

## SEXING OF CATTLE ON THE BASIS OF THE OSTEOMETRY OF METACARPAL BONES (XIV – XVII CENTURIES)

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**Abstract.** The aim of performed study was to measure complete metacarpal bones of cattle from XIV–XVII th c., to estimate measurement range typical for cows, steers and bulls (XIV–XVII th c) and to use obtained range for sexing distal parts of metacarpal bones.

Analysis of 67 complete cattle metacarpal bones from Vilnius, Prezidentura territory (XVII th c., analysed 12 bones) and Vilnius Lower castle (XIV–XV th c., analysed 27 bones and XVI–XVII th c. analysed 28 bones) was performed. The measure of 69 distal parts of metacarpal bones from the Town hall square in Vilnius (dating to the IV qr. of XVI th c.) was accomplished. Measurements were taken according to technique described by von den Driesch (1976) and Thomas (1988). The data was analysed by a Statistical Analysis System (Version 8.3, SAS® Institute Inc.) and MS Excel programmes.

From 67 complete metacarpal bones dated from XIV to XVII th c., 44 (65,6 %) were attributed to cows, 9 (13,4 %) – to steers and 12 (17,9 %) – to bulls, respectively. Determination of 2 (3 %) bones was uncertain. Furthermore, 88,9 % of metacarpals dated to XIV–XV th c were attributed to cows.

From 69 analysed distal parts of metacarpal bones 41 (59,4 %) were attributed to cows, 2 (2,9 %) – to steers and 4 (5,8 %) – to bulls. However, 31,9 % metacarpals distal parts were of indeterminate sex. The measurement data of cows' metacarpal bones importantly unchanged ( $p>0,05$ ) during 400 years from XIV to XVII th c.

Measurement data range of cows and bulls diverged. All females' dimensions were less compared to bulls. Measurement data of steers' metacarpals duplicate maximal cows and minimal bulls measurement.

**Keywords:** metacarpal bones, cow, steer, bull, Lithuania, XIV–XVII centuries.