

AGES student co-authorship on peer reviewed research (2010 - present)

The following are published, peer-reviewed papers by AGES faculty with AGES student lead authors or co-authors (shown in bold). These papers reflect work done by AGES students with their AGES faculty research advisors while they were undergraduates at Appalachian.

2024

- Königshof, P., Carmichael, S. K., Waters, J. A., Waters, W., Munkhjargal, A., Gonchigdorj, S., Crônier, C., Nazik, A., **Duckett, K., Foronda, J.**, Zieger, J., and Linnemann, U., 2024, Devonian to Mississippian strata of the Shine Jinst region revisited: Facies development and stratigraphy in southern Mongolia (Gobi Altai Terrane): Palaeobiodiversity and Palaeoenvironments, 10.1007/s12549-024-00608-3.
- Pugh, I.**, Nesbitt, S. J., Heckert, A. B., Lauer, R., and Lauer, B., 2024, A new drepanosauromorph (Diapsida) from east–central New Mexico and diversity of drepanosaur morphology and ecology at the Upper Triassic Homestead Site at Garita Creek (Triassic: mid-Norian): Journal of Vertebrate Paleontology, p. E2363202. doi:[10.1080/02724634.2024.2363202](https://doi.org/10.1080/02724634.2024.2363202)
- Rose, L.J.P.**, Heckert, A.B., Lauer, B., and Lauer, R., 2024, Description of a new Upper Triassic lungfish (Sarcopterygii: Dipnoi) locality from the Garita Creek Formation, east-central New Mexico, with a reevaluation of Late Triassic lungfish diversity in the American Southwest: Lithodendron, v. 1, 145-170. <https://doi.org/10.69575/HDWG3456> (This was the inaugural issue of a new open-access journal).

2023

- Casale, G., Levine, J.S.F., and **Economou, J.**, 2023, Extracting quartz deformation fabrics from polymineralic rocks: Journal of Structural Geology, v. 173, 104893. <https://doi.org/10.1016/j.jsg.2023.104893>

2022

- Fiori N**, WP Anderson Jr (2022) The impact of sea-level rise on saltwater intrusion for barrier-island aquifers in North Carolina, Continental Shelf Research 244, doi:10.1016/j.csr.2022.104789.
- Savannah Devine, Hugh Harper**, Scott T. Marshall; Mechanical Models of Fault-Slip Rates in the Transverse and Peninsular Ranges, California. *Seismological Research Letters* 2022; doi: <https://doi.org/10.1785/0220220182>
- Armstrong, W. H., Polashenski, D., Truffer, M., Horne, G., **Hanson, J. B.**, Hawley, R. L., **Anthony M. Hengst, Lily Vowels**, Brian Menounos, Wesley Van Wychen (2022). Declining basal motion dominates the long-term slowing of Athabasca Glacier, Canada. Journal of Geophysical Research: Earth Surface, 127, e2021JF006439. <https://doi.org/10.1029/2021JF006439>
- Cowan, E. A., Seramur, K. C., Costa, J. W., **Bradley-Lewis, N.**, & Marshall, S. T. (2022). Integration of shallow geophysics, archaeology and archival photographs to reveal the past buried at Ingleside Plantation, Piedmont North Carolina (USA). *Archaeological Prospection*, 1– 12. <https://doi.org/10.1002/arp.1871>
- Brand, N. A.**, Heckert, A. B., Sanchez, I., Foster, J. R., Hunt-Foster, R. K., and Eberle, J. J., 2022, New Upper Cretaceous microvertebrate assemblage from the Williams Fork Formation (Campanian–Maastrichtian), northwestern Colorado, U.S.A., and its paleoenvironmental

implications: *Acta Palaeontologica Polonica*, v. in press.
<https://doi.org/10.4202/app.00934.2021>

Wang, Zhen, Ellen A. Cowan, Keith C. Seramur, Gary S. Dwyer, **Jessie C. Wilson, Randall Karcher**, Stefanie Brachfeld, and Avner Vengosh. "Legacy of Coal Combustion: Widespread Contamination of Lake Sediments and Implications for Chronic Risks to Aquatic Ecosystems." *Environmental Science & Technology* (2022).

Eads, M.S., and Heckert, A.B., 2022, Breaking the mold: an empirical analysis of molding and casting efficiency. *Journal of Paleontological Techniques* no. 23, 16 pp.
<https://jpaleontologicaltechniques.com/2022/10/06/jpt-no-23-reaking-the-mold-an-empirical-analysis-of-molding-and-casting-efficiency/>

Moore, C. and S.G. Evans (2022), Shallow soil temperatures are heterogeneous across a small mountain fen, *Wetlands*, doi:10.1007/s13157-022-01566-2.

