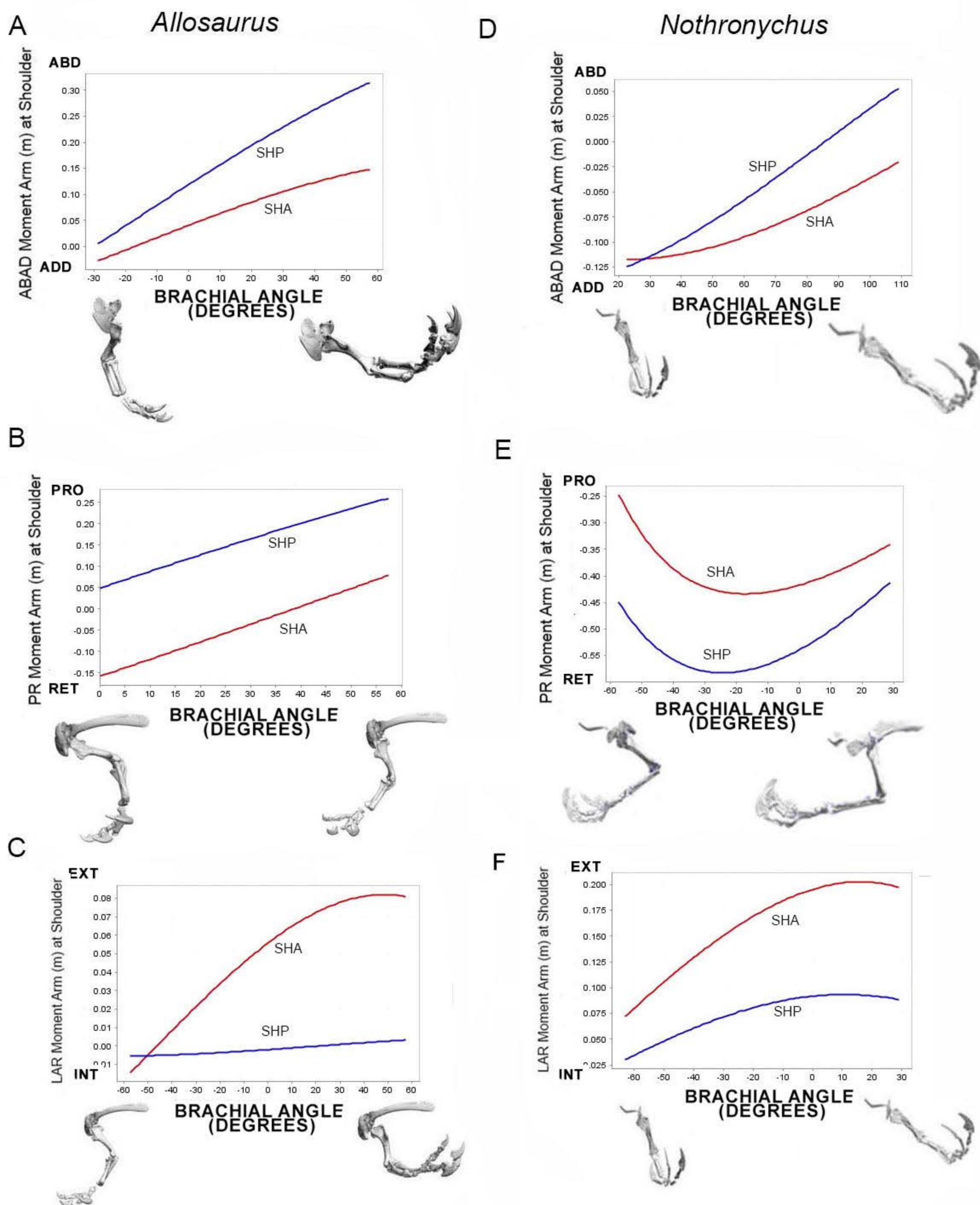




Supplementary Figure S5. *Allosaurus* (A, B, C) and *Nothronychus* (D, E, F) shoulder abduction/adduction (A, D), protraction/retraction (B, E), long axis rotation (C, F) plots. Muscles: SC, supracoracoideus; SCA, supracoracoideus anterior; scapularis anterior; SBC, subcoracoideus. Negative angles and moment arms represent adduction (ABAD), retraction (PR), and internal rotation (LAR) while positive angles and moment arms represent abduction (A, D) and (B, E) and protraction (C, F). Crossing 0 reflects a change in function (Hutchinson et al., 2005).