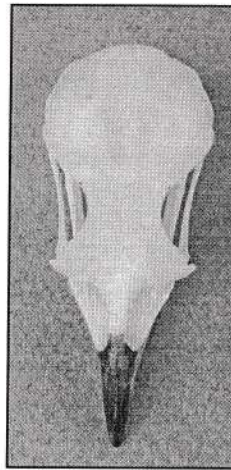


Fig.-7: *A cuckoo skull and a bony coccyx.*

Coronary, from the Latin *corona* or crown. *Corona* is also Latin for boundary. When viewed from above, it can be seen that the right and left coronary arteries encircle the heart like a crown. Some non-anatomic words derived from the Latin *corona* include coronation and coroner (the original definition of the latter word was "an officer appointed by the crown").⁴



Fig.-8: *Julius Caesar, wearing a corona. Courtesy of the Library of Congress.*

Iris, directly from the Greek *iris*, rainbow. Iris was a Greek goddess before being a rainbow: a messenger among the Greek pantheon. Iris became associated with rainbows because they were a symbol of good news in Greek society and she apparently brought her fair share of welcome reports.⁴ Aristotle also used the term to describe the bright halos that sometimes encircle the moon. Danish anatomist Jacob Winslow, in 1721, chose to call the pigmented, circular smooth muscle that surrounds the pupil the iris.



Fig.-9: *A lunar iris and The Goddess Iris.*

Muscle, comes from the Latin for "little mouse". Two explanations are usually given for the peculiar transformation of mouse to muscle. One has it that the movement of a contracting muscle under the skin is reminiscent of a mouse moving beneath a rug; The biceps brachii is typically used as an example. The other explanation is that, in the abstract at least, some muscles look a bit like mice: specifically those with long, thin tendons (the mouse tails) emerging from oblong muscle bodies. The muscles of the forearm are among many that are illustrative.⁴

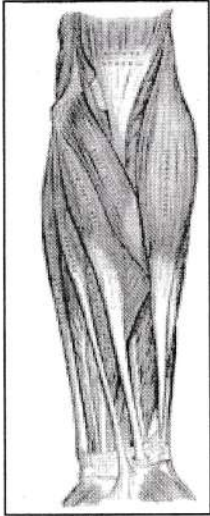


Fig: 10: The little mice of the anterior forearm.

The **Sella turcica**, is always translated from the Latin as "Turkish saddle", *sella* meaning saddle and *turcica*, "of the Turks". While Greeks and Romans were busy perfecting their primitive riding techniques, the Turks and numerous Arab tribes developed and fine-tuned the saddle which, to facilitate rides of great distances, typically had high backrest. Following the introduction of the "European" saddle in the 4th century by the Romans, the phrase "Turkish saddle" appeared, used by Europeans as a generic reference to any saddle with a high back and front.⁴

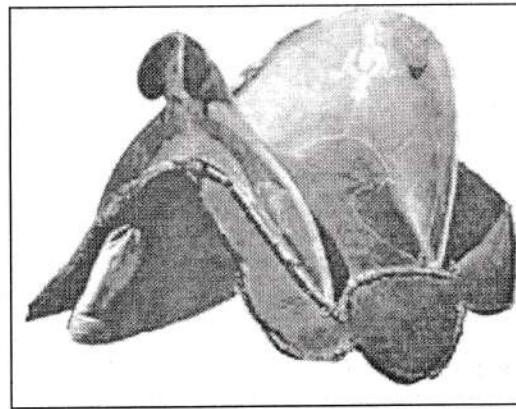


Fig.-11: An 18th century Arab horse saddle, in the *sella turcica* style

Dr. Md Mesbah Uddin¹
Dr. Sharmin Jahan²
Professor Dr. Munir Hassan³

¹Associate Professor & Head of the Department, Department of Anatomy Kumudini Women's Medical College. Mirzapur, Tangail.

²Assistant Professor Department of Community Medicine Dhaka National Medical College Dhaka.

³Professor & Head, Department of Microbiology, Dhaka National Medical College & Hospital

References:

1. Online etymology dictionary. <http://www.etymonline.com>.
2. O'Rahilly. Basic human anatomy. 2008. <http://www.dartmouth.edu/humananatomy...>
3. Wikipedia article on Achilles tendon. http://wikipedia.org/wiki/Achilles_tendon.
4. Carpenter CA. Tough mother in a Turkish saddle. 2007. <http://anatomyalmanac.blogspot.com/2007/06/sella-turcica-depression-in-skulls.html>.