

Kurtén B. 1968. The Giant Cheetah, *Acinonyx pardinensis*. In: Pleistocene Mammals of Europe. Chicago, Illinois: Aldine Publishing Company; p 88-90.

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Abstract: The giant cheetah, *Acinonyx pardinensis*, equal in size to a modern lion, is known mainly from the Villafranchian, although it did survive in the early Middle Pleistocene, when it was clearly common in Europe, as well as in India and China. During this period, the giant cheetah was gradually reduced in size, approaching the living species closely enough to be classified within *Acinonyx jubatus*. Its presence in southern and central Europe during the Villafranchian, indicates that extensive grasslands were available even during the forest episodes.

able to list 69 sites with fossil leopard and many more have been added since then. Though it seems never to have been so abundant in numbers as the lion (lion sites are more than three times as numerous as leopard sites), the leopard ranged with its larger cousin throughout the Middle and Late Pleistocene, dying out in Europe towards the end of the 4-Würm. The European subspecies is notable for its large size, but this also holds for the Pleistocene leopards of Palestine and China. The African Pleistocene form, on the other hand, was no larger than the living one.

The ancestry of the leopard is uncertain. Descent from the Villafranchian *F. pardoides* is a distinct possibility, *F. palaeosinensis* of China is another, and what Africa may have harboured in the line of Villafranchian proto-leopards is at present little known.

The geographic range of the leopard in Europe was found by Strehlin to be more restricted than that of the lion. Its northern boundary passes from southern England through Liège, Thuringia, Moravia and the Transylvanian Alps. The leopard-like cats of central Asia belong to the species *F. uncia* Schreber, the snow leopard or irbis.

The living leopard is widely distributed and inhabits many kinds of environments, including tropical rain forests, steppes and mountains even above the snow line. No wonder that the species flourished in Europe during the Ice Age, even in the coldest phases of the 4-Würm. A skilful climber, the leopard stalks its prey or lies in ambush in the trees or among the rocks. The prey consists of medium-sized herbivores, of which there were a great number in Europe during the Ice Age, such as the boar and several kinds of deer. Long of body, with short legs, a small head and a very long tail, the leopard is unique among the larger cats in having almost mustelid-like proportions [246].

The Giant Cheetah, *Acinonyx pardinensis* Croizet & Jobert. This species is known mainly from the Villafranchian, beginning with the basal level (Villafranca d'Asti; Etouaires), although it did survive in the early Middle Pleistocene (Saint-Estève; Hundsheim). The Villafranchian was clearly its heyday in Europe; its slender limb bones and typical teeth are quite common in the Villafranchian, at Pardines, Villaroja, Senèze, Olivola and other sites.

Equal in size to a modern lion, it was indeed a giant of a cheetah. The living cheetah is known to be the fastest runner of all animals, galloping easily at 56 mph [103]. In this respect the giant cheetah was

probably as advanced as its living relative, judging from the skeletal elements. *A. pardinensis* on the hunt must have been a fabulous sight.

The giant cheetah was gradually reduced in size during the Villafranchian. The late Villafranchian fossils are decidedly smaller than the early ones and in the Middle Pleistocene the size reduction had gone so far that this form has even been regarded as a distinct species (*A. intermedius* Thenius). However, the Saint-Estève form is as large as the Villafranchian one [34].

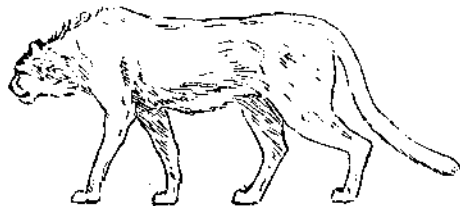


Figure 35. Restoration of Giant Cheetah, *Acinonyx pardinensis*, after a mount in the Museum of Basel (skeletal parts from various Villafranchian sites).

The giant cheetah has also been found in the Villafranchian of India and China. Again, there is a transition to a smaller form during the Middle Pleistocene in China and the Late Pleistocene cheetahs in this area approach the living species closely enough to be classified within it (*Acinonyx jubatus* Schreber), though they are still a little larger on average. It would seem that there was a gradual transition from the great Villafranchian species to the living cheetah. On the other hand the pre-Villafranchian history of the cheetah is unknown to us. As the earliest Villafranchian finds already show all of the cheetah characters, it may be assumed that the genus *Acinonyx* had a long history in the Pliocene.

