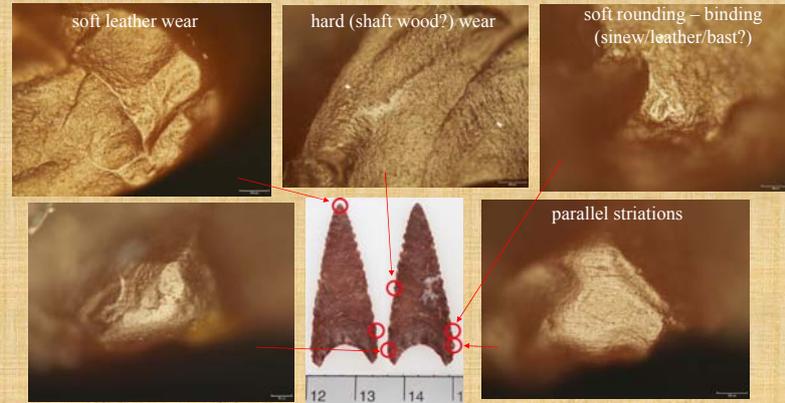
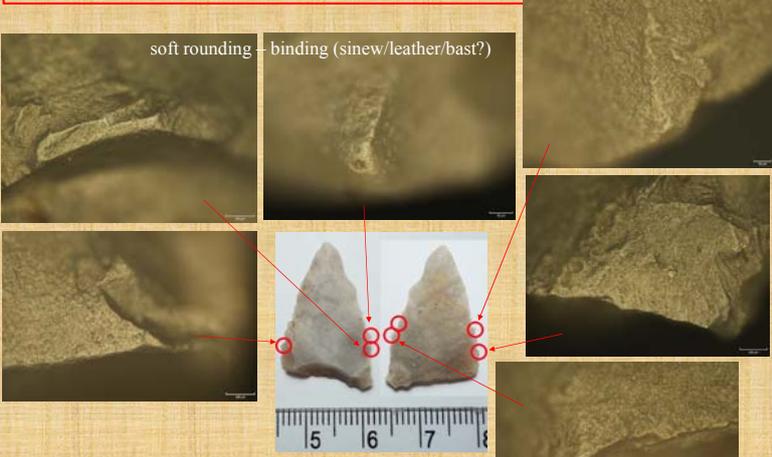


# Late Eneolithic/Early Bronze Age projectiles comparative use-wear analysis

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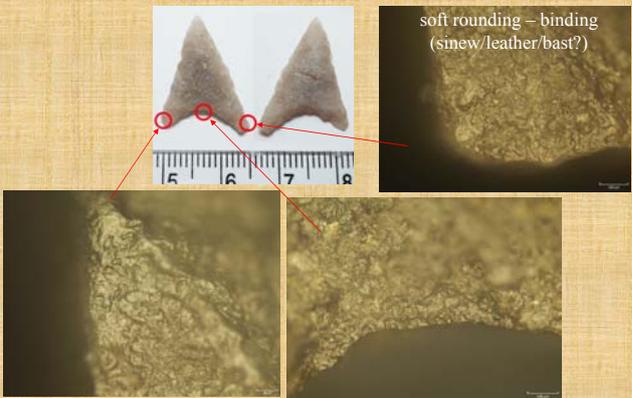
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**Arrowheads** were bearer of **social or representative meaning** at the end of Eneolithic and at the beginning of Early Bronze Age. They act as a part of especially male grave equipment, unlike wrist guards and daggers, which may occur in rich woman graves too. Their **profane practical function** could be reduced in that times yet.



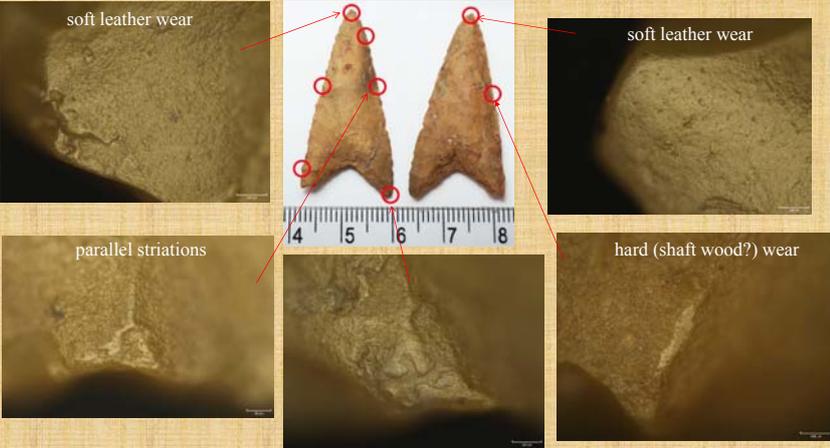
**Use-wear analysis** confronts recently general archaeological cliché of warrior/archer of that time (Sosna 2012). His UW analysis of 32 arrowheads from BBC cemetery Hoštice I brought only 16 % of DIF, 9 % of weak hafting marks on wings, no transport wear, and mostly the only one piece in grave (only one „arching set“ in old man grave). Sosna interpret these projectiles as **mainly symbolic attribute in graves, related with social and ideological dimension of war, and warrior identity**.

**Method and Analyzed collection**  
 HPA optical microscopy 200x Olympus BX50  
 Corded Ware Culture cemetery: Ivanovice  
 Nitra Culture (epicorded-ware complex) cemetery: Hroznová Lhota  
 Únětice culture: cemetery Mikulovice  
 : settlements Tvrdonice, Mikulov, Rybníky, Hostěradice



**Discussion**  
 Unlike Sosna 2012 results for BBC arrowheads, arrowheads of other cultures of that time in central Europe show us well developed evidences of practical use. The role of projectiles in these cultures looks different, and different then could be their social and ideological concept of archery too.

**Results**  
 Arrowheads both of **Corded-ware** and **Nitra Cultures** show well developed transport wear, hafting wear, supposed reparation of tip fracture (standardized projectile length grades; fresh tip and used base combination), and practical ballistic properties; arching sets are frequent.  
 Arrowheads of **Únětice Culture** from graves present no functional use marks, and fresh sharp edges. Findings from settlements are individual. Arrowhead from Tvrdonice settlement shows hafting marks only. Arrowhead from Mikulov shows well developed hafting and transport marks. Nevertheless postdepositional abrasion, raw material and morphology testify the Nitra Culture provenience, older than Únětice settlement phase.  
 Arrowheads from settlements Rybníky and Hostěradice (survey) were devalued by postdepositional degradation.



**Conclusion**  
 Arrowheads of **Corded-ware** and **Nitra Culture** show clear attributes of **practical equipment of archer** (warrior and hunter), although we have only grave goods, no settlements findings.  
 Arrowheads of **Bell beaker Culture** are interpreted by Daniel Sosna as mostly symbolic expression of war ideology and warrior identity.  
 Arrowheads of **Únětice Culture** show in light of present results **infrequent practical use in settlements, and perhaps symbolic role in graves**.

References  
 Sosna, D. 2012: Stone Arrowheads from Hoštice I: Use-wear Analysis. In: Matějčková, A. – Dvořák, P. (eds.) 2012: Pohřebišťe z období zvoncovitých pohárů na trase dálnice D1 Vyškov – Mořice. Pravěk Supplementum 24/1, Brno, 323-338.

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