

CHAPTER TWO

Taxonomic Classification of Camel

The *Camel* is common name to describe any of the six camels like creatures in the family Camelidae: the two true camels, and the four South American camelids, the llama, alpaca, guanaco, and vicuña. In this regard the scientific classification of the dromedary and other Camelidae are:

Kingdom: *Animalia*

Phylum:

Phylum: *Chordata*

Class:

Class: *Mammalia*

Order: *Artiodactyla*

Suborder: *Tylopoda*

Family:

Family: *Camelidae*

Genus: - *Camelus* (Old world/true camels)

- *Lama* (New world camels)

Species: *C. dromedarius* & *C. bactrianus*, *L. glama* (Llama), *L. pacose*

: (Alpaca), *L.guanicoe* (Guanaco) & *L. vicugna* (the vicugna)

A fully grown adult camel stands 1.85 m at the shoulder and 2.15 m at the hump. The hump rises about thirty inches out of its body. Camels can run up to 65 km/h in short bursts and sustain speeds of up to 40 km/h.

2.1. The old world camel

They belong to the genus *Camelus* which consists again two species under it.

a. *Camelus dromedarius* (the dromedary/Arabian/one-humped camel)

b. *Camelus bactrianus* (the bactrian camel)

a. The dromedary camel (*Camelus dromedarius*)

The name dromedary camel was derived from the Greek word “dromedos” meaning running. The **dromedary**, also called the **Arabian camel** or the **Indian camel** (*Camelus dromedarius*), is a large with one hump on its back. They are found in North Africa, Arabia and the Middle East

Males are 1.8–2 m tall and females are 1.7–1.9 m tall. Males range from 400–600 kg, while females weigh 300–540 kg. They vary in color from light being to dark brown. The notable hump, measuring 20 cm (7.9 in) high, is composed of fat bound together by fibrous tissue.

Their diet includes foliage and desert vegetation, like thorny plants which their extremely tough mouths allow them to eat. These camels are active in the day, and rest together in groups. Led by a dominant male, each herd consists of about 20 individuals. Predators in the wild include wolves, lions, and tigers. Dromedaries use a wide set of vocalizations to communicate with each other.

b. Bactrian camel (*Camelus bactrianus*)

The word bactrian camel was derived from the name of the place 'Bactrian' found in Afghanistan. The **Bactrian camel** (*Camelus bactrianus*) is a large, even-toed ungulate native to the steppes of Central Asia. The Bactrian camel has two humps on its back, in contrast to the single-humped dromedary camel. Its population of two million exists mainly in the domesticated form.

The domesticated Bactrian camel has served as a pack animal in inner Asia since ancient times with its tolerance for cold, drought, and high altitudes.

The Bactrian camel is the largest mammal in its native range and rivals the dromedary as the largest living camel. Shoulder height is from 180 to 230 cm, head-and-body length is 225–350 cm and the tail length is 35–55 cm. At the top of the humps, the average height is 213 cm. Body mass can range from 300 to 1,000 kg, with males often being much larger and heavier than

females. Its long, woolly coat varies in color from dark brown to sandy beige. There is a mane and beard of long hair on the neck and throat, with hairs measuring up to 25 cm long.

The face is typical of a camelid, being long and somewhat triangular, with a split upper lip. There are long eyelashes, which, along with the sealable nostrils, help to keep out dust in the frequent sandstorms which occur in their natural range. The two broad toes on each foot have undivided soles and are able to spread widely as an adaptation to walking on sand. The feet are very tough, as befits an animal of extreme environments.

Note: Although *Camelus dromedaries* and the *Camelus bactrianus* are both camels, the physiological adaptation of one-humped camel, the dromedary (*Camelus dromedaries*) and the Bactrian (*Camelus bactrianus*) is entirely different.

Cross breeding of Dromedary and Bactrian camel

Bactrian and Dromedaries can hybridize. The crossbreds are normally fertile, possess one hump, and are larger than either parent or express considerable hybrid vigor. Hybrids were produced on a large scale in central and western Asia in the past, especially in Turkey where the hybrid was known as **Turkoman**.

Today the two species can and often do interbreed, and on the basis of the fertility of the hybrids some authors have advocated amalgamating them into one species with two varieties. In areas of bordering distribution (e.g.

North Punjab, Persia, Afghanistan), the phenotypic differences between the two types tend to diminish as a result of the crossbreeding between them.

Dromedary-Bactrian hybrids are called **bukhts** and are good draft camels. The females can be mated back to a Bactrian to produce $\frac{3}{4}$ -bred riding camels. These hybrids are found in Kazakhstan.

The dromedary camel is believed to be evolved from bactrian camel. The justifications for this belief are:(1) the species have embryological similarity, i.e. both dromedary and bactrian camels have two humps during embryological development (2) Unlike other species these two species of camels can hybridize giving fertile cross bred animal.

2.2. The New World Camels

They belong to the Family Camelidae and the genus *Lama* which has again 4 species under it and also known as South American camel. They are hump less and all readily interbred and give fertile offspring; therefore, they are subspecies of the same species.

-*Lama glama* (the llama)

-*Lama pacos* (the alpaca)

-*Lama guanicoe* (the guanaco)

-*Lama vicugna* (the vicugna)

The llama and alpaca are only known in the domestic state, and are variable in size and of many colors, being often white, brown, or piebald. Some are grey or black. The guanaco and vicuña are wild, the former being endangered, and of a nearly uniform light-brown color, passing into white below. They certainly differ from each other, the vicuña being smaller, more slender in its proportions, and having a shorter head than the guanaco. The vicuña lives in herds on the bleak and elevated parts of the mountain range bordering the region of perpetual snow, amidst rocks and precipices, occurring in various suitable localities throughout Peru, in the southern part

of Ecuador, and as far south as the middle of Bolivia. Its manners very much resemble those of the chamois of the European Alps; it is as vigilant, wild, and timid.

The fiber is extremely delicate and soft, and highly valued for the purposes of weaving, but the quantity which each animal produces is minimal. Alpacas are descended from wild vicuna ancestors, while domesticated llamas are descended from wild guanaco ancestors, though a considerable amount of hybridization between the two species has occurred.

Differential characteristics between llamas and alpacas include the llama's larger size, longer head, and curved ears. Alpaca fiber is generally more expensive, but not always more valuable. Alpacas tend to have a more consistent color throughout the body. The most apparent visual difference between llamas and camels is that camels have a hump or humps and llamas do not.

