MUSCLE ATTACHMENT AND MANTLE-RELATED FEATURES IN UPPER CRETACEOUS *BACULITES* FROM THE UNITED STATES WESTERN INTERIOR

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Baculites from the Upper Cretaceous of the United States Western Interior commonly occur in flood abundance in early diagenetic concretions in shale intervals such as the Campanian Pierre Shale. Pristine aragonite preservation is widespread, while internal moulds and partially exfoliated specimens show a series of features that give clues as to muscle and mantle attachment between animal and shell. These are rare, and most conspicuous in adult body chambers and adjacent phragmocone, while features may be absent in the majority of co-occurring specimens in a single concretion. Structures present include a bilobed dorsal muscle scar and a single ventral scar at the adapical end of the body chamber. Rare individuals show repeated scars at the adapertural end of the adult phragmocone; others show a clear set of drag marks associated with the scar(s), as well as elsewhere on the surface of moulds, recording the adapertural migration of the tissues. Internal moulds of body chambers may bear a longitudinal groove or grooves associated with muscle scars, that corresponded to ridges on the inner surface of the shell. Problematic adaperturally concave traces on the flanks of partially exfoliated moulds may possibly reflect sites of weaker mantle attachment. Predated *Baculites* with massive damage to the shell, followed by repair and a return to near-normal shell growth, as well as recovery from parasitism(?) or pathological mantle growth, demonstrate the regenerative properties of the ammonite mantle.