Jasinski, S. E., Heckert, A. B., **Sailar, C.**, Lichtig, A. J., Lucas, S. G., and Dodson, P., 2022, A softshell turtle (Testudines: Trionychidae: Plastroninae) from the uppermost Cretaceous (Maastrichtian) Hell Creek formation, North Dakota, USA, with implications for the evolutionary relationships of plastronines and other trionychids: *Cretaceous Research*, v. 135, p. 105172. <https://doi.org/10.1016/j.cretres.2022.105172>

2021

Ariuntogos, M., Königshof, P., Hartenfels, S., Jansen, U., Nazik, A., Carmichael, S. K., Waters, J. A., Sersmaa, G., Crônier, C., Ariunchimeg, Y., **Paschall, O.**, and **Dombrowski, A.**, 2021, The Hushoot Shiveetiin gol section (Baruunhuurai Terrane): Sedimentology and facies from a Late Devonian island arc setting. *Palaeobiodiversity and Palaeoenvironments* (special issue: The Central Asian Orogenic Belt (CAOB) during Late Devonian: new insights from southern Mongolia) (DOI: 10.1007/s12549-020-00445-0)

Heckert, A. B., Nesbitt, S. J., Stocker, M. R., Schneider, V. P., **Hoffman, D. K.**, and Zimmer, B. W., 2021, A new short-faced archosauriform from the Upper Triassic Placerias/Downs' quarry complex, Arizona, USA, expands the morphological diversity of the Triassic archosauriform radiation: *The Science of Nature*, v. 108, no. 4, p. 32.
<https://doi.org/10.1007/s00114-021-01733-1>

Hoffman, D. K., Miller-Camp, J. A., and Heckert, A. B., 2021, Tooth enamel microstructure in North American Phytosauria (Diapsida:Archosauriformes): Implications for biogeography and ecology of a Late Triassic clade of crocodylian-like predators: *Palaeontologia Electronica*, v. 24.3, p. 26. <https://doi.org/10.26879/1162>

Maas CM, WP Anderson Jr, K Cockerill (2021) Managing stormwater by accident: A conceptual study, *Water* 2021, 13, 1492. doi:10.3390/w13111492. (Published in the Special Issue Urban Hydrogeology Studies)

Hengst, A.M., Armstrong, W.H., Rick, B., and McGrath, D. (2021). Short-Term Variability in Alaska Ice-Marginal Lake Area: Implications for Long-Term Studies. *Remote Sensing*. 2021; 13(19):3955

2020

Ellen A Cowan, Sarah D Zellers, Juliane Müller, Maureen H Walczak, Lindsay L Worthington, Beth E Caissie, Wesley A Clary, John M Jaeger, Sean PS Gulick, **Jacob W Pratt**, Alan C Mix, Stewart J

Fallon, 2020, Sediment controls dynamic behavior of a Cordilleran Ice Stream at the Last Glacial Maximum, *Nature Communications* vol. 11, Article number: 1826, p. 1-9

Evans, S.G., **Yokeley, B., Stephens, C.**, and B. Brewer (2020), Potential mechanistic causes of increased baseflow across northern Eurasia catchments underlain by permafrost, *Hydrological Processes*, doi:10.1002/hyp.13759.

Suttner, Thomas J., Kido, Erika, Ariunchimeg, Yarinpil, Sersmaa, Gonchigdorj, Waters, Johnny A., Carmichael, Sarah K., **Batchelor, Cameron J.**, Ariuntogos, Munkhjargal, Hušková, Aneta, Slavik, Ladislav, Valenzuela-Ríos, José I., Liao, Jau-Chyn, and Gatovsky, Yury A., 2020, Conodonts from Late Devonian island arc settings (Baruunhuurai Terrane, western Mongolia), *Palaeogeography, Palaeoclimatology, Palaeoecology* (DOI: 10.1016/j.palaeo.2019.03.001)

2019

Gu C, K Cockerill, WP Anderson Jr, **F Shepherd**, PA Groothuis, TM Mohr, JC Whitehead, **AA Russo**, C Zhang (2019) Modeling effects of low impact development on road salt transport at watershed scale, *Journal of Hydrology*, doi:10.1016/j.jhydrol.2019.04.079.

Dorsett, J. H., Madden, E. H., Marshall, S. T., & Cooke, M. L. (2019). Mechanical Models Suggest Fault Linkage through the Imperial Valley, California, USA Mechanical Models Suggest Fault Linkage through the Imperial Valley, California, USA. *Bulletin of the Seismological Society of America* ,109 (4): 1217-1234.

