

of the heavy draft-horse of Europe; and now Kraemer* comes to the conclusion that the horses of classical Rome and Greece represent a cross between the heavy European horse and the Asiatic type. Notwithstanding the very plausible fact of the domestication of the European wild horse, however, it can not be contradicted that this wild horse itself could have come from Asia.

In considering the horse of the Anau kurgan, it is primarily worthy of note (1) That the horse from the lowest to the uppermost layers is represented by a great quantity of bones, to an extent which in the lower layers is only equaled by those of the bovid; (2) that in these bones we can recognize only one variety of horse, which thus occurs in the lowest layers with wild animals only and in the higher strata with the other domesticated animals; (3) that the percentage of the bones of the horse, as compared with those of other domesticated animals, also increases in period Ib. This last fact permits the conclusion that the horse came to the table of the inhabitants more often in the later than in the earliest period of the development of the kurgan civilization, from which we might next conclude that the horse was then easier to catch and had, therefore, become tamed or domesticated.

It is not possible to assert with logical certainty the correctness of our conclusion that we have here, at least in the upper strata, a domesticated horse, as we were able to do in the cases of the bovid and sheep through a study of the skeletal remains. I hold that no one is able to determine with certainty, from the study of a few bones of a fossil or a subfossil horse, whether the individual was wild or domesticated.

There are wanting in the case of the horse precisely the criteria which we have in the bovinds, where in consequence of stabling or of restriction of freedom of movement, the substantia compacta of the bones is thrown into the background in favor of the spongiosa. Again, we are not able to base a distinction between the domesticated and the wild animal on a change in the skull, as we do in the sheep. On the contrary, the mode of life of the horse, especially among inhabitants of the steppes, remains the same as in the wild condition. Harnessing, and the use of the organs as in the wild condition, insures the stability of the bodily form and of the skeleton; and the influence of the weight of the rider carried by the animal is not further perceptible in the bones. Consequently, in the horse of a primitive people, such as were the inhabitants of the Anau kurgan in the neolithic age, the quality of tameness is wholly psychological and is therefore not perceptible in an anatomical investigation.

The determinable remains of the horse from the kurgan number about 1,250. There are, however, but 120 well-preserved pieces, which repay an exact measurement and study. Beginning with the examination of the cranial remains, we find the best among them to be a right upper-jaw with the whole dental row and half of the bone palate. A comparison of the measurements of these pieces with other horse skulls shows a good agreement with a subfossil skull from Western

*Die Rassen der Pferde in der klassischen Staaten nach litterarischen und bildlichen Quellen. Deutsche Landw. Tierzucht, No. 37, pp. 433-437.