

The Deer of Vatera

The forest at Vatera, two million years ago, was the home of a fallow-like deer (*Metacervoceros rhenana*, also known as *Cervus philisi*). This deer had about the size of the fallow deer of today, but had a different antler, without the characteristic palmation of today's fallow deer. The antler was simple, with one tine only, and a forked end.

There was another small deer (*Croizetoceros ramosus*) at Vatera, two million years ago. This *Croizetoceros* stood about 1 m at the shoulder, and had rather complex antlers - compared to its Miocene ancestors -. These antlers were long and shaped like a lyre, from which three to five subdivided tines arose with a straight angle. *Croizetoceros* is considered the first representative of the modern deer with multitined antlers. The earlier deer all have at best a two or three-tined antler.

Metacervoceros and *Croizetoceros* are both modern deer (cervids). Cervids are long-limbed elegant even-toed ungulates, with a brownish coat, sometimes with a spotted pattern in the adults, and always so in the young. The newborn calves of deer are left hidden in the vegetation, and a spotted pattern makes them thus difficult to find. This cannot have been different for the extinct deer of Vatera of two million years ago.

Modern deer have antlers, which are cast every year and grown again in the next year. These cast antlers are often found fossil, such as in the case of Vatera. The dentition of deer is selenodont and brachyodont or moderate hypsodont, which makes them excellent browsers. They eat leaves, moos, twigs and tree bark. Deer ruminates, which means that they first eat fast, hardly chewing, and much later they regurgiate, and chew their food again. In the mean time, the food was pre-digested in the stomach by bacteria and protozoa, so that in this way ruminants can eat tougher food than their dentition prescribes. Other living ruminants are bovids, giraffs and camels.