Hoffman, D.K., Heckert, A.B. and Zanno, L.E. (2019), Disparate Growth Strategies within Aetosauria: Novel Histologic Data from the Aetosaur *Coahomasuchus chathamensis*. *Anat. Rec.*, 302: 1504-1515. doi:10.1002/ar.24019

Paschall, Olivia C., Carmichael, Sarah K., Waters, Johnny A., Koenigshof, Peter, Ta, Phuong H. Komatsu, Toshifumi, and **Dombrowski, Allison D.**, 2019, The Hangenberg Event in Vietnam: sustained ocean anoxia with a volcanic trigger?, *Global and Planetary Change* (Special issue on Devonian global changes - recent advances and challenges in different domains, eds. G. Racki and P. Wignall), v. 175, p. 64-81 (DOI: 10.1016/j.gloplacha.2019.01.021)

Liutkus-Pierce, C. M., **Takashita-Bynum, K. K.**, **Beane, L. A.**, Edwards, C. T., **Burns, O. E.**, Mana, S., Hemming, S., Grossman, A., Wright, J. D., and Kirera, F. M., 2019, Reconstruction of the Early Miocene Critical Zone at Loperot, Southwestern Turkana, Kenya: *Frontiers in Ecology and Evolution*, v. 7, p. 44.

2018

Levine, J. S. F., Merschat, A. J., McAleer, R. J., Casale, G., **Quillan, K. R.**, **Fraser, K. I.**, & **BeDell, T. G.** (2018). Kinematic, Deformational, and Thermochronologic Conditions Along the Gossan Lead and Fries Shear Zones: Constraining the Western-Eastern Blue Ridge Boundary in Northwestern North Carolina. *Tectonics*, 37(10), 3500-3523.

Hoffman DK, Heckert AB, Zanno LE. 2018. Under the armor: X-ray computed tomographic reconstruction of the internal skeleton of *Coahomasuchus chathamensis* (Archosauria: Aetosauria) from the Upper Triassic of North Carolina, USA, and a phylogenetic analysis of Aetosauria. *PeerJ* 6:e4368 <https://doi.org/10.7717/peerj.4368>

2017

Casale, G., Levine, J. S., **Craig, T. D.**, & **Stewart, C.** (2017). Timing and deformation conditions of the Tallulah Falls dome, NE Georgia: Implications for the Alleghanian orogeny. *GSA Bulletin*, 129(9-10), 1195-1208.

Cowan, E. A., **Epperson, E. E.**, Seramur, K. C., Brachfeld, S. A., & Hageman, S. J. (2017). Magnetic susceptibility as a proxy for coal ash pollution within riverbed sediments in a watershed with complex geology (southeastern USA). *Environmental Earth Sciences*, 76(19), 657.

Carmichael, Sarah K, Doctor, Daniel H, Wilson, Crystal G., **Feierstein, Joshua**, and McAleer, Ryan J, 2017, New insight into the origin of manganese oxide ore deposits in the Appalachian Valley and Ridge of northeastern Tennessee and northern Virginia, USA, *Geological Society of America Bulletin*, v.129, p. 1158-1180 (DOI: 10.1130/B31682.1)

Marshall, S. T., Funning, G. J., Krueger, H. E., Owen, S. E., and Loveless, J. P. (2017), Mechanical models favor a ramp geometry for the Ventura-pitas point fault, California, *Geophys. Res. Lett.*, 44, 1311– 1319,

Cockerill KM, WP Anderson Jr, **FC Harris, KM Straka** (2017) Hot, salty water: A confluence of issues in managing stormwater runoff for urban streams, *Journal of the American Water Resources Association (JAWRA)*, 1-18, doi:10.1111/1752-1688.12528.

Jared T. Voris & Andrew B. Heckert (2017) Ontogenetic heterodonty in *Reticulodus synergus* (Chondrichthyes, Hybodontiformes) from the Upper Triassic of the southwestern U.S.A., with a redescription of the genus, *Journal of Vertebrate Paleontology*, 37:4, DOI: 10.1080/02724634.2017.1351980

Paschall, O.C. and Waters, J.A., 2017. Estimated predation rate of the stalked bourgueticrinid (Crinoidea) *Democrinus* from Roatán, Honduras. *Geological Journal*, 52(5), pp.727-732.

2016

Cynthia Liutkus-Pierce, Brian W Zimmer, Sarah K Carmichael, William McIntosh, Alan Deino, **Seth M Hewitt, Katelyn J McGinnis, Travis Hartney**, James Brett, Sara Mana, Daniel M Deocampo, Brian G Richmond, Kevin Hatala, William Harcourt-Smith, Briana Pobiner, Adam Metallo, and Vince Rossi, 2016, Radioisotopic age, formation, and preservation of Late Pleistocene human footprints at Engare Sero, Tanzania, *Palaeogeography, Palaeoclimatology, Palaeoecology*, v. 463, p. 68-82 (doi: 10.1016/j.palaeo.2016.09.019)

Carmichael, S.K., Waters, J.A., **Batchelor, C.J.**, Coleman, D., Suttner, T.J., Kido, E., **Moore, L.M.**, and Chadimova, L., 2016, Climate instability and tipping points in the Late Devonian: Detection of the Hangenberg Event in an open oceanic island arc in the Central Asian Orogenic Belt, *Gondwana Research*, v. 32, p. 213-231 (DOI:10.1016/j.gr.2015.02.009).

