

in the ass the "spur" is wanting on all the teeth, while the equid of Auvernier has it on all the premolars and on the third molar. It is noteworthy, though without value in distinguishing between species, that the ass of Abadieh has the first premolar, which is not frequent at this age. I find no differences in the incisors, which are fully present in both skulls. The incisive part of the Auvernier equid is, with a width of 62 mm., somewhat wider than that of the ass, which measures only 52 mm. The equid of Auvernier had during life a broader muzzle than the ass, again recalling the horse, which, especially in the diluvial horse, had a very broad muzzle, broader than is shown in recent horses (83 to 88 mm., Nehring, *op. cit.*, p. 90).

The equid of Auvernier is thus shown to differ in its principal points from the ass of Abadieh and must, therefore, be regarded as a *horse* and no longer as an *ass*. We may see confirmatory evidence that it is a horse that was used by the people of Auvernier, in the size of a bronze bit from the pile-dwelling of Möhringen on the same Lake of Bienne; this measures 9 cm., while the maxilla where the snaffle lies measures 5.1 cm. Moreover, Marek* has published a series of skulls from stations of the same age, as well as later (among them a plaster cast of the Auvernier horse), which are classed by him as Helveto-Gallic horses.

If it has been shown that Rüttimeyer erred in his determination of the Auvernier skull, it is now easy to prove the same in the case of Sanson. Two skulls in the Galerie de Paléontologie of the Museum in Paris belong, in dimensions and in form, to the same variety of horse as that of Auvernier, and their special characteristics will now be considered.

We can take up the thread of our argument at the point where we left it (p. 403) in order to identify these two skulls, which, if they had been African asses, would have been of fundamental importance as to the distribution of domestic animals in prehistoric times.

(b) *The copper time of the bronze age* brought to Europe the small, slender-limbed horses whose domesticated condition is for the first time certain; and which is proved also to have existed in:

(c) *The La Tène Period* (iron) and which have been already treated by Studer,† Marek,‡ Kraemer,§ and others.

(d) *The Hallstatt Period* seems, probably on account of the heavier armor of the cavalry of that time, to bring us already the heavy type of horse that we find in Roman times at Vindonissa; at least the skull from Schuettarschen, which will soon be treated of, differs in several respects from those of the bronze and La Tène periods. Unfortunately we have from Schuettarschen no bones of the extremities to aid in more exact discrimination.

(e) *The Roman Times* bring us better, more abundant material, as we shall see in the finds from Vindonissa.

*T. Marek, Das Helvetisch-Gallische Pferd, etc. Abhandl. Schweiz. paleont. Gesellsch., Zürich, 1898.

†Th. Studer, Die Tierwelt in den Pfahlbauten des Bielersees. Mith. Berner naturf. Gesellsch., 1883.

‡J. Marek, Das Helvetisch-Gallische Pferd. Abhandl. d. Schweiz. pal. Gesellsch., xxv, 1898.

§Kraemer, Haustierfunde von Vindonissa. Revue Suisse de Zoologie, t. 7, 1899, pp. 143 *et seq.*