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References to Deformation Caused by Bearing in Bones from Prehistoric Cremations

Summary. Vertebrae and parts of joints from long bones from prehistoric cremations of the Late Bronze Age and Early Iron Age are presented, showing marked deformations caused by pressure during cremation when bones exposed to temperatures of 400°–500° Centigrade display minimal hardness. The vertebrae with deformation of the arcus parts are only from the lower vertebral column; on account of the weight of this body region, this suggests that the corpse lay in the dorsal position at the place of cremation. The fact that there were deformed arches only on one side might suggest an irregular structure of the surface on which the corpse lay. In the prone position, i.e. in the absence of pressure caused by body weight, all vertebrae should be unaltered; alternatively, if cremation wood was piled on top of the corpse, the arches of thoracic and cervical vertebrae are also likely to be deformed. Deformations resulting from weight bearing were found in the joints of extremities only, with flattening of the heads of joints as well as fissures in the external layers of bones and compression into folds. Some bones show distinct even grooves caused by direct pressure, possibly resulting from the fixation of joint regions for cremation? Evidently the deformations caused by the weighting down of different skeletal regions provide hints that may help in the recognition of cremation rites. It would be helpful if experimental cremations could be performed to establish the pressure necessary to cause deformations.

Key word: Prehistoric cremated skeletons, weight-bearing deformations

Zusammenfassung. Aus Leichenbränden werden einige Skelettelemente mit Verformungen vorgelegt, die durch äußere Einwirkungen während des Festigkeitsminimums der Knochensubstanz zwischen 400–500°C entstanden sein müssen. Derartige Belastungsdeformationen konnten bisher in einigen Fällen an Gelenkregionen verschiedener Langknochen sowie häufiger an Arcusteilen größerer Wirbel beobachtet werden. Als Ursache wäre eine be-
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