

of the bone immediately below the condylar surface. The shaft of the tibia was divided into three surfaces in its upper part, but in the lower half the ventral and outer surfaces were not so sharply differentiated from each other. The lower end of the inner and posterior surfaces of the tibia had two longitudinal grooves, the inner for the tibialis posticus being both wider and deeper than the outer for the flexor longus hallucis. On its inner side a short malleolus projected downwards. The tibia articulated below with the fibula and the upper surface of the astragalus. The tibia differed from that of *Leptonychotes* in having a much less transverse diameter at the condylar end, in not possessing a definite ridge on the shaft for the gracilis, in not being so distinctly grooved at the lower end in front for the tibialis anticus, and in being more deeply grooved behind for the tibialis posticus and flexor longus hallucis.

The *fibula* was a slender bone, 213 mm. long. Its upper end was fused with the outer tuberosity of the tibia. The shaft was three-sided all the way down. A short malleolus projected from the lower end which articulated by movable joints both with the tibia and the external lateral surface of the astragalus, and was grooved externally for the peronei; it did not articulate with the os calcis, and the malleolus generally was much less bulky than in *Leptonychotes*. In *Arctocephalus gazella* the tibia was 180 mm. and the fibula 163 mm. long, and the epiphyses were not ankylosed.

*Pes.*—The tarsus contained eight bones. The *astragalus* possessed a trochlear surface superiorly, which articulated with the lower end of the tibia; internally it did not articulate with the tibia, and externally it had a broad surface for the external malleolus of the fibula, which looked forwards as well as outwards, but was not however relatively so large as in *Macrorhinus* and *Leptonychotes*; anteriorly it had a convex head for the scaphoid, immediately external to which was a narrow articular surface for the cuboid; inferiorly its articular surface was divided into two parts, separated by an interosseous ligament, for the os calcis; the posterior surface was narrow and grooved, and not prolonged into a calcaneal process. The extreme length of the astragalus was 40 mm.

The *os calcis* was elongated behind into a strong calcaneal process, which was grooved posteriorly for the tendon of the plantaris. Its outer surface was also marked by the peronei tendons, the position of which was expressed by a strong tubercle and by two grooves; superiorly it articulated with the astragalus, and anteriorly with the cuboid. The extreme length of the os calcis was 54 mm.

The *cuboid* had both a plantar ridge and a peroneal groove. It articulated behind with the os calcis, internally with the scaphoid and external cuneiform, anteriorly with the 4th and 5th metatarsals.

The *scaphoid* had the usual shape of the bone, but without a tubercle; it articulated behind with the astragalus, externally with the cuboid, internally with the entoscapoid bone, anteriorly by three very distinct facets with the cuneiforms.