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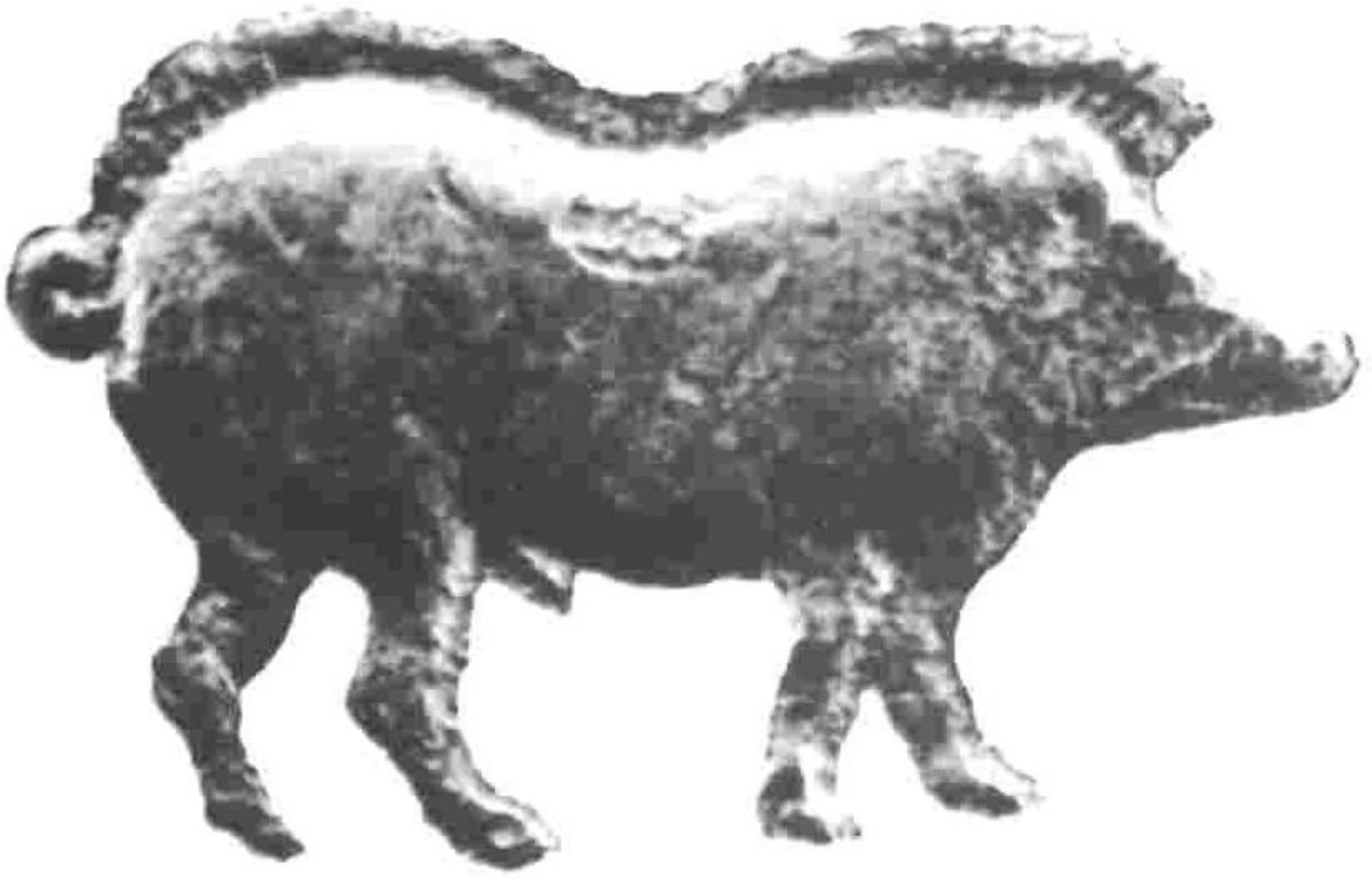

Ancient Etruscan coin (Populonia, 4th Century b.C.; Archaeological Museum, Florence)

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HAEMATIC PARAMETERS AND MEAT QUALITY OF DIFFERENTLY CAPTURED FALLOW DEER (*DAMA DAMA*)

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Stress is the response of an organism to any stressor and may cause a lower meat pH_u, with an ageing alteration and a meat defined Dry, Firm and Darks (DFD) that is not appreciated by the consumers. Therefore, we want to study the effects different capture-slaughtering system on fallow deer haematic parameters and meat quality. 28 fallow deer, bearing to the wild population living in San Rossore Natural Park were submitted to blood drawing: 12 deer in the enclosure after capture operations and 16 deer after being killed by a gamekeeper while they were standing free on a pasture. Blood was collected by vacuum-tainer, centrifuged and deep frozen; AST, ALT, CK, cholesterol, trygliceride, glucose, total protein, albumin, BUN and cortisol were determined. In the enclosure 4 deer were killed and a total of 8 carcasses were aged for 7 days. The loin, excised from the carcass, was analysed for: pH_u, meat colour, water holding capacity, tenderness, chemical composition. Data were analysed by non parametric methods to test the effect of the different treatment. As regard blood analyses a higher content of AST, ALT and CK was observed in the animals in the enclosure (510 *vs.* 191, 96 *vs.* 51, 5337 *vs.* 1346, for AST, ALT, CK, respectively). Cortisol and cholesterol content did not differ between the two groups. Triglycerides and glucose were fundamentally higher in the animals in the enclosure. Total protein, albumin and BUN were slightly higher in the animals in the enclosure (albumin statistically different: 3.5 *vs.* 3.1). pH_u showed a normal meat acidification: however, observing the data, pH_u of one fallow deer killed in the enclosure was higher than 6.0, threshold value for the onset of the DFD syndrome. Meat colour is rather dark: meat colour of the high pH_u-animal resulted very dark. Drip loss and cooking loss were quite low; water-holding capacity of the high pH_u-animal was very high, confirming a behaviour like DFD meat. Shear force was very low, thus meat was tender. Chemical composition showed a very low ether extract content. It is possible to conclude that capture operations can affect blood parameters, inducing stress in captured animals but without influencing meat quality that shows good characteristics. Nevertheless, the observation of one animal with a high meat pH_u and with a syndrome like-DFD, may suggest a further deepening, also with the aim to test the capture operations so to avoid any possible stress to the animals that must be slaughtered.

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