

This work is licensed under the Creative Commons Attribution-Noncommercial-Share Alike 3.0 United States License. To view a copy of this license, visit http://creativecommons.org/licenses/by-nc-sa/3.0/us/ or send a letter to Creative Commons, 171 Second Street, Suite 300, San Francisco, California, 94105, USA.

LARVAL EXUVIAE OF *ATTAGENUS BICOLOR* VON HAROLD (COLEOPTERA: DERMESTIDAE) FROM AN ARCHEOLOGICAL SITE AT MESA VERDE, COLORADO

WILLIAM G. EVANS
Department of Entomology
University of Alberta
Edmonton, Alberta T6G 2E3

STUART J. BALDWIN
Department of Anthropology
University of Alberta
Edmonton, Alberta

Quaestiones Entomologicae 13: 309-310 1977

During an examination of an archeological specimen of rock salt (halite = NaCl), weighing 6.8 g, insect fragments were found embedded within the salt by Dr. H. Baadsbaard and Dr. D.G.W. Smith of the Department of Geology, University of Alberta. Apparently the insect remains were accidentally mixed with loose, granular salt which then was moistened and moulded into a cake. The salt cake was found by Fewkes (1916) inside a covered pottery jar recovered from Oak Tree House (site 523), a cliff dwelling in Mesa Verde National Park, southwestern Colorado. Placement of the salt cake within the pottery jar must have occurred in the late A.D. 1200's, just before abandonment of the site by the prehistoric inhabitants. Full particulars on the archeological context, dating, and chemical composition of the salt cake have been published by Baldwin (1976).

The insect remains were found to be dermestid larval exuviae but only two specimens were suitable for study. These were examined with a scanning electron microscope, and with use of a key to larval Attagenini (Beal, 1970), they were identified as *Attagenus bicolor* von Harold. Since Beal did not indicate sizes of mature larvae, the instar number of these specimens is unknown. However, the unique position of the spiracle and the setal socket positions on the spiracular sclerite (Fig. 1) and the slender acrotergal setae agree with his description of this species.

Beal (1970) notes that adults and larvae of A. bicolor were found in matted vegetation and fill in site 1285 (Step House) at Mesa Verde by S.A. Graham. Apparently the specimens he examined were those already reported on by Graham (1965) in his paper discussing the usefulness of studying insect remains as an aid in archeological investigations. Full details on the archeological deposits at Step House have not yet been published, but the latest remains are contemporary (A.D. 1200's) with those of Oak Tree House (Nichols and Harlan, 1967).

LITERATURE CITED

Baldwin, S.J. 1976. Archaeological salt at Mesa Verde and trade with areas to the north and west. The Kiva 42: 177-191.

Beal, R.S. Jr. 1970. A taxonomic and biological study of species of Attagenini (Coleoptera: Dermestidae) in the United States and Canada. Entomologica Americana 45: 141-235.

Fewkes, J.W. 1916. The cliff-ruins in Fewkes Cañon, Mesa Verde National Park, Colorado. pp. 96-117. *In* Hodge, F.W. (editor). Holmes Anniversary Volume. Washington, D.C.

Graham, S.A. 1965. Entomology: An aid in archaeological studies. pp. 167-174. In Osborne,
D. (editor). Contributions of the Wetherill Mesa Archaeological Project. Memoirs of the
Society for American Archaeology 19: 1-230.

Nichols, R.F. & Harlan, T.P. 1967. Archaeological tree-ring dates from Wetherill Mesa. Tree-Ring Bulletin 28: 13-40.

ACKNOWLEDGEMENTS

We would like to thank J.S. Scott and G.D. Braybrook for help in obtaining the scanning electron microscope photograph.

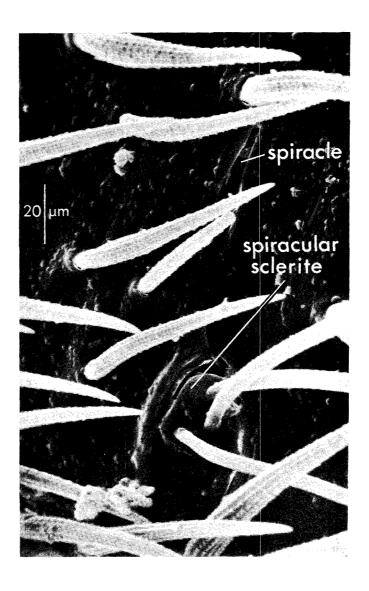


Fig. 1. The spiracular sclerite and spiracle of the fifth abdominal segment of the larval exuvia of Attagenus bicolor.