

CHAPTER 15

IMMUNOLOGICAL ANALYSIS OF GRAVETTIAN LITHIC ARTIFACTS FROM HUCCORGNE

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Cross-over immunoelectrophoresis (CIEP) was used to analyze lithic artifacts from Stratum 4 of the 1991-92 excavations at Huccorgne to attempt to detect and identify protein residues. Description and discussion of the methodology are provided (among other places) in this author's report on immunological analysis of artifacts from le Trou Magrite (Newman 1995, with references). Three sediment samples from Huccorgne were also analyzed as controls.

Twelve lithic artifacts from HH were analyzed. Residues extracted from the artifacts were tested against the following antisera: anti-bear, anti-bovine, anti-cat, anti-camel, anti-chicken, anti-deer, anti-dog, anti-guinea pig, anti-horse, anti-human, anti-mouse, anti-rabbit, anti-rat, anti-sheep, anti-bison, anti-elephant and anti-elk. The anti-sera were provided commercially by Organon/Teknika, Forensic Medecine, Sigma Scientific Co., and the University of Calgary.

The results are as follows:

<u>Artifact No.</u>	<u>Artifact Type</u>	<u>Result</u>
H8-30	burin	negative
H8-31	blade	negative
H8-35	blade	negative
H8-65	burin/endscraper	rabbit
H8-76	blade	negative
H8-27	burin	negative
I6-18	blade	negative
H6-41.1	Gravette point	negative
J7-5	burin/endscraper	negative
I6-1	blade	negative
J6-12	retouched blade	negative
S25-42	blade	negative

There is only one positive result: to rabbit antiserum on a burin/endscraper. Other members of the Order Lagomorpha (hares and pikas) could be represented by this result (and either--but not rabbit--would make sense in this open tundra-steppe environment). Cross-reactions with other orders do not generally occur.

No other positive results were obtained in this study. The absence of identifiable proteins on the artifacts may be due to poor preservation of protein or that they were used on species other than those encompassed by the antisera samples used (but note that anti-sera of elephant, horse, elk and deer, species which are represented among the faunal remains, were used in our tests). It is also possible that the artifacts were not utilized (an hypothesis most plausible for the several unretouched blades). It is interesting that the only positive result is on a retouched tool.