At present, *A. jubatus* inhabits most of the African steppes and savannas; it also existed up to recent years in southwestern Asia and India, but not in eastern Asia, where it became extinct at the close of the Ice Age. Unfortunately the species has now been exterminated in all of its Asiatic range, where it used to be tamed and kept as a hunting animal. The range in Africa has also shrunk seriously in the north. Cheetahs were present in historical times in Asia Minor; they have,

for instance, been found at Troy in post-Homeric (Greek Ilion) association.

Ecologically the cheetah is dependent on open ground and avoids forests, where of course its great speed would be useless. Its presence in southern and central Europe during the Villafranchian, together with *Euryboas*, indicates that extensive grasslands were available even during the forest episodes [243; 302].

### Family Mustelidae, Weasel-like Carnivores

The varied family of the Mustelidae includes the majority of the carnivores of Europe today; and so, to all appearances, it must have done in the Pleistocene. But the bones of mustelids are comparatively small and fragile and have a poor chance of fossil preservation. This is particularly true for the tree-living forms – weasels, stoats and martens – all of which are very scarce as fossils.

The Mustelidae is one of the oldest carnivore families. As the viverrids are linked to hyaenids and felids, so the mustelids form a natural group together with the dogs, procyonids and bears. The mustelids have established themselves in the trees, on the ground, in the earth and in the water. Some are exclusive meat-eaters, others are omnivorous with a strong vegetarian bias. They live in environments ranging from the Arctic to the tropics. No other carnivore family exhibits such a diversity of adaptive types.

The family may be divided into a number of subfamilies. Of these the Mustelinae, with the weasels, polecats, martens and gluttons, is especially rich in species. The subfamilies of the ratsels (*Mellivorinae*) and skunks (*Mephitinae*) are absent in the Pleistocene of Europe, although they were well represented in the Tertiary. The badgers or *Melinae* on the other hand form an important element and so does the other subfamily, the *Lutrinae*.

Schlosser's Glutton, *Gulo schlosseri* Kormos. Glutton-like mustelids are entirely lacking in the Villafranchian of Europe and the earliest Pleistocene evidence of this group comes in the early Middle Pleistocene at Episcopia (B-Waalian). The species has also been identified in strata dating from 1-Günz II and C-Cromer (Mosbach 1; Forest Bed; Gombasek; Erpfingen; Stránská Skála), but these may be transitional to the true glutton. The size is almost the only key to the identification of Schlosser's glutton and it is actually only at Episcopia that a form decidedly smaller than the living glutton has been found.

### ORDER CARNIVORA

Indirectly, however, another character differentiating Schlosser's glutton from the living species is evident. It occurs at Episcopia in a decidedly warm fauna together with macaque and other warmth-loving species. Perhaps this means that Schlosser's glutton did not yet possess the boreal adaptation of its living descendant; it would seem that the glutton embarked upon its modern way of life as late as the 2-Mindel glaciation.

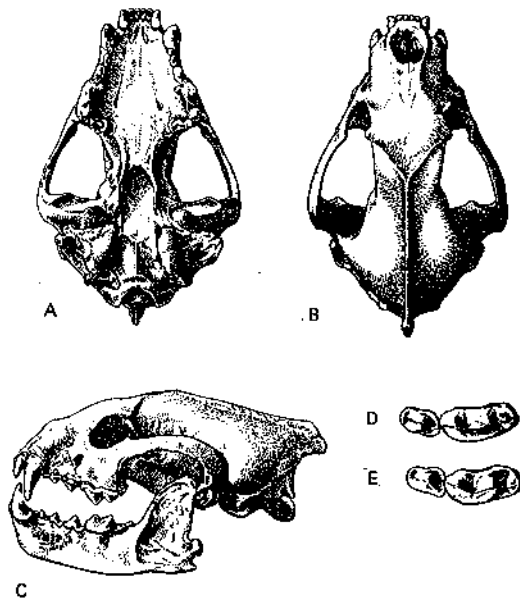


Figure 36. A-C, skull and mandible of Glutton, *Gulo gulo*, Recent; one-fourth natural size. D-E, lower  $P_4$  and carnassial of D, Schlosser's Glutton, *G. schlosseri* and E, Recent Glutton; two-thirds natural size. A-C after Gromova; D-E after Stehlin.