2015

Carmichael, S.K., Zorn, B.T., Santelli, C.M., **Roble, L.A.**, Carmichael, M.J., and Bräuer, S.L., 2015, Nutrient input influences fungal community composition and size and can stimulate Mn(II) oxidation in caves, *Environmental Microbiology Reports*, v. 7, no. 4, p. 592-605 (DOI:10.1111/1758-2229.12291)

Ellen A Cowan, **Daniel P Gaspari**, Stefanie A Brachfeld, Keith C Seramur, 2015, Characterization of coal ash released in the TVA Kingston spill to facilitate detection of ash in river systems using magnetic methods, *Fuel*, 159, p. 308-314

AB Heckert, DJ Chure, **JT Voris, AA Harrison**, TJ Thomson, 2015, Stratigraphy, correlation and age of the Moenkopi Formation in the vicinity of Dinosaur National Monument, Eastern Uinta Basin, Utah and Colorado, USA, *Geology of Utah's Uinta Basin and Uinta Mountains* 44, 1-12

2014

Carmichael, Sarah K., Waters, Johnny A., Suttner, Thomas J., Kido, Erika, and **DeReuil, Aubry**, 2014, A New Model for the Kellwasser Anoxia Events (Late Devonian): Shallow Water Anoxia in an Open Oceanic Setting in the Central Asian Orogenic Belt, *Palaeogeography, Palaeoclimatology, Palaeoecology*, v. 399, p. 394-403

2013

Carmichael, Sarah K., Carmichael, Mary Jane, **Roble, Leigh Anne**, Johnson, Krissy, Gao, Yongli, and Bräuer, Suzanna, 2013, Evidence of sustained anthropogenic impact in Carter Saltpeter Cave, Carter County, Tennessee and the potential effects on manganese cycling, *Journal of Cave and Karst Science*, v. 73, no. 3, p. 184-209

Heckert, A.B., and **Miller-Camp, J.A.**, 2013, Tooth enamel microstructure of *Revueltosaurus* and *Krzyzanowskisaurus* (Reptilia:Archosauria) from the Upper Triassic Chinle Group, USA: Implications for function, growth, and phylogeny: *Palaeontologia Electronica*, v. 16, no. 1, 23 pp.
<http://palaeo-electronica.org/content/2013/344-revueltosaurus-tooth-enamel>

2012

Heckert, A.B., **Mitchell, J.**, Schneider, V., & Olsen, P., 2012, Diverse new microvertebrate assemblage from the Upper Triassic Cumnock Formation, Sanford Subbasin, North Carolina, USA. *Journal of Paleontology*, 86(2), 368-390. doi:10.1666/11-098.1

Heckert, A.B., **Sload, E.J.**, Lucas, S.G., & Schumacher, BA, 2012, Triassic fossils found stratigraphically above 'Jurassic' eolianites necessitate the revision of lower Mesozoic stratigraphy in Picket Wire Canyonlands, south-central Colorado. *Rocky Mountain Geology* ; 47 (1): 37–53.

2011

Anderson WP Jr, **RE Storniolo, JS Rice** (2011) Bank thermal storage as a sink of temperature surges in urbanized streams. *Journal of Hydrology* 409:525-537, doi: 10.1016/j.jhydrol.2011.08.059.

Rice JS, WP Anderson Jr, CS Thaxton (2011) Urbanization influences on stream temperature behavior within low-discharge, headwaters streams. *Hydrological Research Letters* 5:27-31,doi:10.3178/HRL.5.27.

2010

Anderson WP Jr, **JL Anderson**, CS Thaxton, CM Babyak (2010) Changes in stream temperatures in response to restoration of groundwater discharge and solar heating in a culverted, urban stream, *Journal of Hydrology* 393:309-320, doi:10.1016/j.jhydrol.2010.08.030.

Mitchell, J.S., Heckert, A.B. & Sues, H. 2010, Grooves to tubes: evolution of the venom delivery system in a Late Triassic "reptile". *Naturwissenschaften* 97, 1117–1121 (2010).

Mitchell, J.S., & Heckert, A. B., 2010, The setup, use and efficacy of sodium polytungstate separation methodology with respect to microvertebrate remains: *Journal of Paleontological Techniques*, v. 7, p. 1-12.
<http://www.jpaleontologicaltechniques.org/pasta3/JPT%20N7/Bulletin.html>